QUALITATIVE METHODS FOR STUDYING GROUPS

EDITED BY: Francesca Alby, Francesco Arcidiacono, Maria Fernandes-Jesus, Terri Mannarini, Laura Lucia Parolin and Liisa Voutilainen

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QUALITATIVE METHODS FOR STUDYING GROUPS

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Editorial: Qualitative Methods for Studying Groups

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Editorial on the Research Topic

Qualitative Methods for Studying Groups

Research on small groups in social and behavioral sciences involves many studies and considerable theoretical insight (Levine and Moreland, 1990; McGrath et al., 2000). Interest in exploring social processes within small groups has a long history, yet in some areas—namely in social psychology—it has decreased over time, due to a shift to the study of intergroup relations (Wittenbaum and Moreland, 2008). Traditionally, this bulk of research has been characterized by quantitative methods, even though in the last two decades qualitative research has progressively entered this field (Emich et al., 2020), and the need for qualitative analyses of micro aspects of group processes has been acknowledged as an opportunity to be seized (Keyton, 2016). However, the most part of small group research has been driven, and continues to be driven by a positivistic epistemology and with an experimental approach to data collection that does not pay attention to emic views and to groups' relations to contexts. A different approach has been developed within qualitative, especially ethnographic, research. A large tradition of microanalytic studies has focused on discursive and multimodal interactions within groups in a variety of contexts, highlighting, among other things, the mediating role of artifacts and processes of embodiment in collective action and interaction (see, among many others, Goodwin, 1994; Luff et al., 2000; Streeck et al., 2011). Within a practice-based approach, several authors explored groups as the result of a nexus of practices, highlighting them not as social objects defined by rules, roles, and mental contents, as in the traditional rationalist view, but as forms of joint practicing that collectively shape social and psychological processes such as knowing, meaning-making, identity-forming, and other order-producing activities (Chaiklin and Lave, 1993; Schatzki, 2001; Gherardi, 2009; Nicolini, 2012).

Due to its emphasis on process instead of structure, this qualitative research literature rarely refers to the concept of group (see, however, Lave and Wenger, 1991; Hutchins, 1993; Wenger, 1998). Indeed, there is some disagreement also among group scholars about what is a "group" (Hollingshead and Poole, 2012), hence we endorse an inclusive view of groups, since we believe that the concept of group can contribute to qualitative research by connecting micro and macro analyses, processes and structure, individual and society.

The idea of this Research Topic arises from this conviction and from this gap in the literature. By embracing a constructivist epistemology, and adopting a qualitative methodology, this Research

Topic collection aims to capture the complexity of the phenomena that occur in groups in ordinary and institutional settings and to provide a detailed, situated understanding of the actors' experiences.

The articles published in the Research Topic build on our original vision, introducing diverse perspectives and group conceptions, documenting group activities in quite different contexts, including work, educational, healthcare, clinical, and community-based settings. The contributions explore a broad range of empirical phenomena.

Alby et al. (2022) analyze the narrative construction of psychoanalytic trainees' professional identity. Through thematic analysis of interviews, the study shows how professional identities are constructed as the outcome of learning practices and multiple group participations over time.

Annese et al. show the situational nature of an effective tutorship style in Whatsapp learning groups, based on an integrated quali-quantitative approach that combines thematic analysis and social network analysis.

Brito Rivera et al. show how group membership and social identity markers are discursively used by researchers to support emerging forms of collaboration and the creation of a common ground during a research-intervention in a hospital.

Bruzzone and Crevani describe a research-intervention process in which researchers, practitioners and older people were involved in co-creating a working method for supporting the introduction of welfare technologies for older people.

Kurilla's article provides a wide and comprehensive critical review of theories and perspectives for qualitative group research, and in particular conceptual devices for research on group communication.

Nitzan and Orkibi examine the experience of participation in arts-based groups for people with mental health conditions in a community rehabilitation program

Parolin and Pellegrinelli present an analysis of an aid practice addressed to the vulnerable population during the first peak of the pandemic. By showing how technologies have the potential to shape courses of action, their analysis—inspired by Actor-Network Theory—provides evidence of how groups, practices and sociomaterial networks are entangled.

Parrello et al. use a longitudinal and process-based qualitative approach to test the efficacy of the Multi-Vision Group - a modified version of the Balint Group - to support team reflexivity and members wellbeing within a non-profit organization operating to reduce socio-educational disparities.

Rania et al. explore reflective practices and group dynamics within online training activities with university students. The data collected through individual reflective practices and the transcripts of the group reflections are analyzed using grounded theory.

Saglietti and Marino focus on an intensive group-care context, i.e., group home for children, and examine the discursive accomplishment of intergroup relations. Based on ethnographic interviews, the authors discuss the co-construction of intergroup relations and ingroup bias.

Scaratti et al. rely on the concept of *liminality* to explore a particular formative group context in an extra-hospital

Rehabilitation Center. The authors analyze conversational data from training sessions to illustrate how this particular context represents a liminal space in which a professional hybridization phenomenon occurs in connection to organizational restructuration, work uncertainty and professional challenges.

Wakke and Heller examine interactions in which students help each other with their learning during classroom instruction, forming groups in the process. The authors reveal how the problem definition is a key moment in the sequential and bodily-spatial unfolding of the help interaction.

In the paper of Jensen et al. an analytical framework for the analysis of organizational cognition is proposed to borrow from recent developments within distributed/ecological cognition.

Alhazmi and Kaufmann present the application of phenomenological qualitative methods to the analysis of cross-cultural experience in novel educational social contexts.

Through an analysis of a focus group discussion on TV series, Weiser-Zurmühlen proposes a methodological framework that combines conversation analysis, positioning theory and stance analysis in the study of group interactions. She argues that by considering both micro and macro contextual features, it is possible to gain a deeper understanding of interactional phenomena in groups.

The studies in this collection have some characteristics which are outlined in what follows.

SITUATEDNESS OF THE PHENOMENA UNDER SCRUTINY

Phenomena under scrutiny such as professional identity, tutorship style, group formation processes, organizational change, and others are considered in their relation to contexts and to the emic perspectives of the actors therein. Research settings include hospitals, community rehabilitation centers, group care homes, schools, and different kind of educational settings and workplaces. Social actors include doctors, nurses, managers, researchers, psychologists, educators, psychoanalytic trainees, university, elementary and high school students, technicians, developers, people with mental health conditions, "street teachers", elderly people. Since in qualitative research data are not "found" but constructed within a researchers-participants relationship and through research instruments, these studies try to make them accessible as much as possible and accounted for in the analysis. By being faithful to research settings and instruments, and to actors' inside views, the studies in this collection aim to account for the situatedness of the phenomena that they explore.

QUALITATIVE DATA CORPORA

The studies in this collection rely on various types of qualitative data, which have the common characteristic of being discursive data, either interactional or textual. Among them we find naturally-occurring multi-party interactions (such as the ones collected in meetings or classrooms), focus group discussions,

interviews, WhatsApp chats, observational reports or narrative reports produced by research participants.

THEORY DRIVEN METHODS

Almost all the studies collected rely on explicitly theory-driven methods, both as for the tools used to gather the data and as for the analytical procedures: phenomenology, ethnomethodology, activity theory, situated action theory, positioning theory, Actor-Network Theory, distributed cognition or a combination of them characterize this assortment.

MULTIPLE ANALYSIS PROCEDURES

Some research in the collection employs quantitative analyses (e.g., frequency analysis, social network analysis) of data gathered with qualitative methods such as ethnographic interviews or video recordings of meetings or WhatsApp chats. Other research makes use of qualitative analyses such as thematic analysis, discourse analysis, conversation analysis and multimodal analysis of interaction. Some authors rely on paper-and-pencil procedures while others on qualitative data analysis software (such as Nvivo).

MULTIPLE PERSPECTIVES ON GROUPS

Groups are considered as quite different "objects" by the authors of the Research Topic. This variety is in line with the heterogeneity of definitions that more generally characterizes group research in social sciences.

In particular, groups are here understood as:

- devices for intervention, as in the case of groups set up for training, reflexive or rehabilitation/care purposes;

- forms of joint practice in contexts of private, educational and working life;
- technologically mediated collections, in which the interaction is distributed between various actors, in space and time and mediated by technologies and sociomaterial processes;
- discursive units, i.e., linguistic markers of collective social identities and group memberships used in communicative exchanges for local rhetorical and pragmatic purposes.

INTERTWINING OF RESEARCH AND ACTION

Several articles describe cases of action-research, in which researchers and participants work together, within group settings, in activities aimed at facilitating reflection and change processes.

These studies' characteristics may or may not capture widespread trends in qualitative research on groups. However, this Research Topic certainly shows the existence of a fruitful field of research that crosses different disciplines and settings. While this Topic shows that attention is growing, the scope for future studies remains large, with many important understudied matters and their methodological implications.

We thank all the authors who contributed to this Research Topic with their findings, together with the reviewers and external editors whose help was essential in getting this collection successfully published.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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"We're All in the Same Boat" – The Experience of People With Mental Health Conditions and Non-clinical Community Members in Integrated Arts-Based Groups

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In recent decades there has been a significant increase in community rehabilitation programs for people with mental health conditions. One such nationwide programs is *Amitim* in Israel whose mission is to foster the psychosocial rehabilitation of people with mental health conditions in the community. *Amitim*'s flagship program consists of arts-based groups that integrate participants with mental health conditions and non-clinical community members. To better understand the experiences of participants in these arts-based groups, five focus groups were conducted with participants from 15 integrated arts-based groups. In total, 17 people with mental health conditions and 21 non-clinical community members were interviewed for this qualitative study. Three main themes emerged from the thematic analysis: creation and expression through the arts promote well-being, self-disclosure in a safe space encourages a sense of belonging, and "we are all in the same boat." The participants underscored the role of creation and expression through the arts in facilitating emotional expression, self-discovery, interpersonal communication, and spiritual elevation. The findings suggest that the facilitators should instill a sense of equality by enabling intergroup acquaintances without labeling participants' mental health status. Integrated arts-based groups should be accompanied by a mental health professional who can contain and work through complex emotional situations when needed. Arts therapists who specialize in both arts and mental health are particularly suitable for this role. Overall, the interviewees reported that participation in the integrated arts-based groups positively impacted their personal recovery processes by providing a corrective experience of equality as well as enhancing a sense of belonging to the community and social relationships. The participants also reported being empowered by the final artistic event that not only enhanced their sense of visibility, competence, and aspirations for future development in personal, interpersonal, and artistic realms, but also helped to combat both self- and public stigma.

Keywords: community rehabilitation, arts groups, theater and drama, creative writing, music, mental health, stigma, recovery

INTRODUCTION

Stigma and discrimination are the two main challenges faced by people with mental health conditions (MHCs) (United Nations, 2017), and constitute their most significant barriers to recovery (Oexle et al., 2018; Wood and Alsawy, 2018). Public stigma is characterized by negative attitudes toward people with MHCs, including stereotypes, prejudices and discrimination (Corrigan, 2000), and may lead to low willingness to engage in social, occupational, familial, or intimate relationships with people with MHCs (Corrigan et al., 2003). The internalization of such negative attitudes by people with MHCs is termed *self-stigma* or *internalized stigma* (Corrigan et al., 2016), which is associated with a decline in hope, self-esteem, social functioning, self-efficacy (Mittal et al., 2012; Boyd et al., 2014; Yanos et al., 2015; Jahn et al., 2020), and less recovery motivation (Drapalski et al., 2013; Link et al., 2015). The recovery-oriented approach reflects the transition from a medical model of isolation to a social model of integration (Jacob, 2015), places the person at the center rather than the illness, perceives people with MHCs holistically and focuses on their integration in the community by improving their quality of life, sense of control, independence, meaning and hope (Slade et al., 2012; Davidson, 2016). Interventions aimed at reducing self-stigma may increase one's sense of meaning and promote personal recovery (Ehrlich-Ben Or et al., 2013; Oexle et al., 2018). Consistent with this view, increasing numbers of rehabilitations programs have been designed to integrate people with MHCs into the community. There is evidence that a contact strategy that advocates direct intergroup interaction between diverse populations for changing attitudes (Allport, 1954) is the most effective strategy for reducing mental health public stigma (Corrigan et al., 2012; Ahuja et al., 2017).

The *Amitim* program in Israel enables adults with MHCs to participate in leisure and arts activities that are offered to the general public in community centers across the country (Halperin and Boz-Mizrahi, 2009). *Amitim*'s integrated arts-based groups is a unique model designed to create a meaningful, interpersonal connection between people with MHCs and non-clinical community members who engage in a joint creative activity and take part in discourse about mental health issues. The purpose of this qualitative study was to examine how both participants (people with MHCs and non-clinical community members) experience these arts-based groups and to pinpoint the challenges and benefits.

The Recovery Approach

"Recovery is a process, a way of life, an attitude, and a way of approaching the day's challenges. It is not a perfectly linear process" (Deegan, 1988, p. 15). More precisely, *personal recovery* refers to an individual process that can primarily be assessed subjectively by the individual, and is not necessarily related to symptom reduction (Slade, 2010; Chan et al., 2018). In this sense, the process of personal recovery focuses on the individual's journey rather than on reaching a goal or an outcome. Personal recovery is subjective and unique to each person, and can be an experience of self-discovery, change and personal growth. It requires commitment and optimism from those who

have MHCs and their families, as well as a support system from professionals, health services and the community (Jacob, 2015). "CHIME" is a widely accepted conceptual framework to identify personal recovery processes, which consists of five essential components: connectedness (relationships, peer support, and part of society), hope and optimism (positive thinking, motivation, and aspirations), identity (positive self-esteem), meaning in life (meaningful life, goals, and spirituality), and empowerment (responsibility and strength) (Leamy et al., 2011; van Weeghel et al., 2019).

In Israel, as is the case in other countries (Slade et al., 2012; Solli et al., 2013; Fernando, 2014), the recovery-oriented approach has influenced psychiatric rehabilitation policy by shifting care from hospital to community services, as manifested in the 2000 "Rehabilitation in the Community of Persons with Mental Disabilities Law." This law is aimed at the community rehabilitation and integration of adults with at least a 40% "mental health disability" (as determined by the National Insurance Institute) and enables them to achieve more functional independence and a better quality of life, while maintaining their dignity, in the spirit of the Israeli "Basic Law on Human Dignity and Liberty." Indeed, this transition has contributed to the quality of life and community integration of people with MHCs (Dudai and Hadas-Lidor, 2008; Roe et al., 2012) and to the establishment of community rehabilitation programs designed not only to reduce self-stigma among people with MHCs, but also non-clinical community members' public stigma (Roe et al., 2016).

Community Rehabilitation and Arts-Based Groups

Studies have shown that leisure activities make a positive contribution to the personal recovery process by endowing individuals with a sense of community membership, autonomy, capability, meaning and hope, while reducing depression, stress and boredom (Chan and Mak, 2014; Iwasaki et al., 2015; Fenton et al., 2017; Chan et al., 2018). A recent systematic review indicated that participation in social activities is one of the most common enhancers of social inclusion (Filia et al., 2018).

There is growing evidence that a personal recovery process can be fostered by pursuing activities in various fields of the arts, and that these activities can improve social abilities, connect communities, and promote well-being (Crawford et al., 2013). Lomas (2016) discussed the significant potential of the arts as a means of experiencing growth and fulfillment, and proposed the term of "positive art" to designate the field that encompasses theory and research on the positive effects of arts activities on well-being. His literature review shows that artistic expression in or appreciation of visual arts, music, literature, and drama contributed to five positive outcomes: awareness, enrichment, aesthetic appreciation, entertainment, and connection with others (Lomas, 2016). Leisure activities such as theater or music, when moderated by a professional with an artistic background, enable the participants to perceive themselves as musicians or actors and not as patients (Ørjasæter and Ness, 2016).

Another literature review identified the core components of theater that may contribute to positive change in people

with MHCs. These include "processes of group cohesion and affiliation, common goals, common experiences, setting characteristics of openness and inclusion, opportunities for community connections and integration, flexibility, and ownership" (Faigin and Stein, 2010, p. 307). Theater also enables people with MHCs to take on valued social roles and publicly challenge mental health stereotypes (Faigin and Stein, 2010). A qualitative study explored the experiences of people with MHCs, their relatives, and health professionals in a local community theater project where all the participants presented as equal members without explicitly revealing their background (Bosco et al., 2014). The participants with MHCs reported improvement in social relationships and quality of life. The relatives of those with MHCs reported noticing personal growth, empowerment, and reduction in their family members' self-labeling (Bosco et al., 2014). A different qualitative study of a theater ensemble involving people with MHCs identified several ways in which this community-based theater impacted people with MHCs, including "personal growth through acting, performing as escape from the self, sharing personal stories on stage and the power of personal stories to connect to audiences" (Faigin and Stein, 2015, p. 153).

A narrative study examined the associations between recovery and participation in a theater group that was part of a community rehabilitation program for people with MHCs (Torrissen and Stickley, 2017). Participants in this study reported an improvement in sense of meaning, sense of belonging, social interaction, peer support, and self-esteem. The authors suggested that participation in community-based theater may have a positive impact on the participants as regards all five recovery processes in the aforementioned CHIME model (Leamy et al., 2011). The qualitative findings of a mixed method study reported trends where people with MHCs who participated in playback theater reported improved self-esteem, creativity and self-expression, self-knowledge, as well as experiences of fun and relaxation (Moran and Alon, 2011). The authors argued that consistent with the recovery approach, playback theater encourages people with MHCs to meet as equals with others, promotes contact, facilitates a sense of community, and helps reduce feelings of isolation and stigma. They claimed that "re-authoring one's own story is the way to shed the identity of "patient" and adopt a new identity with multiple roles" (Moran and Alon, 2011, p. 321). A different playback theater group specially trained to raise awareness of mental health issues gave the audience an opportunity to share experiences of prejudice and discrimination, to protest negative attitudes, and look beyond mental health labels (Yotis et al., 2017). Overall, these studies underscore the contribution of theater to the recovery process. Theater's rehabilitative power lies in its inherent reliance, as an art form, on the presence of an observing other; theater is often defined as A performs B for C, and "theater" in Greek (théâtron) means a "place to behold" "to view" (Theater, 2019).

Music has also been found to impact the recovery process among people with MHCs. According to Ansdell (2010), musical performance not only creates social bonds between people and communities, but also helps to "perform the self" which validates one's existence; namely, "I perform, therefore I am" (Aldridge,

1996 as cited in Ansdell, 2010, p. 171). A qualitative study examined the effect of a drumming group on people with MHCs, compared to a non-music control group. The findings indicated a decrease in depression, a significant improvement in social resilience, and a significant reduction in anxiety compared to the control group (Fancourt et al., 2016). Another qualitative study examined the contribution of a community-based singing activity to the recovery process of people with MHCs (Lagacé et al., 2016). Participants noted a re-discovery of their identity, increased self-confidence, resuming and engaging in meaningful occupations and projects, improvement in social and cognitive skills as well as in their physical condition. These benefits were attributed to a normalizing environment, lack of stigma, high expectations and support for participants, stress relief activities, emotional expression and arousal of cognitive functions (Lagacé et al., 2016). A qualitative study that included 20 interviews and 2 focus groups indicated that engagement in the community-based singing workshops in "Sing Your Heart Out" (SYHO) project improved or maintained the mental health and well-being of the participants, people with MHCs, as well as the general public (Shakespeare and Whieldon, 2018). A thematic analysis of semi-structured interviews of 25 choir members and 23 creative writing group members with mental health conditions indicated that participating in arts-based groups can be empowering, because it increases the participants' awareness of their psychological needs such as belonging, support, self-efficacy, purpose and positive emotions (Williams et al., 2020).

With regards to creative writing, it was suggested that "creative writing might play an important role in recovery from mental illness" (King et al., 2013, p. 450). These authors argued that creative writing in the psychosocial rehabilitation for people with MHCs can contribute to personal identity development, the repair of symbolic functions, and the remediation of cognitive functions. They emphasized the importance of the facilitator's identity as a professional writer rather than a mental health professional in enabling participants to identify themselves as writers rather than as patients (King et al., 2013). The benefits of creative writing in the recovery of people with MHCs were also examined in *Writing for Recovery* (Taylor et al., 2014), a narrative practice development project which provided the participants with a protected space to explore their identities through the writing processes, express their individual unique voices, share social experiences and find personal and social meaning in recovery. In the process of re-storying identities, new relationships were created and the participants' social and self-confidence increased (Taylor et al., 2014). This is consistent with the view that the process of re-authoring one's life story is an integral ingredient of the recovery process because it gives the individual an opportunity to regain ownership of his or her personal story (Roe and Davidson, 2005). A phenomenological qualitative study indicated that personal writing (i.e., poetry, creative writing, story-making, or journal writing) may improve the development of self-identity, expand points of view, enhance self-awareness, assist in the understanding of others, enable spiritual transcendence, and promote personal growth and recovery (Haertl and Ero-Phillips, 2019). In sum, the reviewed studies above focused on the potential impact of theater, playback

theater, music, singing, and creative writing on people with MHCs- art forms that are offered in the *Amitim* program.

Integrated Arts-Based Groups in the *Amitim* Program

The *Amitim* program, founded in 2001 by the Israel Ministry of Health and the Israel Association of Community Centers, operates nationwide in about 80 community centers and serves approximately 3,500 adults (aged 18+) with at least a 40% mental disability, who are eligible for rehabilitation services by law. The professional coordinators of the *Amitim* program accompany the adults with MHCs, facilitate their integration in community center activities and support their personal recovery process and psychosocial rehabilitation (Halperin and Boz-Mizrahi, 2009).

Amitim's flagship activities are its integrated arts-based groups which are designed to enable interpersonal contact and meaningful dialogue between people with MHCs and non-clinical community members. The process is focused on a joint creative activity and is accompanied by a structured discussion on mental health issues and the shared experience. Thus, the integrated arts-based groups aim to impart knowledge and skills in theater, music, writing, or other arts, and to facilitate direct interaction between participants. Intergroup contact (i.e., contact between members of different social groups) have been found to be an effective way to reduce prejudice and intergroup tensions as well as to improve intergroup relations (Christ and Kauff, 2019). This format is consistent with Allport's intergroup contact hypothesis (Allport, 1954), which stipulates that four key conditions are required to create the positive effects of intergroup contact: equal group status within the situation, common goals, cooperation between groups, and support by social and institutional authorities.

Amitims' integrated arts-based groups aim to change attitudes toward mental health in non-clinical community members and to promote personal recovery among people with MHCs. This goal is consistent with the aforementioned cumulative evidence that participating in arts-based groups can have positive psychosocial outcomes. Approximately 15 integrated arts-based groups operate annually in community centers and in several academic settings throughout the country. Each group consists of about 10–25 participants (of whom about 50% are with MHCs), and is led by a group facilitator who is an artist, arts therapist, or other human service professional. Each group is also accompanied by an *Amitim* coordinator. The groups meet weekly for about 2 h and overall group duration ranges between 13 and 36 weeks. A detailed description of the characteristics of participants enrolled in *Amitim*'s arts-based groups is reported elsewhere (Nitzan and Orkibi, 2020).

The Present Study

This qualitative study is a part of a larger mixed methods research program which includes quantitative data collected at beginning and end of the *Amitim* program's annual activities. The present report focuses on the qualitative data collected between August and September 2019 from five focus groups to better understand the participants' experiences in the integrated arts-based groups, as well as the contribution of the groups to the integration of people with MHCs in the community and the reduction of public stigma and self-stigma.

MATERIALS AND METHODS

This qualitative study followed two worldviews. The first is a constructive worldview that focuses on participants' perspectives and the construction of subjective meanings created through interactions with others and cultural norms, as well as the researcher's interpretation. The second worldview is a pragmatic one that involves multiplicity of methods and different ways of collecting and analyzing data according to the requirement of the research (Creswell, 2014).

Participants and Procedure

Thirty-eight individuals were recruited from 15 integrated arts-based groups to take part in five focus groups (singing, music, writing, theater, and playback theater). Of the participants, 26 were females ($M = 42.3$, $SD = 16.48$) and 12 were males ($M = 34$, $SD = 12.83$). There were 17 participants with MHCs (females = 12) and 21 non-clinical community members (female = 14). See **Supplementary Table 1** for a summary of participants' demographics.

In May 2019, *Amitim* program research supervisors together with University of Haifa researchers sent a joint letter to the *Amitim* integrated groups coordinators reiterating the importance of focus groups to understand the participants' experiences and get feedback on the groups. The coordinators were asked to help recruit participants for the focus groups. *Amitim* coordinators of five integrated groups were able to recruit participants for the focus groups and mediated between the researchers and the participants to schedule the time for the sessions. The study was approved by Mental Health Division of the Ministry of Health and by the Ethics Committee at the University of Haifa (approval # 287/17). Participation in this study was voluntary and all the participants signed an informed consent form indicating their willingness to take part in the focus group.

Data Collection

Focus groups were chosen as data collection method because they constitute a collaborative space which enables an open dialogue between participants following a shared experience. All participants can express their opinions, share personal and collective experiences, exchange diverse perspectives, and offer different interpretations. In addition, focus groups may encourage participants who refrain from one-on-one interview to take part in group interview (Bloor, 2001). Five focus groups were held at the end of the integrated arts-based groups annual activities. The focus groups were documented on sight by a professional typist who was committed to confidentiality. The focus groups adhered to a semi-structured interview protocol with open-ended questions and lasted 90–120 min each. At the end of the focus group, each participant received a gift card as an expression

of thanks. See **Supplementary Table 2** for the focus group interview protocol.

Data Analysis

Data were coded using reflexive thematic analysis, which is characterized by theoretical flexibility and is suitable for questions related to participants' experiences, attitudes, and perceptions (Braun and Clarke, 2020). The process included six phases: familiarization with the data by reading the data repeatedly to be intimately involved in the corpus; coding by identifying key characteristics in the dataset and generating codes; generating initial themes by identifying broader meaning patterns (potential themes) across codes in the collected data; reviewing themes by examining candidate themes checked against the dataset and refining them if needed; defining and naming themes by analyzing each theme in detail and giving an informative name to each theme; writing up the report by weaving the data extracts together with the narrative. The checklist for conducting a good thematic analysis was used as a guide to ensure an analysis that was rigorous and robust (Terry et al., 2017; Braun and Clarke, 2020).

FINDINGS

The findings consist of three main themes that are shown in **Table 1**.

Theme 1: Creation and Expression Through the Arts Promote Well-Being
Release and Emotional Expression

Many participants indicated that creation and expression through the arts generate a sense of freedom, release inhibitions, and allow for the expression of emotions that would not have been expressed in other ways. Kevin (pseudonym), for example, referred to the ability of the arts to fully express personality: "I think each art form releases and brings out someone's personality, his endless ability, it releases him from everything" (28/Singing/MHCs)[1]. Carl described the way in which music

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[1]Participants' details are indicated in parentheses after the quotation: Age/Group/MHCs or CM for "non-clinical community members".

TABLE 1 | The resulting themes.

Theme 1. Creation and expression through the arts promote well-being	Theme 2. Self-disclosure in a safe space encourages sense of belonging	Theme 3. We are all in the same boat
1.1. Release and emotional expression	2.1. A safe space enables self-disclosure	3.1. The group as a corrective experience
1.2. Introspection and self-discovery	2.2. Self-disclosure encourages belonging	3.2. Equality: we are all "copers"
1.3. "Just like therapy"		3.3. The final performance as a shared experience of visibility and competence
1.4. Experience of spiritual elevation		
1.5. Interpersonal communication		

helps to overcome negative experiences: "It [music] releases many things, mainly negative, that have been accumulated. . . and there are certain songs you identify with and feel as if they were written about you. . ." (23/Music/CM). Lily referred to the ability of writing to touch emotions: "The beauty of writing is the emotion that comes out without barriers. . . it just comes out, everyone brings out their own pain, their loss, the things that make them feel, whatever makes them cry" (37/Music/MHCs).

Introspection and Self-Discovery

Many participants indicated that creation and expression through the arts promotes introspection and enables self-discovery. Sheila, for instance, said: "Music allows me listen to myself, to my desires, to my needs, I know what is right for me" (48/Singing/MHCs). Claire spoke of unconscious elements and new insights that emerged from writing: "All of my writing. . . I brought out my other self, what was hidden. . . My writing focused on the duality within me" (46/Writing/MHCs). Talia described her self-discovery process: "You tell the story with words, and very slowly you bring out your own personality. . . and you were unaware it existed within you. . . at first these are simple words but afterward you find your secret. . ." (66/Playback/CM). Carl shared his insights as a result of the creative process: "I wrote a letter to my dad, about taking responsibility for mistakes I made and paying the necessary price for them. . . and this is something that was very meaningful in my life. . ." (23/Music/CM). His groupmate, David, added excitedly: "I wrote a letter to my deceased uncle and I discovered that because he loved the sea, it is hard for me to go to the sea. . . I just cried and went to the sea after more than 5 years of avoiding it" (26/Music/MHCs).

"Just Like Therapy"

Many of the participants stated that creation and expression through the arts feels "just like therapy." Vera referred to music as creating an internal healing process: "You relish in something through your sense of hearing and it heals you from within, activates emotions, processes them and connects to them... it begins a process of healing. . ." (39/Music/CM). Sheila described the act of singing as relaxation: "You start singing and it's as if your body relaxes, it's a kind of therapy" (48/Singing/MHCs). Nancy referred to the writing process as a gateway to the inner world: "I think there's something therapeutic in putting forward something that is so personal... words allow access to my inner world" (55/writing/CM). In contrast, her groupmate, Anna, pointed to the danger of overexposure: "When a group becomes something more therapeutic it loses its value. . . because therapies, with all due respect, we have had enough. . ." (38/writing/MHCs).

Experience of Spiritual Elevation

Many of the participants referred to the spiritual aspect of creation and expression through the arts, which is beyond the spoken word or rational thinking. It is an elevating experience of connecting to the powerful and divine spring of creativity. Kate tried to explain the spiritual experience music affords: "Music takes us to another dimension, to a kind of spiritual level that we cannot achieve during a conversation, because it's hidden very

deep within us and we cannot express it in words. . . with music, suddenly something comes into the surface" (25/Music/CM). Peter found it difficult to describe the unique experience in words: "Everyone knows what it's like to feel something, and no matter how many words you use to try to describe it, it won't convey the feeling. . . music. . . it's more a connection on the divine level" (26/Music/CM). Ellison described an unexpected mystical process: "I see it as a mystical consciousness process. . . I don't know what I'm going to be and what will pass through me. . . it's surprising every time" (41/Playback/CM), and Kevin emphasized the unique experience of elevation, which is hard to explain in words: "The moment you create something. . . you're above your own self. . . there's power in a choir, there's power in singing, I think it's something that is very hard to explain, in the same way that you cannot explain in words what love is, it's something you feel" (28/Singing/MHCs).

Interpersonal Communication

Many participants referred to creation and expression through the arts as a unique channel of communication which helps them communicate with their environment, encourages social encounters, and alleviates loneliness. Vera, for example, described the social changes she experienced because of the process: "The words, the music, the sounds carry you. . . I was a person who afraid to make her voice heard or express herself. . . so not only have I overcome shyness, but I also feel socially accepted" (39/Music/CM). Maria described the unmediated way in which theater allows expression: "The theater allowed me to speak and bring out everything I feel in a different way. . . once you manage to speak. . . people also see you differently" (33/Theater/MHCs). Fred referred to the way in which creation and expression through the arts mediate the inner and the outer worlds and make personal content more accessible: "You learn to deliver this content, what you produced . . . so, it is both readable, interesting, something that someone would like to read" (57/Writing/CM). Similarly, Nancy referred to writing as enabling communication with others: "Writing, at its core, is a communication of repressed issues. . . I wrote something that led me to understand something incredibly significant about myself... before reading, I said to myself: "It is entirely uncommunicative". . . but. . . wow. . . everyone understood me" (55/Writing/CM).

Theme 2: Self-Disclosure in a Safe Space Encourages a Sense of Belonging
A Safe Space Enables Self-Disclosure

Most of the participants referred to the group as a safe space that provided a sense of unconditional acceptance that permitted them to bring up complexities without fear of judgment or criticism. Selina explained the need for a safe place: "There must be a safe space for us, to be exposed and bring out our psyche materials... to come every time and bring part of yourself, knowing it will be embraced and accepted in this room" (60/Writing/CM). Ella mentioned the importance of containment for musical development: "I wanted a place that can contain and hold [me]. . . to progress with music

in a safe environment and I got more than I expected. . ." (21/Music/MHCs).

According to many participants, the feeling of safety was influenced not only by the participants themselves, but also by the facilitator's presence and his/her ability to contain the group while maintaining clear boundaries. Ellison, for instance, emphasized the facilitator's presence: "She was very present and when you feel her presence you can feel safe around her. . ." (41/Playback/CM), and Natalia clarified the importance of setting boundaries: "Wherever a strong hand was needed, she took a strong position" (53/Playback/MHCs). James described the facilitator's ability to hold the group in a positive way: "She knew how to set boundaries, but with a smile" (46/Singing/MHCs). Bill commended the facilitator's ability to deal with members leaving during the process: "The way in which the facilitator dealt with it, was very concrete, very compassionate, but also very respectful, and it was clear to all of us that whoever was left, was in good hands" (25/Theater/CM). In contrast, Mali, from the same theater group, who was negatively affected when participants left the group, suggested that help from an outside professional was necessary: "I found it very hard when people left, and I felt that there wasn't enough of a discussion about it. . . someone from outside the group could have come and talked about it. . . I didn't know how to deal with it" (26/Theater/CM).

Some non-clinical community members in the music group expressed the need to be accompanied by a professional to contain complex mental experiences. For example, Peter emphasized the need for more preparation in terms of what they would encounter, to be able to support their groupmates when needed: "Here it is critical. . . to know more about people. So, if someone says, "I have a manic-depression condition," or someone else would say, "I have an outbreak"... I would be ready for it. I want to be his friend and I'm ready to contain it" (26/Music/CM). Conversely, participants in the writing group thought the facilitator avoided over-disclosure and dwelling upon "deep psychological issues" because the facilitator focused on the artistic form rather than the content. Selina stated that "The facilitator held the safe space and indeed. . . she did not focus on the content of the psyche depths of each participant rather [just] the essence of it all. The constructive criticism referred to the form" (60/Writing/CM). Diana addressed the dangers inherent to over self-exposure: "One needs to avoid falling into holes" (72/Writing/CM), and Fred described the clear boundaries set by the facilitator: "[the facilitator] made sure the group did not go in the wrong direction.... if someone started to analyze the content, she put a stop to it" (57 Writing/CM). Nancy concluded: "I think she [the facilitator] succeeded, without making it a therapeutic group, in creating a space in which different contents were brought to the surface. . . a space which is very open minded, a space that allows you to explore everything for real, not in a sense of "solve my problem," but simply "I wrote about it, and I'm sharing it with you. . ." (55/Writing/CM)".

Self-Disclosure Encourages Belonging

Self-disclosure encourages a sense of belonging and acts as a "ticket" to the group. Lily shared her insights: "Openness

creates openness, period. The question is how to achieve this initial openness.... You cannot force people to say things" (37/Music/MHCs). Faith emphasized the importance of sharing in the group, as a way of instilling a sense of belonging: "I had the opportunity to tell my life story since the day I was born. . . and it enabled me to feel comfortable with everyone. . . Once you reveal your past, your history, you become a part of the group" (67/Singing/CM). Dan described the process of creating a sense of belonging in the group: "I, for example, do not belong to *Amitim,* however, I also have my difficulties. . . at first it was hard for me to talk about it, but I saw that it's common to so many of the group, so I felt a part of it. . . that I can also share and open up. . . I felt brave and strong afterward because I could do it in front of everyone" (29/Singing/CM).

Many participants described the empathy they felt toward their groupmates because of their disclosure. This feeling deepened their mutual sensitivity and created a fertile terrain for commitment to the group and the process. Sheila described the impact her story had on the other members: "My story probably touched [the participants] and it allowed people to speak up" (48/Singing/MHCs). Carl stated how he identified and empathized with others in his group: "I feel I had someone to identify with. . . as if I can share this empathy with more people (23/Music/CM), and George talked about the experience of being together: "You tell your story, and the whole group tries to help you, and look for ways to reach out, or how to touch, or where it touched them. . ." (59/Playback/CM).

Theme 3: We Are All in the Same Boat

The group was compared to a boat sailing on the water with everyone on board. The weather is constantly changing, the sea is sometimes calm and at other times stormy, strong winds are blowing and currents of water from different directions threaten to capsize the boat. The boat reaches the shore, thus culminating the journey in performance. During this emotionally challenging journey, the group members learn to listen to themselves and to others, to take space as well as to give, and utilize the artistic medium to look within and outside into the world, look straight in the eyes of their community.

The Group as a Corrective Experience

Many participants said they went through a new experience which differed from past group experiences. Ella said "Honestly, [it] is the best experience I've been through in my whole life. . . For me, it corrected what I went through at school: the attitude, my feelings in the group. I always had anxieties in groups that I would re-experience the same. . . After I said this a few people hugged me, and I saw that it's different here and I feel accepted and loved and can express myself. . ." (21/Music/MHCs). James described a new experience of connection and support: "I truly discovered genuine support for one another, and a bond which didn't exist in any other group I've ever been to, because there were always ego and power struggles" (46/Singing/MHCs). Dan likened his experience as a youngster in an adult band, to his current experience: "They didn't give me opportunities to sing solo. . . they put me in the back . . . it crippled my motivation to continue. When I came here, I felt there is no discrimination

against someone older, advanced, beginner. . . I'm given my own place and the atmosphere is a lot more supportive. . ." (29/Singing/CM). Sofia described the changes she experienced: "Usually, when I join a group, I'm very reserved and quite scared of what others will say about me. But here, when I saw how they approached me in the first session, I said to myself: "Go ahead, raise your hand, don't be shy". . . I came home and told my mom: 'Why can't every day be a Thursday?'" (22/Theater/MHCs). Jack described his experience as entirely different from anything he had experienced so far in similar situations: "When I went on stage I did so with tears in my eyes. . .That for me was the most significant moment. . .Usually, when I'm feeling unstable, I move away from people, whereas over there [on stage] I put myself in front of people" (33/Theater/CM).

Equality: We Are All "Copers"

Most of the participants with MHCs felt they did not experience prejudice when getting acquainted with their groupmates, but rather were accepted "at face value." They emphasized the importance of getting to know one another without stigma. They also indicated they are often guided by a sense of mission to normalize difficulty and show the non-clinical community members that they are not defined by their illness. Some of the participants with MHCs admitted that there is something comforting in discovering that non-clinical community members also need to cope with mental health issues. Kevin stated: "Even those who are not diagnosed are coping with issues, even those who do not seem like people with MHCs suddenly tell us about things they've been through, difficulties they have, and it is very much encouraging for us. . . I am here as a messenger; to show we are part of the community. . . And overall, we are completely ordinary people, the illness does not define us" (28/Singing/MHCs). Sheila confirmed this by stating: "We are humans first [and foremost]. We are not our illness" (48/Singing/MHCs). Anna stated: "It's not like we have a sticker on our forehead: "I'm coping with a mental condition," "I'm ordinary".... You wouldn't know who's coping with a mental issue and who isn't" (38/Writing/MHCs). Nina emphasized her self-perception as an ordinary person: "I came to tell my story, showing that even though I'm coping with something, I don't have horns, or a tail, or anything, I'm an ordinary human being. Just like there is someone coping with a physical disability, I am coping with a disability which is a mental one. . . and indeed I was worried. . . that there would be "them" and "us" – "the copers" – but it was not the case" (28/Theater/MHCs), and her friend Maria concluded: "I think that what allowed us to love one another is that we learned to get to know each other without the stigma. . ." (33/Theater/MHCs).

Similarly, many of the non-clinical community members maintained they did not always know who had an MHC and who did not, everyone has vulnerabilities and complexities, and labeling is irrelevant, as reflected in Ellison's words: "I never understood or knew which participants had mental illness and who didn't. We were all "copers" (41/Playback/CM)". Some of the non-clinical community members described a process that reflected a change in perceptions from fear of problems with opposing groupmates to a realization that "we are all copers"

and equals. Isabella clarified: "At the beginning I felt certain disparities but with time it turned into a "non-issue". I didn't care who's from *Amitim* and who isn't . . . you hear someone's story, and you don't know how to deal with it. . . which is often a strange world for me. So, there was a certain shock and difficulty. . . but with time. . . it passed" (45/Playback/CM). Bill, who had just begun taking psychiatric medication stated: "I realized that I have an mental health condition too, so it's really frightening. I didn't want to see people who are like me, I was very afraid it would make me deteriorate. . . and this year made me feel the best I ever felt, this group. . ." (25/Theater/CM).

Different points of view expressed by the participants with MHCs and non-clinical community members brought the issue of "us" and "them" to the surface. For example, Emily divided the participants into those who are healthy and those who are sick, those who are strong and those who are weak, those who help and those who need help and was convinced that the "other participants" were told to help those who experienced difficulties: "I felt tremendous support from them. . . They helped and supported me throughout which was amazing, and I believed that they had been instructed to 'go help this one'" (56/Theater/MHCs). Faith apparently differentiated between herself and the participants with MHCs stating "the encounter gave *them* a lot" (67/Singing/CM).

The sense of equality also stemmed from the fact that the facilitators provided equal opportunities for all participants regardless of their mental health issues, Nancy stated: "There is something about her [facilitator] that made everyone [feel] equal. . . she said more than once that she is also a "coper" like the rest of us. . . . everyone starts at the same place, regardless of background and life circumstances and this and that category". . . (55/Writing/CM). Claire confirmed: "She treated everyone equally rather than who's a better writer. . . she truly gave everyone the stage and a warm, encouraging attitude. . ." (46/Writing/MHCs). The group facilitators set high artistic standards for all participants and in this way conveyed a message of equality that everyone can face challenges. George stated: "she demanded high standards. Like, if something was not accurate. . . then she motivated us or insisted on it. She always made us feel like we needed to appreciate ourselves as actors" (59/Playback/CM). His groupmate, Liliana, added: "She [the facilitator] believed in each one of us. . . we came with a certain goal we all shared . . . I felt real warmth from everyone who were united around a certain goal . . . and there was equality among all of us" (26/Playback/MHCs).

The Final Performance: A Shared Experience of Visibility and Competence in Front of the Community

The culmination of the group process was a performance in which the participants share the output their creation with the community, family, and friends. The participants were committed to the final performance which made them feel visible and seen. Many of the participants with MHCs described being in front of the audience as a coming out, moving from the darkness into the light. David stated: "It's like coming out of the closet... as if until now we were hidden inside us... in a performance you reveal yourself in front of everyone"

(26/Music/MHCs). Kevin stated: "You are literally being seen, both as a participant with MHCs, as well as a vocalist and it's fun. They [the audience] come. . . and they suddenly see: "Wow. . . you are regular people". . . I said [to myself]: 'I broke the stigma, I won!'" (28/Singing/MHCs).

Many participants with MHCs argued that the belief in their artistic ability allowed them to do things and produce pieces they did not believe they could produce. They emphasized the experience of success and the feeling of competence they felt after the performance. Emily admitted: "I simply didn't think I'd be capable of doing it... they made me feel I was worth something after all. . . it gave me meaning. . . I felt love. . ." (56/Theater/MHCs). Ella said she "felt it was the climax of the whole process . . ." (21/Music/MHCs).

However, two participants with MHCs from the theater group were dissatisfied with the drastic transition from the more relaxed work process that characterized the meetings during the year, to the pressure and intensiveness that characterized the preparations for the final performance. Emily stated: "All of a sudden there was an insane pressure for the performance, suddenly we come on Fridays-Saturdays [weekend], the whole week, every day, and it was like completely unbalanced... it was very. . . for me. . . intensive... It was extremely hard" (56/Theater/MHCs). Maria agreed, and added: "It became stressful. . . also because I'm working and if I don't work, I won't have money for rent or for therapy" (33/Theater/MHCs).

The non-clinical community members discussed the positive experience. Kate addressed the empowering experience of being seen: "Suddenly we are on stage and there are people from the outside who see us, and all of a sudden from being in a room, we are in a whole auditorium, [they] see what we were doing the whole year. . ." (25/Music/CM). Jessica stated: "There was something crazy in the air. . . I felt as if the auditorium was very small suddenly. . . it was such an intense experience, and I was very excited. . . there was truly a strong bond" (26/Theater/CM). However, Diana expressed her concerns: "I invited my son to the performance. . . I was very afraid of the criticism. . . but he was extremely impressed. . . it was very dignified [performance]. . ." (72/Writing/CM).

DISCUSSION

The purpose of this study was to document the experiences of participants in *Amitim*'s integrated arts-based groups and to pinpoint the challenges and benefits. The findings suggest that *Amitim*'s integrated arts-based groups fulfill the four main conditions to create positive effects of intergroup contact (Allport, 1954): participants with MHCs and non-clinical community members met as equals, there was intergroup cooperation and work toward a common goal, with the support of the *Amitim* program and the National Insurance Institute (i.e., the "authorities"). The participants with MHCs reported they did not experience any manifestations of prejudice, consistent with findings showing that contact is the most effective strategy for reducing public stigma in adults (Corrigan et al., 2012; Ahuja et al., 2017).

For the participants with MHCs, the integrated arts-based groups were an opportunity to normalize their difficulties. Specifically, the groups fostered the feeling that their illness does not define them and enabled them to experience more intergroup similarities than differences, similar to other studies where people with MHCs interacted with others as equals, which helped reduce feelings of isolation and stigma (Moran and Alon, 2011). In some groups, the non-clinical community members stated they had no idea which participants had MHCs and which were non-clinical community members, while in other groups some participants indicated that over time it became a "non-issue.'" In one group, a non-clinical community member who started to take antidepressants wondered if he should now belong to the group of participants with MHCs, and some participants with MHCs were surprised to discover that non-clinical community members also cope with mental health issues. This finding underscores the blurred intergroup differentiations in *Amitim*'s integrated arts-based groups that meaningfully contributed to the overall sense of equality and acceptance. This suggests it is crucial to facilitate acquaintance between participants as equals, without labeling or prejudice, thus permitting each individual to decide when and if to reveal their condition. However, in our study, few participants with MHCs in the integrated groups still expressed internalized negative attitudes (self-stigma), which seems to have impacted the way they have experienced their encounter with the non-clinical community members.

The Role of the Facilitator

Most participants indicated that the facilitators provided equal opportunities for all of them, regardless of their mental health status. The facilitators made equivalent demands of high artistic quality and commitment to the artistic process, which contributed to the sense of equality experienced by the participants with MHCs.

The facilitator's identity was perceived as a significant factor for the participants. The music group was facilitated by a well-known musician, the singing group, by a singer, the writing group by a writer, the theater group by both a theater director and psychodrama therapist, and the playback group was facilitated by a drama therapist. On one hand there are many advantages to having facilitators who are well-known professional artists in that they have the skills to support the creative process and set the same standards for everyone. Studies have shown that the facilitator's identity as a professional with an artistic identity, rather than a mental health professional, allows participants to identify as writers, actors, or musicians rather than as patients (King et al., 2013; Ørjasæter and Ness, 2016). On the other hand, an artist is probably less well equipped with the knowledge and skills to deal with situations that may arise when group members experience personal or interpersonal difficulties. The consistent presence of a mental health professional in the group, such as the *Amitim* coordinator, may provide an adequate response. The need for the presence of a mental health professional can be resolved by assigning an arts therapist who has been trained in arts and therapy as a facilitator, as was done in a playback theater group in which some of the actors were also therapists (Yotis et al., 2017). Interestingly, the need for

the involvement of a mental health professional was voiced to a greater extent by the non-clinical community members than participants with MHCs; possibly because the latter are more familiar with mental health issues and are undergoing treatment. In fact, the non-clinical community members' need for emotional support also contributed to the sense of equality in participants with MHCs.

The Benefits of the Arts

Most participants felt that creation and expression through the arts promote well-being, consistent with findings that engagement in community-based arts groups promote well-being (Shakespeare and Whieldon, 2018), social connectedness and the process of personal recovery (Crawford et al., 2013). Opportunities for community connections and inclusion are recognized as among the core components of theater that may contribute to positive change in people with MHCs (Faigin and Stein, 2010). The participants referred to the creation and expression through the arts as a unique channel of communication which mediates the inner and outer world, allows for self-expression, and focuses on strengths rather than the illness. They emphasized the arts' unique qualities that enable introspection, self-discovery and insights as the creative process unfolds. Disclosing personal contents in the groups encouraged mutual empathy and promoted a sense of belonging. The participants had the opportunity to share their emotional experiences in a safe space, while experiencing acceptance, containment, and support. This is consistent with the idea that "re-authoring one's own story is the way to shed the identity of 'patient' and adopt a new identity with multiple roles" (Moran and Alon, 2011, p. 321). Similarly, research on community-based singing activity suggests that people with MHCs experience re-discovery of their identity (Lagacé et al., 2016). This is consistent with the recovery-oriented approach which perceives people with MHCs holistically, places the person in the center rather than the illness (Slade et al., 2012; Davidson, 2016), and views the recovery process as a subjective journey of self-discovery, change and personal growth (Jacob, 2015).

Many participants referred to creation and expression through the arts as a mystical process of consciousness, spiritual elevation, and a sublime experience of connection to the powerful divine spring of creativity. Similarly, research indicates that people with MHCs experienced personal writing as enabling spiritual transcendence (Haertl and Ero-Phillips, 2019). Transcendental or "divine" awareness can be expressed in poetry, music, or other arts (Mitchell, 2011), and is associated with hope, empowerment, and a sense of well-being (Tanyi, 2002). Spirituality was noted to be inherent to the rehabilitation process of people with schizophrenia and their well-being (Ho et al., 2016), and is one of the significant factors supporting the recovery journey (Wood and Alsawy, 2018). This is consistent with the CHIME framework for personal recovery processes, where spirituality is part of having a sense of meaning in life (Leamy et al., 2011). Hence, the spiritual experience described by the participants and expressed in creation and expression through the arts may play a central role in the process of personal recovery.

Some participants experienced the creation and expression through the arts to be "just like therapy," consistent with the findings that participating in arts-based groups can be empowering, because of the participants' increasing awareness of their psychological needs (Williams et al., 2020). However, a participant with MHC objected that the group could become therapeutic because "there are already enough therapies." This view emphasizes the need to preserve the group as a place for artistic development accompanied by an in-depth process of growth and personal empowerment. Nevertheless, different participants have different needs and groups differ in terms of their level of disclosure, need for support, and the ability to contain the intensity and pressure associated with the final performance. Still, it would be useful to compare the impact of integrated arts-based groups to that of creative arts therapies (Orkibi et al., 2014; Orkibi and Feniger-Schaal, 2019; Feniger-Schaal and Orkibi, 2020; Shafir et al., 2020).

Some of the participants described the final performance as "a moving from the darkness into the light" and referred to the empowering experience of "being seen" or the "performance of the self" which validates one's existence (Ansdell, 2010). The sense of being transparent causes people with MHCs to hide from society (Corrigan et al., 2016; Jahn et al., 2020), thus the experience of "being seen and being heard" was a particularly empowering experience for the participants with MHCs. The final performance was an opportunity to reveal themselves to their family, friends, and community, to share the healthy parts, their abilities, vitality, and creativity. They are equal human beings just like the non-clinical community members who perform with them. The audience may change their perception focused on illness and inability, and see them in a more positive light, which may help reduce public stigma. According to the participants, experiencing competence and success is a corrective experience that helps to increase self-confidence, self-esteem, and a sense of self-efficacy, and may reduce self-stigma. The path to further successful experiences, even in everyday life, has been charted.

Limitations and Future Directions

While the study consisted a sizable number of participants, it only included five focus groups, out of 30 integrated arts-based groups, and only included individuals who volunteered to participate in the focus groups, rather than all members. Future studies would benefit from interviewing people with MHCs in *Amitim* who chose *not* to participate in the integrated groups to learn about potential barriers and hindering factors. Furthermore, the only clinical information available from *Amitim* was that the participants had a mental health disability of 40% or more. While this approach is consistent with the non-labeling stance of the recovery model of *Amitim*, as well as the ethics approval obtained for this study, it would be useful to assess how individuals with different MHCs (i.e., diagnoses) experience the program. Future studies should also examine the unique meaning of each artistic medium *per se* and arts forms not included in this study, such as visual art and dance. Future work could examine the associations between spirituality, creation and expression through arts, mental health, and recovery. Finally,

our quantitative findings of pre- and post-participation in the integrated arts-based groups would shed light on the influence of the program on stigma reduction, sense of community, and personal recovery.

CONCLUSION

The findings suggest that according to the interviewees participating in integrated arts-based groups had a positive impact on their personal recovery processes in a variety of ways including a sense of belonging to the community, motivation, and aspirations for future development in personal, interpersonal, and artistic realms, introspection, increased self-esteem and self-efficacy, and a greater sense of meaning and empowerment. These findings are consistent with the "CHIME" framework that defines components of personal recovery (Leamy et al., 2011). Participants' experiences in the integrated arts-based groups underscore the role of creation and expression through the arts in emotional expression, spiritual elevation, self-discovery, interpersonal communication, and ultimately, their well-being. Furthermore, in the two groups that were run at educational institutions where the non-clinical community members were students, the integration of participants with MHCs into an educational program had two benefits: (a) instilling confidence in participants with MHCs that they can enroll in educational programs open to all, and (b) helping to combat public stigma, prejudices, and discrimination. Thus, the expansion of integrated arts-based groups to more educational institutions in addition to community centers should be considered for a more inclusive educational curriculum. Facilitators of integrated groups should create a sense of equality by enabling intergroup acquaintances without required or premature disclosure of the participants' mental health status. Because arts-based group facilitators must be able to contain and work through complex emotional situations when needed, it seems safe to conclude that arts therapists, who specialize in both arts and mental health, are particularly suitable for that role. When an artist facilitates an integrated group, he or she should be accompanied by a mental health professional. Thus overall, these programs help optimize not only the fight against stigma in the community but also support the personal recovery journey of all their members.

DATA AVAILABILITY STATEMENT

The datasets presented in this article are not readily available because the qualitative data from focus groups are in Hebrew. Requests to access the datasets should be directed to corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Human Research Ethics Committee, Faculty

of Social Welfare and Health Sciences, University of Haifa (approval # 287/17). The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

AN: study design, data collection and analysis, and writing and revising of the manuscript. HO: study design, writing and revising of the manuscript, and supervision. Both authors contributed to the article and approved the submitted version.

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2021.661831/full#supplementary-material

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Supporting Team Reflexivity During the COVID-19 Lockdown: A Qualitative Study of Multi-Vision Groups In-person and Online

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Introduction: The professional self is often hindered by a lack of self-care and poor work-life balance, and cannot be considered an unlimited resource. Given this, the reflexive team is an important organizational tool for protecting workers' well-being. The non-profit organization *Maestri di Strada* (MdS) ("Street Teachers") conducts action research (AR) in the area of socio-education. The main tool used by the group to protect the well-being of its members is a guided reflexivity group, inspired by the Balint Group and termed the Multi-Vision Group (MG). In March 2020, because of the COVID-19 lockdown, the MdS team had to quickly revamp its working model, and MGs were held online for the first time.

Aim: Through qualitative research that takes a longitudinal approach, the aim of this study is to evaluate the efficacy of the MG in supporting the team's reflexivity in this new online format.

Methods: This article considers MGs during two different time periods: pre-pandemic (T1) and early pandemic (T2). During T1, the MdS team met 18 times in person, while during T2 the team met 12 times through an online platform (always under the guidance of a psychotherapist). During all sessions in both time periods, a silent observer was present in the meetings, and they subsequently compiled narrative reports. The textual corpora of the reports were submitted for a Thematic Analysis of Elementary Contexts through T-Lab Plus, in order to examine the main content of the groups' discourse.

Results: The results (five clusters in T1; and five in T2) show that, during T2, the group devoted considerable time to experiences tied to the pandemic (T21: schools facing the pandemic crisis; T2.2: the pandemic: death, inner worlds, and thought resistance; T2.3: kids' stories involving physical distancing and emotional proximity). The group also came up with innovative educational initiatives that defied the lockdown (T2.4: fieldwork: the delivery of "packages of food for thought"; T2.5: the MdS group: identity and separation). Based on these findings, the MG most likely contributed to the emergence of MdS as a "resilient community," capable of absorbing the shock of the pandemic and realizing a fast recovery response.

Keywords: socio-educational work, team reflexivity, action-research, COVID-19 lockdown, modified balint group, online group, T-lab text analysis

INTRODUCTION

Professional Self, Well-Being, and Teams

Non-profit organizations are steadily becoming a larger presence in Italy (ISTAT, 2020). However, these organizations face considerable difficulties that impact workers' well-being, such as excessive employee turnover, decreased public funding, delays in contract renewals, and a lack of systematic resources for supervision and the kind of reflection that creates team support (Olivieri, 2019).

The professional self, which is closely related to the personal self, has an intersubjective, narrative, discursive, and reflective structure (Manuti, 2006; Fellenz, 2016). It can be harmed by a lack of self-care and by poor work-life balance (Myers et al., 2020). The professional self cannot be considered an unlimited resource, and because of this, team support is particularly important: new ideas and innovation emerge *between* rather than *within* people, thereby emphasizing the importance of the social and collective context (Barak et al., 2010).

Initial professional training based on knowledge and skills is not enough to support those who work in challenging environments: "on the one hand, knowledge will not just be out of date, but will always be insufficient to describe the novel and unstable situations that present themselves; on the other hand, skills are always addressed to known situations, and cannot be addressed to unforeseen (and unforeseeable) situations" (Barnett, 2009, p. 439). Training of the kind described by Barnett is very widespread today and, according to Urdang (2010), it has abandoned both its basic psychodynamic orientation, as well as its emphasis on professional self-construction and on process-oriented work. Instead, training focuses on cognitive-behavioral theories oriented toward finding solutions, and on time-limited and evidence-based treatments that are results-oriented. These approaches tend to reinforce socio-educational workers' tendencies toward "omniscience, benevolence, and omnipotence" (Brightman, 1984–1985). Thus, larger questions related to meaning, inner life, and group dynamics are often overlooked (Applegate, 2004).

Reflexive processes are considered a crucial strategy for socio-educational workers dealing with uncertain, complex, ambiguous, and unpredictable situations (Spafford et al., 2007; Afrouz, 2021). Reflexive processes are also helpful in managing the financial insecurity of the profession (Werzelen et al., 2019). However, a certain amount of uncertainty, in contrast to the centrality of bureaucratic organizations, is equally crucial to this field (Finlay and Gough, 2003; Striano et al., 2018). In this profession, emotions, thoughts, and actions are intrinsically connected. *During* professional activity, it is often a "defended self": defenses can be exceptionally heightened by difficult situations (Bower, 2005; Trevithick, 2011). For this reason, it is important to cultivate reflection *after* professional activity: such reflection entails a dynamic process of self-awareness that takes into account emotions as well as both external and internal reality.

Although it is not easy to prove the link between reflection, educators' well-being, and the efficacy of interventions to promote team reflexivity, multiple studies have suggested that reflexive practices improve relationships with others and with one's professional practice. It thus protects from the risk of burnout, especially in unpredictable and complex environments (Widmer et al., 2009; Morgan et al., 2013; Matyushkina and Kntemirova, 2019).

Moreover, there are multiple studies on team reflexivity and its positive effects on performance, innovation, and efficacy (De Dreu, 2002; Schippers et al., 2015; Konradt et al., 2016).

The link between reflexivity and specific characteristics of any given team (such as trust, psychological safety, a shared vision, and the diversification of its professional members) has been shown to have a direct, positive effect on the performance of the team (Hinsz et al., 1997). Diverse teams possess a great variety of knowledge, competences, and skills; they also must integrate differing opinions and perspectives on the task at hand. According to van Knippenberg et al. (2004), this process generates more creative and innovative ideas.

The reflexive team is thus an important organizational tool for protecting workers' well-being. Studies have shown that team reflexivity positively affects job engagement (as measured by efficacy, energy, and level of involvement), compassion satisfaction (defined as the pleasure derived from being able to do one's work well while also helping others), and resilience (the ability to respond positively to challenging experiences) (Sanchez-Reilly et al., 2013; Lines et al., 2021).

The Non-profit Organization "Maestri di Strada"

The non-profit organization Maestri di Strada (MdS, or "Street Teachers") carries out complex socio-educational interventions, both inside and outside of schools, in order to prevent dropout rates and promote the social inclusion of young people.

Maestri di Strada began in Naples, Italy in 2003 with the "Chance Project," which offered a second-chance school to young people who had previously dropped out. Since 2010, MdS has launched many new socio-educational projects in partnership with the University of Naples Federico II.

These projects serve the eastern suburbs of Naples: specifically, the San Giovanni, Barra, and Ponticelli neighborhoods. This area has 140,000 inhabitants and covers an area of 20 km^2. The environment is characterized by high levels of social inequities, poverty, and high rates of early school leaving. Here, criminal organizations recruit many young people who lack both qualifications and employment, and are vulnerable to promises of "quick profits." Young children below the age of criminal responsibility are often recruited, and the number of young victims of murder is remarkably high. Many of those young people internalize the experience of social exclusion, which transforms into feelings of shame, anger, and a widespread sense of "learned" powerlessness (De Rosa et al., 2017; Parrello, 2018).

Maestri di Strada's interventions follow a theoretical framework which is grounded in cultural psychology and psychoanalysis. Accordingly, all forms of learning and all relationships, whether between clients and workers, or between colleagues, are situated semiotically and characterized

emotionally depending on both conscious and subconscious dynamics (Salvatore and Zittoun, 2011).

Maestri di Strada's projects are configured as action research (AR), and often as participatory action research (PAR) (Moreno, 2009; Parrello et al., 2019a).

Action research, as it is known, is a model of investigation whose main aim is to improve the future skills and activities of the researcher, rather than to produce theoretical knowledge. In the 1950s, AR also spread to the field of education (Kaneklin et al., 2010; Baldacci, 2012), and today it is considered one of the most important strategies for qualitative research in education (Coggi and Ricchiardi, 2005), as well as for community care (Lipari and Scaratti, 2014).

At the end of the 1960s, an international network of researchers originated participatory action research (PAR) in order to tackle various problems facing marginalized members of society. Participatory action research deals with power imbalances that generate social and individual distress (Arcidiacono et al., 2017; Stapleton, 2018). For this reason, the PAR method is thought to be particularly suited to the educational field, where power dynamics are a constant presence (Jacobs, 2016). In PAR, knowledge is created by the people involved in the research process, in a non-hierarchical, democratic environment (Savin-Baden and Wimpenny, 2007) that produces contextual knowledge (Pine, 2009).

Reflection is part of the PAR cycle, which can be described as a metacognitive process that consists of exploring personal beliefs, thoughts, and actions in a deliberate, autobiographical, and critical way (Marcosa et al., 2009).

At MdS, both AR and PAR projects aim to identify initiatives that can re-motivate young people to engage with school and to develop active citizenship practices. Young people are assisted individually or in groups by a tutor who is either an adult or a peer a few years older than them. Participants sign up for educational and/or creative workshops, and become actively involved in community events. Moreover, MdS has also developed wider social interventions aimed at supporting families, teachers, and entire communities.

Currently, the MdS team—which seeks to develop multi-disciplinary synergy—is composed of 45 members: educators, teachers, social workers, artists, community parents, psychologists, sociologists, and educational theorists.

Maestri di Strada can be defined as a "community of practices" (Wenger, 1998) because its members are united by a common mission, reciprocal commitment, and a shared narrative repertoire. It is also a "reflective community" (Schön, 1983) because the team's reflexivity is at the center of its methodology (Leitch and Day, 2020). The main reflexive tool used by MdS is the Multi-Vision group (MG) (Parrello et al., 2020).

The Outbreak of the COVID-19 Pandemic

In March 2020, the World Health Organization declared COVID-19 a pandemic on the basis of its global diffusion. Italy was the first European country to be seriously affected by the virus, and the government promptly implemented very restrictive measures aimed at the entire population. A lockdown

was enacted involving all collective economic, cultural, and educational activities, which were substituted, whenever possible, by distance working and learning. All persons were forbidden from leaving home, except in cases of utmost urgency. Such a drastic and sudden form of social distancing and isolation is unprecedented in history.

The spread of the virus, its daily death toll, and social distancing undermined senses of stability, safety, and identity, as well as physical and psychological continuity, for both individuals and communities (van der Kolk, 2014). Thus, the traumatic impact of the pandemic immediately became clear: many experienced immobility, loneliness, uncertainty, a distorted sense of time, the loss of predictability in the world, and a loss of life's meaning.

Various psychological consequences of the pandemic have already been observed: all over the world, mental health services have registered a generalized spread of sleep disorders, anxiety, depression, and post-traumatic stress disorder (Cellini et al., 2020; Galea et al., 2020; González-Sanguino et al., 2020). The mental health of children, teens, and young people is at risk as well: they have been deprived of extra-familial social relationships (Dubey et al., 2020; Ghosh et al., 2020; Orgilés et al., 2020; Parola et al., 2020; Petretto et al., 2020; Rogora and Bizzarri, 2020); they have endured their parents' altered mental states and the increase of intra-familial conflicts (Sommantico, 2010; Fionda, 2020; Usher et al., 2020); and they have been constantly exposed to a terrorizing media narrative, centered around death and disease (Garfin et al., 2020). In addition to psychological consequences, socioeconomic effects must be taken into account as well. Lockdown has often led to unemployment and a rise in poverty rates. One-third of all students in the world (about 8 million in Italy) did not have access to technological devices, a stable Internet connection, and/or adequate home spaces for distance learning. This divide has exacerbated inequalities, the risk of school dropout, and social exclusion: according to UNICEF (2020), this is a "global education emergency," the impact of which could be felt for decades to come.

Past studies of other severe, unplanned disruptions to schooling and family have shown that the greatest negative impact on long-term educational and emotional outcomes tends to be observed on the most disadvantaged children. Consequently, there are considerable concerns that the acknowledged attainment gap for children and young people from disadvantaged families could be exacerbated by the COVID-19 pandemic (O'Connor et al., 2020).

Given this background, teachers and educators have been exposed to high stress levels, especially those who work in marginalized settings. With the closing of schools and local centers for socio-educational activities, teachers have been forced to abruptly interrupt their relationships with colleagues, students, and families, and to adapt quickly to distance learning—often without adequate training. The demands of the Ministry of Education and of school principals were pressing and at times contradictory. Working hours increased. For these reasons and various others (Parrello et al., 2019b), many researchers have predicted a higher risk of burnout for teachers during the pandemic (Alves et al., 2020; Kim and Asbury, 2020; Sokal

et al., 2020; Trust et al., 2020; UNESCO, 2020). The professional difficulties faced by third-sector educators have been similar to those of teachers, with the addition of greater financial insecurity due to their roles' structural precariousness in Italy (De Lauso and De Capite, 2020).

It is clear that the pandemic and social distancing have affected workers' mental well-being, and their performance as teams, both in local schools and with the MdS Association. So how can the well-being of individuals be protected, and how can teams develop resilience in order to face the impact of COVID-19?

Due to health regulations, the MG—the teams' main tool of "thought resistance" —could not be organized in person, in this very moment of utmost uncertainty and anxiety. However, MdS's workers needed to stand together and think together in order to confront the enormous struggles facing local pupils and families, and to recognize their own vulnerabilities (O'Connor et al., 2020; O'Leary and Tsui, 2020; Cabiati and Gómez-Ciriano, 2021).

Thus, aware of the importance of MGs, the MdS workers decided to try to carry them out remotely—a rapidly expanding practice (Barak, 1999; Barnett, 2014; Handke et al., 2019)—in compliance with health regulations.

The Aim of the Present Study

Through qualitative research with a longitudinal approach, this study aims to evaluate the MG's efficacy in supporting teams' reflexive thinking, despite its new online format during a traumatic event such as the pandemic.

In particular, through a comparison of MG discourse both before and during the COVID-19 lockdown, the study investigates the factors that threaten and protect individual and team well-being, and consequently impact professional performance. The goal was also to evaluate how the pandemic "entered" group discourse, and to investigate if, even in its online format, the MG instrument succeeded in offering an adequate space for confronting such an unsettling and unexpected event, and whether it was able to support resistance, resilience, and creativity.

METHODS

The multivision group (MG) is a modified balint group (Van Roy et al., 2015). In the 1950s, the Balint Group (BG) was conceptualized in order to support the work of doctors. During treatment, doctors can be viewed as the most powerful medicine: as such, after treatment, observation of themselves, the patient, and the doctor-patient relationship is required within the context of a larger group setting (Balint, 1957; Perini, 2013). The BG is considered a learning environment as well as a mediating experience, the goal of which is to improve the following: sensitivity to clients' needs, professional performance, and work satisfaction. Within a BG, a participant presents a case and other members respond with comments, emotional reactions, and hypotheses for alternative practices. The BG is focused less on group dynamics and more collective discussion.

Maestri di Strada's MG is composed of a team of professionals from the organization. They meet on a weekly basis under the guidance of a facilitator, who is also an experienced psychotherapist. Instead of presenting specific cases, participants freely describe whatever work experiences they feel the need to share in that moment, in order to better understand them. The facilitator helps the group to think creatively and to enrich their repertoire of options for handling difficult situations. The goal is to turn individuals' professional problems into shared, collective problems. The atmosphere is focused on listening, on acknowledging emotions as viable pathways to deeper understanding, and on open exchange. The atmosphere is usually open and validating, which allows for more distressing topics to arise as well.

In some ways the MG may resemble the Focus Group (FG): the (FG) is also structured around the way in which participants relate their everyday experience (Manuti et al., 2017). However, in the FG, participants do not belong to the same community of practices. Above all, the discussion follows a (more or less) organized track, and is led by a facilitator depending on the level of organized direction desired (Acocella, 2005). In the FG, although the facilitator strives to maintain a calm environment, participants may at times feel strained due to the potential the lack of privacy, and a consequent attempt to avoid difficult topics (Sim and Waterfeld, 2019). Along these same lines, the T-Group (TG) can also at times have damaging effects on its participants, if they do not know one other and are subjected to frequent provocations and to stressful situations (Highhouse, 2002).

All meetings of the MG carried out by MdS took place in the presence of a silent observer (De Rosa, 2003), who then produced a narrative report. Observers are usually trained interns, who come from Social Sciences, Education Science, or Psychology degree programs. They receive brief initial training on observational method from the organization's psychologists. The preferred method is psychoanalytically oriented. While there are no prearranged grids, each person lets their attention drift and focus according to the discourse and dynamics of the group. The narrative report is read aloud during the subsequent meeting. The group then "validates" the report and uses it as a record of its own past history. On the one hand, observers are record-keepers in charge of passively cataloging the universe of meanings present for the group; on the other, however, observers actively contribute to constructing the group archive through their subjective interpretation. Only later on do all group reports become textual material for research.

During the school year 2019–2020, MdS's team met every week for MG meetings at the organization headquarters. Since March 2020, when a health emergency due to the COVID-19 pandemic was declared in Italy and meetings in person were restricted, MdS has carried out weekly *online MGs* through a communication platform (Microsoft Teams). The platform allows participants to listen to speakers and to break in at any time. Only those who speak will automatically appear on screen, with a maximum of nine people at a time. While listening, it is possible to participate in written form through a live chat, which also allows participants to send emojis, images, links, etc. In short, group communication employs three channels: oral, visual (face to face but limited to whoever is speaking in that moment), and written. The facilitator establishes the rules for turn-taking.

FIGURE 1 | Pre-pandemic Corpus (T1): % of ECUs grouped in each cluster.
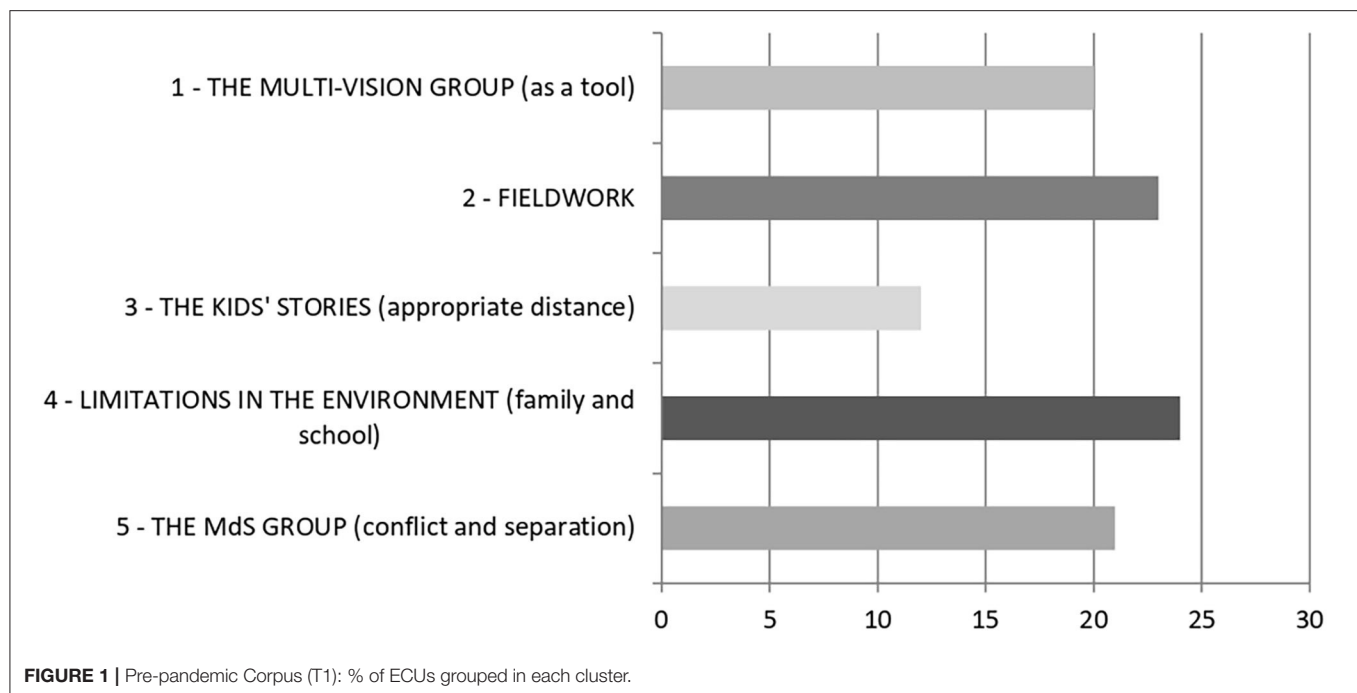
Both in person and online meetings were led by an experienced psychotherapist. A silent observer also participated in the meeting, who later produced accurate narrative reports.

This article takes into consideration the MG reports during two different time periods: pre-pandemic (T1) and early pandemic (T2). As a basis of comparison, the school year preceding the pandemic was also taken into consideration. During T1 (September 2018–June 2019), the MdS team met 18 times in person; during T2 (March–June 2020) the team met 12 times through an online platform.

The T1 corpus, composed of 18 reports written by two observers (31.842 occurrences, 5.725 distinct forms, 3.906 lemmas), and the T2 corpus, composed of 12 reports written by two observers (41.173 occurrences, 6.073 distinct forms, 4.094 lemmas), were analyzed by T-Lab Plus software (2020).

T-Lab Plus is an all-in-one set of linguistic, statistical, and graphical tools for text analysis (Lancia, 2004).

Each corpus went through a stemming process (Automatic Lemmatization). A Thematic Analysis of Elementary Contexts was performed. This type of quali-quantitative analysis is suitable for exploring the content of rich narrative and discursive corpora. The starting theoretical hypothesis is that language is, on the one hand, a tool for communicating, to which the principle of relevance and pertinence (e.g., I dwell on a theme because I consider it important) applies. On the other hand, it is also a tool for non-neutral classification, which is indispensable for organizing the world. In the apparent chaos of a conversation (such as the ones taking place during the MG) it is therefore possible to find significant recursions, which are constructed collectively by the group and allow us to penetrate the text in-depth, in order to formulate explicative hypotheses and "local rules" (Smorti, 2003; Giani et al., 2009).

The text was partitioned into elementary context units, with each approximately the length of a sentence. The units were then classified according to the distributions of words in terms of co-occurrences. Cluster analysis was carried out by an unsupervised ascendant hierarchical method (Bisecting K-Means Algorithm). The co-occurrence of semantic features characterizes this analysis. Each cluster consists of a set of keywords (vocabulary) that appear in specific selections of elementary context units, and which were ranked according to the decreasing value of chi-square. A label was then assigned to each cluster by researchers, who first thoroughly read the observation reports that comprise the corpora. This step is fundamental to guaranteeing an interpretive process that limits misunderstandings or simplifications.

Results of the analysis can be considered an isotopic (iso = same; topoi = places) map of the clusters, as they were composed of the co-occurrences of semantic traits. This map can be understood as a picture of the "mind rooms" (or points of view) (Reinert, 1998) in which the MG occurred, and which was subsequently presented to the MdS team in the form of the narrative report.

RESULTS

T1—Pre-pandemic Corpus

The analysis classified 760 elementary context units (ECUs) and partitioned them into five clusters, or macro-themes. **Figure 1** shows the clusters' quantitative dimensions. **Table 1** displays the specific vocabularies

TABLE 1 | Pre-pandemic corpus (T1): the clusters' specific vocabularies.

Cluster 1 The multi-vision group (as a tool)	CHI2_1	Cluster 2 Fieldwork	CHI2_2	Cluster 3 The kid's stories: appropriate distance	CHI2_3	Cluster 4 Limitations in the environment: family and school	CHI2_4	Cluster 5 The MdS group: conflict and separation	CHI2_5
Multivision	93.926	Job/Work	63.828	Train	42.302	Kid	53.359	Group	47.865
Ilaria (psychol.)	51.347	See	50.554	Ascanio (student)	29.522	Find	48.983	Question	45.099
Antonella (psychol.)	48.757	Week	33.849	Result	24.897	Home	44.065	Cesare (president)	37.974
Start	33.301	Story	28.662	Talk	22.773	Local	31.374	Singles	22.079
Reading	32.475	Salvatore (professor)	26.682	Moment	22.128	Succeed	25.127	Conflict	20.898
Function	29.859	Cira (educ)	24.914	Sara (educ)	21.424	Go out	23.398	Invite (v)	20.468
Saporito	24.360	Community	20.545	Right	21.030	Teach	22.301	Fiorella (educ)	17.335
Meeting	21.293	Change	20.366	Take	16.465	School	20.228	Generate	17.276
Point	19.745	Raffaele (trainee)	20.366	Place	14.856	Theater	18.666	Silvia (educ)	16.126
Carry out	19.602	Educate	18.000	Wheel	14.702	Conditions	18.487	Grow	16.020
Ottavio (trainee)	17.396	Malaise	14.902	Smile	14.702	Create	18.085	Strength	15.359
Peppe (educ.)	17.396	Kid	14.671	Anna (student)	13.321	Feel	16.724	Discourse	15.106
Affirm	16.397	Chiara (educ)	13.800	Suggest	13.321	Simon (educ)	16.724	Grief	14.715
Issue	16.265	Bring	13.378	Close (adj.)	13.179	Sign up	15.679	Mariangela (psychol.)	13.696
Last	16.223	Relationship	13.322	Remember	12.570	Member	15.679	Nicola (educ)	13.482
Return	15.965	Small	13.081	Responsability	11.257	Irvin (educ)	15.580	Occupy	12.492
Last time	15.965	Mds	12.903	Big	10.945	Time	15.266	Problems	12.492
Manner	14.909	Tend to	12.867	Final	10.654	Narrate	15.185	Intervention	12.424
Today	14.909	Allthis	12.867	Organizational	10.654	Save	14.772	Search	12.384
Continuous	13.113	Child	11.791	Dust	10.654	Mother	13.647	Group leader	12.265

adj., adjective; v, verb.

compiled by T-Lab Plus in accordance with the chi-square value.

Cluster T1.1—The Multi-Vision Group (20% ECUs)

This cluster's vocabulary contains the team's discourse regarding the MG as a tool (*multi-vision, observation, reading, begin, meeting*) and the *function* of sharing and care that it performs for the group.

Selection of ECUs:

1. After the **reading** of the report, A. (psychologist) notes that during that day's **multi-vision**, its function as a demonstration of care of the group was apparent.
2. (psychologist) recalls that the last **multi-vision** was especially painful and challenging, but members are all present despite the difficulties, "'til desire do us part."
3. Each member of the group holds a small part of the anguish: this also is the **function** of **multi-vision**.
4. She recalls the anger that emerged from the **last meeting** and says that now we need to face it together.

Cluster T1.2—Fieldwork (23% ECUs)

In this large cluster, the team reaffirmed the need to pause and step back to *see* both beauty and mistakes in their work, and to reflect on the difficulties of *field work*, *relationships* between colleagues, and painful encounters with some *kids*. In particular, the team talked about an event organized by the MdS organization, called *Educational Community Week*. They retraced the *story* of the project and the organization of this event, in order to focus on *everything* that did or did not work. They complained about various decisions that were not unanimous. They acknowledged the *malaise* felt by some educators. They questioned themselves regarding what to *change* in the future for the organization of similar events.

Selection of ECUs:

1. Our **job** is dense, full of components that require total immersion. Even when you clock out, you never really get away. But if you don't distance yourself, you can't **see** beauty.
2. What can an educator do in the face of such great pain in a **kid**?
3. C. (MdS' president) highlights an upside of the **Educational Community Week**: the *kids* participated in an event that brought them all together.
4. Some MdS workers experienced the **Educational Community Week** as an imposition, an event that was decided by a few. **Trouble** exploded in the square [where it was held] and did not give them the chance to enjoy the moment.

Cluster T1.3—The Kids' Stories: Appropriate Distance (12% ECUs)

In this small cluster's vocabulary, the kids' names appear the most frequently (e.g., *Ascanio, Anna*)[1]. Beginning with these stories of marginalization and pain, educators then reflected on their own *responsibility* as adults and professionals, regarding the *right* amount of distance, and how hard it is to obtain certain

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[1]Children's names were changed to respect their privacy.

results. They asked themselves when the *right moment* is to *talk, suggest,* or be *close*, but also imagined being able to take a *train* to physically escape this reality, like one of the kids, at least temporarily.

Selection of ECUs:

1. M. (community parent) is worried about **Ascanio**, who recently came out: a fragile kid who feels guilty, isolates himself often and talks of committing suicide. C. (artist) met him on a **train** while he was aimlessly on the run.
2. **Anna** failed and will be held back a year. The problem is not failing per se, but the way it was communicated by the teacher, who was laughing: it was mortifying for her and for us.
3. M. (educator) says that we should maintain the **right** amount of detachment. The GM leader asks: detachment or distance?
4. In this field, people also need to be responsible for stopping when they no longer have the **right** amount of resources or energy to continue, and take care of themselves.

Cluster T1.4—Limitations in the Environment: Family and School (24% ECUs)

The fourth cluster is very rich: its vocabulary contains references to the shortcomings of family (*home, mother*) and school (*teacher, school*), which were often described in anger, and alongside the desire to *create* the *conditions* necessary to *succeed* in *saving* every *kid*. In particular, the workers talked about MdS's *local* art workshops (*theater,* for example), which were considered to be a valuable resource. However, they also addressed the limits to their own fantasies of omnipotence.

Selection of ECUs:

1. When our kids leave and go **home**, they only find hate; they can't see anything else.
2. How can it be that a deaf-mute 15-year-old **kid** couldn't find anyone at **school** until now who would teach him to communicate, to live in a society, to have a future?
3. If I'm at **school** every morning, I have no **time** to be with them in **theater;** I can't be everywhere, but my heart breaks: tonight, I dreamed of a wall falling on me...
4. If we tell the kids "you'll always find me," if we think we can "**save**" them, making up for all the shortcomings of their **home** and **school environments**, we then take on a task in which we will inevitably falter.

Cluster T1.5—The MdS Group: Conflict and Separation (21% ECUs)

In the last cluster, the team dealt with topics concerning internal MdS *group* dynamics. They discussed the feeling of *grief* for the painful exit of an educator (*Fiorella*) from the team, the *problems* regarding democratic processes in the organization, and the *conflicts* between colleagues and the organization's president (*Cesare*). Here, the Group Leader intervened more. They wondered about the well-being of *single* members and about how they could keep *growing* as a *group*.

Selection of ECUs:
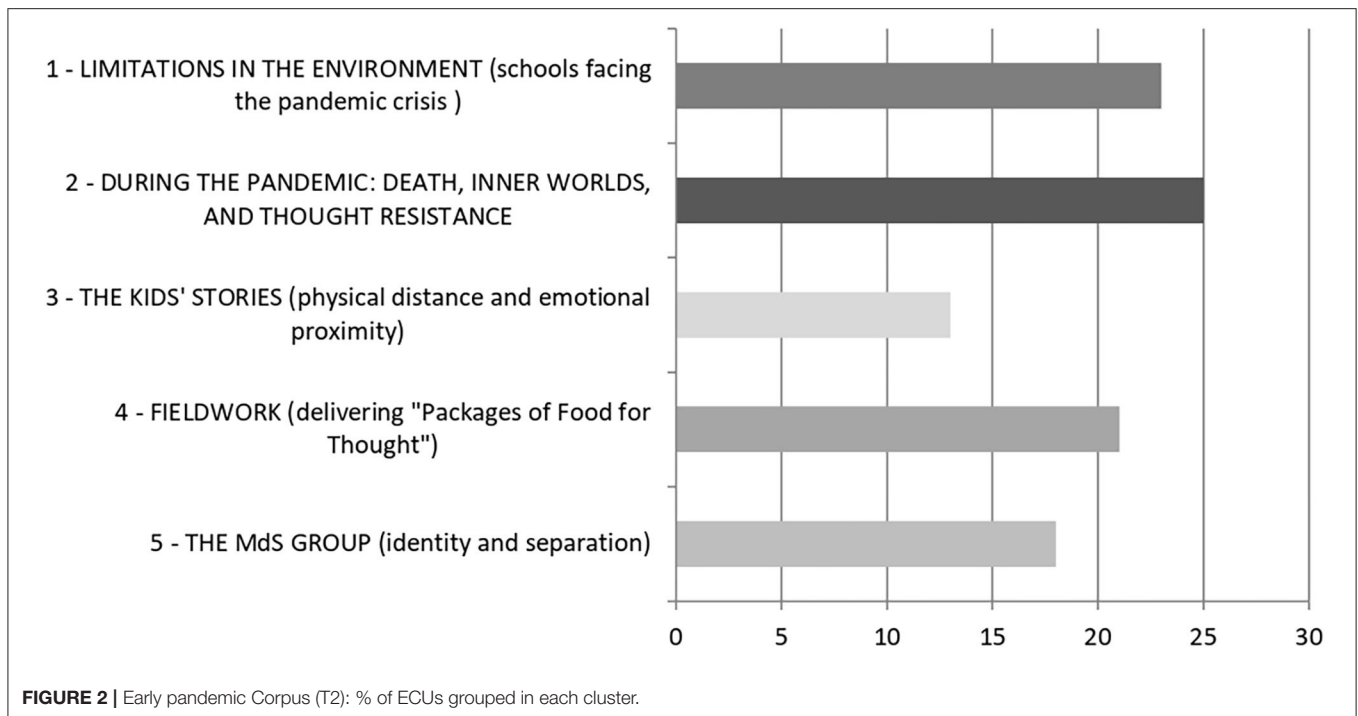
1. **F.** (educator) is a symbol for something that all of us are feeling: the fear of failure.
2. S. (educational theorist) says that the group can only work if it is capable of not sweeping the dirt under the rug, and of confronting its own limitations, **conflicts,** and **grief.**
3. We took on a workload that we can only bear with the help of the group: under the weight of the kids' pain, we either completely drown, or we **grow.**
4. C. (MdS' president) encourages us to free ourselves from any sense of dependence on the **boss.**

T2—Early Pandemic Corpus

The analysis classified 863 *elementary context units* (ECUs) and separated them into five clusters, or macro-themes. **Figure 2** shows the clusters' quantitative dimensions. **Table 2** displays the specific vocabularies compiled by T-Lab Plus in accordance with the chi-square value.

Cluster T2.1—Limitations in the Environment: Schools Facing the Pandemic Crisis (23% ECUs)

This cluster's rich vocabulary contains the group's discourse regarding the functioning of the educational institution in a time of crisis brought about by the pandemic, and in the specific setting of the suburbs (*discourse, institution, school, system, formal, context, social, territory*). The discourse concerns the institution's power and responsibilities (*power, responsibility*). Teachers seem to be alone while facing hardship, stressed by various obligations (*teachers, alone, order (v), practice, work/job, didactic, school principal*): it is harder for them to think things through and experiment (*reason, experiment*) without reflexive

tools or group structure. The group wondered how MdS can support an alternative approach to school administration (*can, alternative*).

Selection of ECUs:

1. **Teachers** don't have a group to welcome them in, or a group they can vent to, and they're **alone** within the **institution**.
2. The lack of trust in each other is a characteristic of the **system**.
3. Teachers weren't prepared for **distance learning,** nor for **experimenting** with new **didactic** methods, and now they're forced to by the **school system**.
4. Right now, we need to be understanding of teachers, in order to understand the narrative imposed by the **school system**, but, at the same time, we have to create new **discourses** and **alternative** educational approaches that will be able to support schools now as well as later on.

Cluster T2.2—During the Pandemic: Death, Inner Worlds, and Thought Resistance (25% ECUs)

This cluster's vocabulary, the largest of the five, contains the group's discourse regarding tragic external events, and their inner reverberations: *time, phase, before, return, normality, quarantine, break, virus, life, death, experience, violence, fear, powerlessness, concern, suffering, war*. They talked about life and death (infection and death rates), about the loss of a sense of normality, and about their new sense of time (denser on the outside and slower on the inside, because of the difficulty of adapting to the rapid succession of events).

Many educators entrusted their inner feelings and strong emotions to the group, often through the use of metaphors and

TABLE 2 | Early pandemic corpus (T2): the clusters' specific vocabularies.

Cluster 1	CHI2_1	Cluster 2	CHI2_2	Cluster 3	CHI2_3	Cluster 4	CHI2_4	Cluster 5	CHI2_5
Limitations in the environment: schools facing the pandemic crisis		During the pandemic: death, inner worlds and thought resistance		The kids' stories: physical distance and emotional proximity		Fieldwork: delivering "packages of food for thought"		The MdS group: identity and separation	
Institution	63.966	Time	48.878	Allow	138.547	Parcel	89.780	Relationship	48.781
Silvia (educ)	55.860	Phase	47.058	Situation	90.218	Mother	75.405	Ask	37.560
School	50.865	Before	39.754	Story	39.032	Place (n)	36.640	Pupil	33.208
Power/can	38.548	Return (v)	39.513	(One's) Own	37.253	Eye	34.245	Focus	24.855
System	34.982	Life	36.181	Welcome	32.040	Father	30.335	Distance	24.514
Our	34.701	Normality	31.778	Distance	21.570	Period	30.281	Commitment	21.246
Professional (adj.)	32.099	People	29.057	Ask	18.963	Act	27.545	Didactic	19.544
Formal	28.896	Door	28.501	Write	18.659	Understand	26.437	Bond	17.414
Alone	26.602	Happen	22.979	Development	18.274	Look (n)	26.437	Involve	16.948
Context	24.238	War	20.788	Milena (educ)	18.035	See	25.724	Presence	14.704
Social	23.549	Death	19.981	Suffer	16.570	Deliver	22.270	Continuity	13.703
Alternative (adj.)	23.530	Meetings	19.981	Words	16.113	Take	20.841	Limit	13.214
Recognize	23.140	Reflection	19.819	Past	13.739	Delivery	20.571	School	13.000
Add	22.105	Quarantine	17.798	Live	13.338	Love	20.186	Use	12.950
Fields	17.472	Resistance	17.694	Video	12.660	Son/Daughter	18.906	Mds	12.058
Make	17.407	Caracterize	17.204	Ability	12.660	Challenge	18.906	Support	11.696
Role	16.785	Experience	16.925	Narrate	11.527	Health (adj.)	18.787	Online	11.293
Responsability	15.866	Good	16.900	Listen	11.505	Event	18.580	External	10.641
Show	15.753	Allow	16.214	Maintain	10.494	Receive	16.840	Group	10.484
Evaluate	14.838	Moment	15.139	Share	9.964	Narrate	16.574	Day	10.394
Stay	14.571	Live	15.139	Flavio (prof)	8.232	Ornella (educ)	15.393	Enter	10.394
School name	14.571	Mind	14.622	Chiara (educ)	7.008	Move	14.678	Find	10.165
Summer (adj.)	14.505	Feeling	14.329	Talk	6.937	Child	13.281	Network	10.158
Put	14.227	Fear	13.760	Job/Work	6.418	Claudia (educ)	12.968	Function (v)	10.158
Build	14.003	Feel	12.688	Educator	6.347	Teacher	12.932	Emotional	9.630
Territory	12.705	Contagion	12.469	Feel	6.207	Behave	12.932	Contact (v)	9.363
Safe	11.600	Violence	12.248	Energy	6.137	Conclude	12.105	Setting	9.363
Take	11.354	Benecessary	11.986	Powerlessness	6.137	Sara (educ)	11.440	Reflective	9.184
Experiment (v)	10.251	Scare	11.608	Deep	6.073	Adult	10.877	Professor	9.093
Believe	10.216	Full	11.413	Professor	5.982	Immediately	10.877	Parent	8.721
Scholastic	9.511	Hit	10.669	Crisis	5.982	Bring	10.814	Individual	8.096
Force (v)	9.151	Suffering	10.553	Contact (n)	5.529	Heart	9.871	Dreams	8.096

(Continued)

TABLE 2 | Continued

Cluster 1	CHI2_1	Cluster 2	CHI2_2	Cluster 3	CHI2_3	Cluster 4	CHI2_4	Cluster 5	CHI2_5
Limitations in the environment: schools facing the pandemic crisis		During the pandemic: death, inner worlds and thought resistance		The kids' stories: physical distance and emotional proximity		Fieldwork: delivering "packages of food for thought"		The MdS group: identity and separation	
Discourse	9.139	New	10.523	Hard	5.449	Street	9.858	Educational	8.028
Teachers	9.050	Multi-vision	10.421	Physical	5.387	Children	8.918	Suggest	7.919
Distance (v)	8.784	Beginning	10.052	Angry	5.213	Start	8.589	Support (n)	6.913
Return	8.784	Virus	9.133	Prove	5.213	Workers	8.090	Observe	6.849
Tend to	8.784	Transition	8.987	Spokesperson	5.213	Lotto G (neighborhood name)	8.090	Increase	6.849
Profession	8.621	Act	8.911	Person	5.118	Behavior	8.090	Job	6.849
Reason (v)	8.621	Exit (v)	8.167	Feel	4.982	Remember	7.682	Institutional	6.664
Didactic	8.492	Days	7.816	Suffering (n)	4.727	Collective	7.012	Educator	6.528
Job	8.153	Meet	7.816	Narration	4.727	Invitation	7.012	Communication	6.493
Concept	7.924	Present	7.761	Salvatore (prof)	3.986	Gabriele (educ)	6.974	Affective	6.493
Teach	7.254	Narrative (adj.)	7.761	Impossible	3.986	House	6.785	Teacher	6.350
Practice (v)	7.254	Home	7.686	Distance learning	3.986	Understand		Concern (v)	6.043
Dynamic	7.249	Spaces	7.109	Aware	3.986	Irvin (educ)		Possible	5.704
Invite (v)	7.249	Breakage	7.083	–	–	Change (n)		Association	5.423
Value	7.249	Powerlessness	6.679	–	–	Field		Colleagues	5.423
Educational	7.092	Concern	6.504	–	–	Wait (n)		Process	5.222
School principal	6.631	Lead	6.504	–	–	Touching (adj)		Latest	5.222
Spread	6.631	Necessity	6.432	–	–	Organization		Report (v)	5.193

adj., adjective; v, verb. n, name.

dreams. The main metaphors concerned *war* and disability, while dreams mostly expressed anguish and bewilderment, but also, on occasion, freedom. Many participants explicitly highlighted the beneficial function of the MG: *meetings, reflection, resistance, multi-vision, mind.* Others took notice of positive events occurring at the time: *happen, moment, good.*

Selection of ECUs:

1. The subject of **time** returns: the alteration of time that we have experienced… over the past months, we were forced to change and approach time differently.
2. There is a parallel between this moment in our **lives** and the **experience** of **war**: apprehension, loneliness, constant **fear,** and an inability to take control of our own experience.
3. **Quarantine** feels like **time has** frozen. The illusion of going back to things as they were **before** is insane. But **good** things do **happen, and** are happening.
4. We're lucky because we have the stability of the ongoing presence of the **group**. This is a group that's already established, and capable of emotional sensitivity. We have this **group**-mother that welcomes us and all of our **experiences** and emotions.
5. We at MdS have built a social safety net: that is, the **group**. The group gives us a space for processing, where we can share and think in new ways. So we then find the courage to act responsibly, no matter the difficulties.

Cluster T2.3—Kids' Stories: Physical Distance and Emotional Proximity (13% ECUs)

This cluster's vocabulary contains discourse regarding the technology that allows people to stay connected despite physical distance (*allow, situation video, distance, story, welcome, contact, share*). However, this type of connection can only develop into emotional closeness and authentic communication if there is also a sense of continuity with a preexisting, positive relationship established by the educator or teacher (*past, maintain, work, educator, teacher*). In that vein, the group recounted stories of violence, powerlessness, and suffering, as told to them remotely by the kids (*spokesperson, story, narration, powerlessness, suffer, suffering*). Some educators thought that the "comfortable distance" itself allowed people to recount those painful experiences.

Selection of ECUs:

1. N. (artist) says that today we can lean on this group for support because positive relationships have already been established before. And he sees the same thing with his students: he can carry out impactful creative workshops from a **distance** because they have shared good experiences together in the **past**. The confidence they find today is rooted in yesterday's positive experience. The kids don't lose the intimacy previously found in the relationship because of the distance; they are comfortable when it comes to continuing to **narrate** their own stories and lives, and through these **stories** we can stay in touch with what is going on for them. It's a sort of virtuous circle that supports our educational work.

2. What if it was this very **distance** that allowed the girl to tell her **story**, to put into **words** so much violence and suffering?
3. This time period makes it very hard to "do," but it provides an opportunity to listen and think **deeply**.

Cluster T2.4—Fieldwork: Delivering "Packages of Food for Thought" (21% ECUs)

This cluster's rich vocabulary concerns an initiative set up by MdS during *lockdown*. After initial inactivity due to strict health regulations, MdS introduced the delivery of "packages of food for thought" to kids who belong to vulnerable families (*package, organization, conclude, deliver, delivery, event, health*). The packages contained tablets, books, stationery, and, above all, personal letters. The deliveries took place thanks to the support of the Ministry of Education and law enforcement, and kids and parents saw them as an act of love (*mother, father, son, child, act, love, eye, look, see, touching*). The group discussed the emotional impact of this project at length. Very few teachers wanted to participate (*teacher*). Some of the places they visited were on the outskirts of the suburbs, which are striking in their poverty and neglect (*place, street, house*).

According to the educators, the packages—delivered during a time of collective hopelessness and passivity—kindled a sense of empowerment in the recipients.

Selection of ECUs:

1. **Delivering** a **package** seems like a trivial thing, but it can actually symbolize an act of overcoming certain predetermined limits.
2. The infrequency of **acts** of care was apparent from looking into the eyes of the families. However, the moment they understood who we were, they introduced themselves with a smile and took the **package** and, with it, accepted the **gesture of love**. Like that **father**…
3. The positive thing about delivering **packages** is the effect they created, and the feeling of consideration. People were asking to be **seen**, and they needed attention.
4. They were waiting for us; rumors moved faster than our van. When we arrived in a new location, they were already prepared: initially a little shy and bashful, then curious and eager to receive a **package**, which was viewed as a sign that the organization thought of them, **sees** them, and doesn't abandon them alone in those forgotten, anonymous **places**.
5. Some, curious, got closer and offered their help in navigating the neglected neighborhood **places**.
6. The **teachers** behaved in an ambivalent manner, as if they were torn between seeing the kids and protecting themselves.
7. We had the courage and the ability to **move** in order to reach them. And this was perceived by families as an **invitation** to act, to participate, to exist, and to be **seen** by welcoming eyes that sought their gaze and offered them care.

Cluster T2.5—The MdS Group: Identity and Separation (18% ECUs)

This cluster's vocabulary records the group's discourse regarding the specific organization of MdS, especially during this time of

crisis: their main goal is to cultivate relationships with pupils and parents despite remote learning. They also seek to allow themselves to be "used" by the school and its teachers to serve the students (*relationships, bond, ask, pupil, focus, teachers, parents*), and they continue to dream of a better future for everyone. Again, we find their awareness of having a powerful reflexive tool at their disposal, even when it is only available online (*group, setting, reflexive, support, online, function*). Its absence is regarded as a great limitation for schools (*limit, school, involve*). Selection of ECUs:

1. MdS interposes itself between **teachers**, **pupils**, and **parents** in order to mediate.
2. O. (educator) says that she consciously let the school **use** her to help the **pupils**.
3. One **mother**, worried about her daughter who struggled with distance learning, contacts MdS. O. (educator) gets to work to try and improve communication with **teachers**.
4. Our duty now is to try and protect **relationships**.
5. **Parents** and **children** feel abandoned by the school, and they seek us out, knowing that we are **distinct** from the **school**.
6. **Teachers use** our educators and psychologists in order to vent. They **use** MdS as a container for their **suffering**: indeed, thanks to the **group**, we have learned to contain and withstand the challenges.
7. Without a **reflexive setting** or a welcoming community, **teachers** are scuba divers without oxygen. In the face of this absence, MdS can be a resource: we can be their oxygen!
8. The fact that G. (educator) left the MdS team deeply impacted the **group**. Many wonder if, sooner or later, they too will be forced to leave this job—full of **dreams** but with no financial security.

DISCUSSION

In July 2020, after 4 months of the pandemic, global research groups began to prioritize education and the need for changes in work environments (O'Connor et al., 2020). The experience of the MdS team is a confirmation of this need.

In the suburbs of Naples, many children and teens live in a state of deprivation and social exclusion: the COVID-19 lockdown increased their risk for school dropout and other challenges[2] In the same time period, educators' personal and professional well-being was also severely put to the test. The MdS organization attempted to "take care of those who care," following the suggestions of van der Kolk (2020): by establishing routines, creating thoughtful connection, and fostering the feeling of being alive. The online MG also moved in that direction: it became a regular and eagerly anticipated meeting for members. It allowed participants locked inside their homes to see one other, to communicate, and to re-imagine creative approaches to pedagogy together. The thematic areas that emerged from our analysis of the group's discourses indicate that this reflexive tool was effective: the pandemic took over the group's discussions,

and many felt the need to talk about themselves even before they discussed their work, addressing their own vulnerability even before turning to the vulnerability of the kids and their families (Cabiati and Gómez-Ciriano, 2021). In socio-educational work, personal self and professional self are indeed tightly connected (Fellenz, 2016).

Throughout the year prior, during MG meetings, the group had reflected in particular on limitations in the environment, both of families and schools (cluster T1.4, the largest). They also discussed fieldwork (cluster T1.2). They wondered how educators can place themselves at a "right distance" from the kids, especially when their stories are particularly painful and moving (cluster T1.3). The group had also discussed its own internal dynamics, including conflicts between colleagues and with their leader, while reflecting on the fact that one educator had left the team, perhaps because of the difficult emotional sustainability of the job (cluster T1.5). They often mentioned the positive sharing and support provided by the MG tool (cluster T1.1).

Analysis of MG discourse during lockdown revealed four interesting elements. Firstly, the MG allowed participants to face the shock of the pandemic. They made contact with their own and with their colleagues' inner worlds (cluster T2.2, the largest), by expressing emotions and feelings. They also drew from symbolic thinking through the use of metaphors and the recounting of dreams. Thanks to the online MG, educators constructed a shared narrative of the pandemic that differed from the apocalyptic narrative spread by mass media (Rossolatos, 2020), thereby connecting emotions, thoughts, and action, and protecting their own sense of safety, identity, and continuity. The use of metaphors and the critical discussion that ensued (Craig, 2020; Sabucedo et al., 2020), as well as the recounting of personal dreams filled with anguish as well as hope (Iorio et al., 2020), are all signs of an attempt to make sense of the pandemic. Only by taking care of themselves can educators offer protection and support to those they take care of (Myers et al., 2020).

Secondly, the MG group allowed the team to analyze shortcomings in their own professional settings, focusing on the administration of educational institutions facing the pandemic crisis, in order to come up with ways to support the teachers' work (cluster T2.1). The painful stories of the kids "got to them" despite the physical distance, thanks to the relationships that had been consolidated over time (cluster T2.3): a new form of "right distance" was thus experienced through a virtual filter.

Thirdly, a new type of fieldwork emerged: the MdS team promptly came up with creative initiatives, like the delivery of "packages of food for thought" (cluster T2.4), which were useful (and not only materially) to hundreds of struggling students and families.

Finally, the group did not cease reflecting on its own internal dynamics: however, in this phase conflicts seemed to temporarily disappear, perhaps because of a need for internal unity in the face of the collective threat of the virus. Team members then reflected on their professional identity, and on their strengths and weaknesses in supporting school-family relationships and the dream of a fairer society. They were very upset by the fact that an educator left the group because of the profession's financial insecurity (cluster T2.5). During this phase, no comments were made by the team concerning the MG's online format.

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[2]In a single year of the pandemic, reports of school dropout in Naples have risen 65%. Most reports come from the San Giovanni, Barra, and Ponticelli neighborhoods: https://www.oggiscuola.com/web/2021/04/13/abbandono-scolastico-impennata-di-segnalazioni-cagliari-e-napoli-casi-drammatici/.

Reflexive methodology—at first in person, and then online during lockdown—most likely contributed to the resilient and resistant qualities of the MdS community. It was capable of absorbing the shock of a stressful event and undertaking a speedy recovery process. Because of this, perhaps, any tendencies toward depression and self-idealizing hyperactivity were also curbed (Kulig, 2000).

In conclusion, even in the online format it took during the pandemic, team reflexivity helped to achieve many different positive outcomes. It allowed team members to take care of themselves and tend to their own vulnerability (Cabiati and Gómez-Ciriano, 2021), and it had positive effects on performance, innovation, and efficacy (De Dreu, 2002; Fook, 2013a,b; Schippers et al., 2013, 2015). The "packages of food for thought" were the first initiative of Project REM (Educational Resistance in Movement). This Project included, among other programs, online educational art workshops for students, online support groups for parents, online seminars for teachers, and Facebook live streams for all. Each initiative was both informative and entertaining (Parrello and Moreno, 2021). At the end of the school year, all at-risk students who had been served by MdS passed their exams. Cooperation with families increased, and new partnerships with schools were born.

According to O'Leary and Tsui (2020), the pandemic is an invaluable occasion for reflecting, analyzing, and learning from crisis. One can take the time to understand what has been working well and what has not, and identify new ways of working and adapting that can help to further develop the profession. The pandemic and its effects will be felt for many years to come, but it is already clear that socio-educational work is "fundamental to not only rebuilding but transforming our world" (Truell, 2020, p. 548).

The MdS team went back to in-person meetings as soon as it became possible, in early July 2020, with the accompanying awareness that bodies, non-verbal communication, and physical proximity are also fundamental to a group.

LIMITS AND FUTURE PERSPECTIVES

A limitation of this study is that it refers to a single source of observation. In fact, observers' reports are inevitably affected by

their subjective experience as trainees They are also sometimes aspiring MdS members. Therefore, we should take into account the possibility of some "complacency" in their perspectives regarding the organization. Further research should integrate this study with questionnaires and interviews in order to also consider the point of view of individual participants regarding in-person, online, or blended MGs (Lodder et al., 2020). A research study integrating observational data and data from a self-report questionnaire evaluating the MG is already under way.

The hope of the authors of this article is that online and in-person reflexive groups may be used more widely by educators inside of schools and in the third sector (Kerkhoff, 2020). New studies should be conducted, offering critical opportunities for comparison.

At the moment, these results cannot be generalized, but the practical implications for workers' well-being appear to be evident.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by CERP (Comitato Etico delle Ricerca Psicologica), Department of Humanities, University of Naples Federico II. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

All authors contributed in the same way to conception and design of the study, manuscript composition, and data interpretation. All authors read and approved the final manuscript.

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Reflective Practices to Study Group Dynamics: Implement Empowerment and Understand the Functioning of Groups

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Introduction: Individual and group reflection practices are qualitative methods useful in a group context to develop group skills and more awareness of the dynamics that take place within the group to which one belongs.

Aim: The aim of this work is to highlight how individual reflective practices and group reflections contribute to the development of group skills. More specifically, the effectiveness of relevant group dynamics is investigated, with the aim of creating a space for reflection, and activation for individual and group empowerment.

Participants: The participants were 130 university students (86% female), resided in northwestern Italy, and had a mean age of 27.5 years (*SD* = 7.52). They were randomly divided into 23 groups (ranged from four to nine members).

Method: The participants engaged in several online training activities and at the end of every activity they completed individual reflection practice in which they presented both positive and negative aspects related to the group experiences. Then they participated in online group reflections that allowed them to reflect on the group dynamics, particular attention given to factors such as climate, participation and roles played by each participant in a variety of training activities. This study analyzes 130 individual reflective practices and 23 group reflections. The data collected through individual reflective practices and the transcripts of the group reflections were analyzed using grounded theory. Two independent judges analyzed and categorized the data and then identified the main common categories that emerged by the support of Nvivo software.

Results: From the analysis of the content, it is determined that the participants, based on the construction of the individual and group reflections, paid greater attention to the dynamics that occurred within the group during the various activities in which they participated, thus allowing them to be more aware of the various factors that affected the importance attributed to the different roles, the climate, and their active participation.

Conclusion: Combined, these factors allowed participants to strengthen their relationships with each other and enhance the cohesion of the group.

Keywords: reflective practices, qualitative methods, groups dynamics, group reflections, Italy

INTRODUCTION

The individual and group reflective practices are a qualitative tool that in a group context allows to analyze how the members develop more awareness and group skills that favor the implementation of individual and group empowerment. Regarding "group skills," literature means those essential characteristics that a group must have for its proper functioning such as communication, leadership, creativity, organization, and collaboration (Tarricone and Luca, 2002). Reflective practices are defined by some authors (Schön, 1993; Perrenoud, 1994; Pescheux, 2007; Nuzzaci, 2011) as the ability to make inferences, consciously using previous experiences, theorizing the practice through a formalization of knowledge of action. In particular, the literature has highlighted those reflective practices are considered a qualitative tool useful in groups. The group has also been defined as a learning tool (Bruno and Dell'Aversana, 2018), a place par excellence that favors learning methods and complex training, as each member of the group brings different skills and qualities that are comprehended through comparison, discussion and conflict during the construction of an articulated competence (Pojaghi, 2005). Small group work, in particular, facilitates social well-being, social connection and self-motivation, all of which influence the development of professional growth (Dari et al., 2021). The group-work methodology is an experiential learning tool that initiates social and cultural change processes that can be implemented throughout professional fields, such as school, social, health, work, etc. (Bolocan Parisi et al., 1988). In general, the objectives of a working group include the achievement of a sharing of the issues discussed, a common purpose and a mutual commitment to action. The role of the facilitator is fundamental not so much for the content treated by the group but for maintaining the structure of the group and the success of the process. Groups have their own emotional life that influences and is influenced by their members, as each participant experiences the pressure of achieving what they want and balancing what is good for the group (Phillips and Phillips, 1993). Small group work, also referred to as cooperative learning, is a methodology that involves small groups of individuals working together on a common task (Villalba, 2007; Steen et al., 2008, 2014). As an example, teamwork is an important component of school curricula (Paisley and Milsom, 2007), and the participation of young university students in such teamwork is crucial for career development, especially as it is linked to higher academic achievement (Thanh et al., 2008; White, 2011). This methodology also improves peer interactions (Akos et al., 2007) and is comprised of processes like those encounters in the workplace. For example, teamwork in school requires many of the same skills as teamwork in the work environment, such as effective communication, brainstorming, collaboration, trust building, and conflict resolution (Tindale and Kameda, 2000). Group settings offer students the opportunity to observe and develop new skills through peer interactions and allow a safe and therapeutic space to practice those skills (Perusse et al., 2009). This allows them to gain strength and confidence, which carries over to other aspects of their lives, while also enhancing their advocacy skills (Diemer et al., 2010; Dari et al., 2021).

Finally, as supported by Vinatier (2006), working and talking with others about lived experiences allows one to process and understand the facts and events experienced and to thereby formulate interpretations that are useful as one reconsiders certain practices.

The members of the group, reflect on and compare themselves within the contexts of their professional practice and question the sense of self in practice as they develop their own professional identity (Bruno and Bracco, 2016). Reflective practices concern reflective doing or operating, referring to the complex of modalities, strategies, procedures concretely implemented in reflection. For Perrenoud (2001) in particular, reflective practice is connected with reflexivity, as an identity that measures reality in nature or in the consequences of reflection on daily actions in one's professional environment. In fact, such reflective practices are used in different contexts, including the supervision (Heffron et al., 2016) of work and learning, which then promotes the construction of new knowledge that allows for the creation of meaning and new actions, as well as more familiar contexts (Boud et al., 1985; Nuzzaci, 2011).

Reflecting on action allows an analysis developed from experience, a learning based on the "circularity between action and reflection" on which quality also depends (Bruno and Dell'Aversana, 2018, p. 346). Furthermore, reflection improves the quality of practice and service delivery (Heffron et al., 2016). The use of reflective practices is experimented in different contexts such as work and/or training, where the use of group work is a fundamental tool. According to Ghaye (2001), reflective practices allow workers (both as individuals and as groups) to develop empowerment with respect to tensions in the workplace. Empowerment is achieved through reflection, a critical analysis of one's working reality to transform it and improve individual and working group well-being and satisfaction. Moreover, the group's reflective practices in social work have also been redefined in online mode following the pandemic: Parrello et al. (2021) report a study on the use of the multi-vision group for the first time used in online mode, reflective group that aims to protect the well-being of workers.

With respect to the use of reflective practices with university students, some studies (Esposito et al., 2017, 2021) have highlighted the importance of using the narrative mediation path in an innovative group counseling method to favor the reflection or the development of the capacity for reflection and mentalization. In addition, reflective writing encourages students to express personal emotions, and through this, the learner has the opportunity to reflect on the entire learning process (Rué et al., 2013), thus giving way to a transformation of learning through a process of metacognition (YuekMing and Abd Manaf, 2014). Parrello et al. (2020) highlight how reflexivity is fundamental for practice in the context of studies related to social educational work.

Reflective Practice as a Tool of Awareness

In the early 1930s, Dewey (1933) defined reflective practice as looking at the previous experience to draw useful meanings

for the next experience, a learning style that Finlayson (2015) describes as a collective, public nature within a learning organization, i.e., an intellectual experience. This definition has been expanded and revised over the years (Marshall, 2019; Greenberger, 2020). Indeed, Schön (1975), building upon the definition of Dewey (1933), defines reflection as a learning strategy useful for professionals seeking to achieve a greater awareness of their implicit knowledge. Although different definitions of reflection have been proffered over the years, there appears to be agreement on the function that it performs. Specifically, reflection contributes to the development of self-awareness and the improvement of the decision-making process (Greenberger, 2020). In the 21st century, educational research has increasingly focused attention on reflection as a fundamental aspect of the learning process (Sabtu et al., 2019). Nuzzaci (2011), referring, for example, to the practice of reflexivity in the school environment, emphasizes that in the process of reflection, interaction with colleagues is fundamental for the implementation of informed actions. Sabtu et al. (2019) argue that reflective practices help students both achieve a greater understanding of the academic materials learned and develop student and learning processes throughout their lives (Finlay, 2008). As reported by YuekMing and Abd Manaf (2014), the writing process itself is a fundamental learning tool in that it offers the possibility for students to become autonomous and competent as they reflect on what they have learned and clarify and process thoughts and knowledge in a coherent and structured way, which leads to a greater understanding of the discipline (Rué et al., 2013). Reflective practice can include both a dimension of solitary introspection and a more defined group dimension, the latter of which implies a critical dialog with others (Finlay, 2008). For example, Bruno and Dell'Aversana (2018) state that teamwork favors the development of reflective learning through the activation of a professional identity and the shared responsibility of students regarding the learning environment. The authors also suggest that the group has been recognized as a powerful training tool, within which, based on their reflections and on the comparisons of the contexts of their professional practices, learners develop their professional identities by questioning their sense of self (Bruno and Bracco, 2016). Accordingly, in reflective learning environments, as students are active and responsible agents of their own learning, evaluation is not focused on the expected results but on the process of acquiring knowledge and the development of interpersonal and communication skills (Boud et al., 1985; Bruno and Dell'Aversana, 2018).

The Group Dimension of Reflective Practice

From the studies in the literature, it emerges that the group dimension, compared to the individual dimension, is a more problematic approach than is a reflective approach. According to Bion (1961), who introduces the rational working group model, the rationality of the group, albeit stronger than that of the

individual, is in a constant struggle with emotional tendencies that push toward objectives that are in conflict with those explicitly shared by the group. There are studies (Bondioli, 2015; Savio, 2016) of educational teams in childcare services regarding their participatory and reflective capacities with respect to group dimension. In this regard, a training model of promotion from within is proposed that addresses the obstacles that may impede the reflective and participatory capacities of the group, such as apprehension in situations of learning from experience, lack of definitiveness with respect to the correct path, or the individual need to belong to the group, which may result in one becoming lost in the group.

According to Mezirow (2003), reflexivity is linked to the meaning that an individual attributes to his or learning by interpreting the experience and generating new knowledge *via* the sharing of the skills possessed. Other authors (Wenger et al., 2002) underscore that the working groups are real "communities of practices." That is, they are a group of people who together, within a defined space, deepen knowledge and experience by sharing the same themes, passions, and similar problems. When these "communities of practices" share the same professional contexts, a shared reflexivity to act by bringing together experiences, histories, cultures, and common languages is created to build shared solutions for problematic situations (Albanese et al., 2010).

There are studies that focus on reflective practices in teacher training (Calderhead, 1989; Parsons and Stephenson, 2005; Black and Plowright, 2010; Crotti, 2017) and studies that emphasize reflective group supervision in the workplace (Proctor, 2008; Knight et al., 2010), which is regarded as a process that offers opportunities to strengthen reflective capacity within and among the professionals involved. In this respect, Finlay (2008) highlights how reflective practice is used in supervisory contexts through the presence of the dimension of dialog. From another perspective, group reflective supervision is used in health care as a tool to develop the reflective capacity of staff (Heffron et al., 2016). Collin and Karsenti (2011) accentuate that from a theoretical point of view, the literature has focused more on the individual perspective of reflective practice, showing little interest in the collective dimension, which is explicitly evident when there is the presence of another and an verbal interaction ensues, which is an intrinsic characteristic. Furthermore, the authors highlight the importance of interpersonal (group activities), intrapersonal (reflective writing), and online (written messages and reactive feedback) dimensions within what they define as interactive reflective practice.

AIMS

The aim of this work is to highlight how individual reflective practices and group reflection contribute to the development of group skills. The effectiveness of relevant group dynamics is investigated, with the aim to create a space for reflection, discussion, and implementation, evaluating their effects with respect to how the tool of reflection of the group is used by students.

PARTICIPANTS

The participants are 130 students (86% females and 14% males), lived in northwestern Italy and had a mean age of 27.5 years (22–56 years, SD = 7.52). Furthermore, they enrolled in the master's degree courses of the Department of Social Sciences (Psychology and Educational Sciences). The participants already had experience of online groups, as, in the midst of an emergency crisis caused by the COVID-19, the educational courses, in which the students had taken part in the previous semester, had been organized and conducted on the Teams platform.

MATERIALS AND METHODS

Each participant at the end of the activities proposed weekly during the course wrote an individual reflective practice in the form of a diary structured by thematic areas, highlighting the positive and negative aspects of the group experiences, their involvement in the various activities, what worked or not in the group and the reactions of the participants to the empowerment experience. Group reflection practices were then carried out within the group, together with the researcher, which allowed to reflect on the group dynamics created during the various training activities, focusing on the most relevant ones, with particular attention to factors such as the climate, participation and the role played by each one. Each group reflection produced a collective written practice. In both modalities, individual reflective practice and group reflective practice, there were no limits of space, everyone was free to follow their own narrative modalities in the individual level while in the group dimension there was a group negotiation on how much to produce in the group narrative.

PROCEDURE

Participants joined the study on a voluntary basis with formal enrollment in a group training course, held during October and November 2020. The participants were randomly divided into 23 groups of 4–9 members. The students participated in several online training activities using the Teams platform, according to previously established rules: all participants had to have their screen on, they spoke one at a time. Groups were self-managed and there was no formal role of conductor. Each group completed a group work assigned by the teacher linked to the theoretical contents explained previously (for example designing a structured role playing, analyzing a film segment from the point of view of leadership styles and roles that emerged, designing a focus group). At the end of each activity proposed by the teacher, each participant in the group filled out an individual reflective practice and at the end of the course each group filled out a collective reflective practice after a group discussion, managed in this case by the teacher. There was no minimum or maximum writing limit for these practices. Only the research group had access to both individual and group reflective practices. The researchers assigned each individual reflective practices an individual code (IPP1 = Individual Practice

Participant 1, IPP2, etc.) and a group code for collective practice (CPG1 = Collective Practice Group 1, CPG2, etc.).

DATA ANALYSIS

The data collected through individual reflective practices and the transcripts of the group reflection on the several activities were analyzed through grounded theory (Glaser and Strauss, 1967). Two independent researchers analyzed the qualitative data following the constant comparison analysis technique (Leech and Onwuegbuzie, 2011). The approach is based on grounded theory (Glaser and Strauss, 1967) and is supported using the software Nvivo12 (2018). The grounded theory, through a systematic and flexible methodology, helps to build models based on empirical data. The software was used to create a graphic representation and define a model based on the previously identified categories. The model is composed of nodes and sub-nodes, and their labels represent the categories and sub-categories identified by the researchers that exemplify the main themes that emerged.

RESULTS

This study analyzed 130 individual reflective practices and 23 group reflective practices. The total body of text individual reflective practices was 413,821 words, while that relating to group ones was 18,238 words. The total textual corpus was 432,059 words.

From the analysis of the practices, some sub-categories have been identified for each category, some that unite both types of practices, others specifically referring to individual practices and finally others still only referring to collective ones. For each subcategory, some significant sentences that best represent the subcategory itself are reported.

An analysis of the content indicates that the participants, due to the construction of individual and group reflections, paid greater attention to the dynamics that occurred within the group during the various activities. This enhanced their awareness of the various factors that affect the importance attributed to the different roles, the climate, and the degree of active participation. Combined, these factors allowed them to get to know each other better and strengthened the cohesion of the group.

In particular, there are some interesting aspects that emerged from the analysis of reflective practices, and which constitute the three categories identified by the researchers, that are represented in the model shown in **Figure 1**.

The first category refers to the use of reflective practice as an **awareness tool for the group**. The second category identified reflects on how individual and group reflective practices have been a **tool for analyzing the dynamics of the group**. Through the drafting of reflective practices, the participants identified salient points relating to the dynamics that occurred during the performance of group activities, touching both positive and critical aspects. A final aspect to consider is the way the activities were conducted. In fact, individual reflective practices proved to be a **tool for analyze group dynamics online**,

FIGURE 1 | Categories of individual and group reflective practices.

FIGURE 2 | Awareness tool for the group.
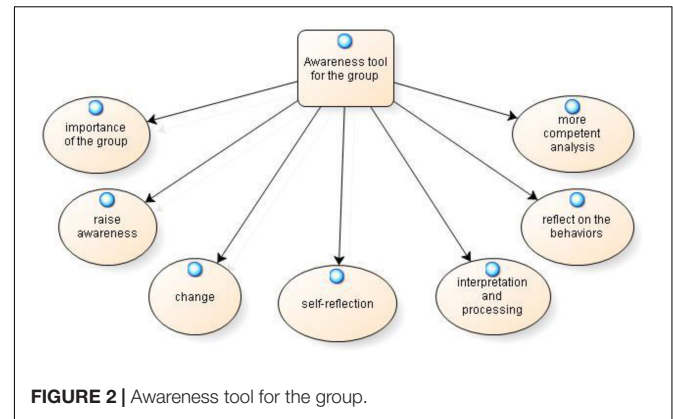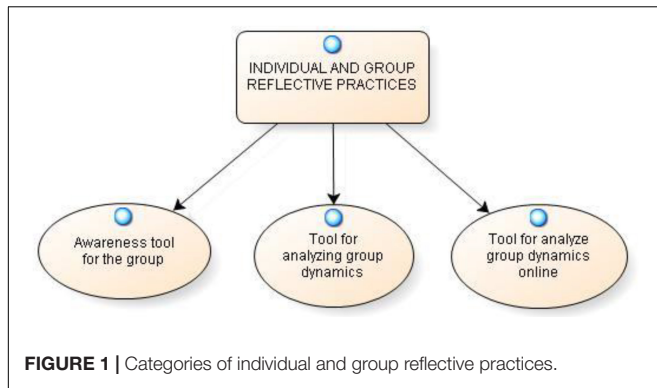
from which some critical issues emerged, but also unexpectedly positive implications.

Awareness Tool for the Group

From the analysis of individual and collective reflective practices, it emerged the category **awareness tool for the group**, within which seven sub-categories have been identified: importance of the group, raise awareness, change, self-reflection, interpretation, and processing, reflect on the behaviors and more competent analysis as shown in **Figure 2**.

The first subcategory, tool that brings out the importance of the group, emerges from both individual reflective practices "*In general, from all the reflective practices, I have reached the awareness of the importance of the contribution of the group in soliciting in each of us new food for thought that, alone, we would not even take into consideration*" (IPP51), that of group "*Reflecting in a general way on group activities, we hypothesized that they were characterized by positive interdependence and individual responsibility […] this allowed the increase of cognitive and social skills. We helped each other, and we were co-responsible; we established our rhythm of work; and we corrected each other*" (CPG23).

The analysis of individual reflective practices, however, found that these specific practices were a valid tool in **raise awareness** as to what occurred within the group: "*The technique of reflective practice allowed me to clarify what had happened within the group and become aware of what I had done well and what I still needed to improve on. Putting this in writing helped me a lot, compared to the simple reflection that I could only have done in my mind at the end of the experience*" (IPP105). Another participant also stated, "*The reflective practice activity carried out led me to various ideas about our ways of working in groups*" (IPP20). Others viewed the individual reflective practices as a tool for **change:** "*I therefore tried to involve others and call other's names for the interventions, recalling what was already written in the last reflective practice and wanting to develop and take on a different role more often than in the previous group experience*" (IPP65).

Individual reflective practice is also seen as a **self-reflection** tool within the group: "*It can be concluded that this experience was very useful as an introspective practice that led us to reason about ourselves*" (IPP88). "*This writing practice, on the other hand, made me realize that I could be more proactive during*

group activities" (IPP40). Some participants noted that individual reflective practice is also an **interpretation and processing** tool: "*The atmosphere that characterizes the group activity is one of mutual understanding…During the experience, as far as I am concerned, a wide spectrum of conflicting feelings and reactions followed one another. For this reason, I decided to carry out the first reflective practice on this activity, focusing further on the interpretation and elaboration of the same*" (IPP12).

Furthermore, the group reflective practices suggest that some participants felt the reflective practices allowed them to **reflect on the behaviors** of those in the group. "*…deeper reflection of our behaviors within the group and those of others*" (CPG4). Finally, the participants noted that group reflective practices allowed the group to perform a **more competent analysis** of the training contents and behaviors identified within the group. "*Through reflective practices, we were able to look at the contents learned in class and our socio-relational behaviors with more analytical and competent eyes*" (CPG18).

Tool for Analyzing the Dynamics of the Group

As reported in **Figure 3**, from the analysis of textual corpus emerged the category **tool for analyzing the dynamics of the group**, consisting of eight sub-categories: collective reflexivity, individual and group empowerment, awareness of the function of the group, emotional support, awareness of the roles, role of the facilitator, amount of time spent on confrontation and orientating and strictly centering on the task.

As can be seen from the sub-categories reported, the group and the dynamics that occur within it have been the object of reflection in the various reflective practices analyzed. Particularly, from individual and group reflective practices, it is clear that group work allows for the development of a **collective reflexivity:** "*During the group work I perceived a collective reflection on the issue addressed*" (IPP111). "*The conversation stimulated dialog and reflection; the group gave rise to a productive confrontation; and each component introduced new themes, which were exposed in a climate of openness and non-judgmental listening*" (CPG1). It was further noted that there was a willingness to listen to all members. "*All group members were willing to listen and participate in order to build a common reflection*" (CPG123).

FIGURE 3 | Tool for analyzing group dynamics.
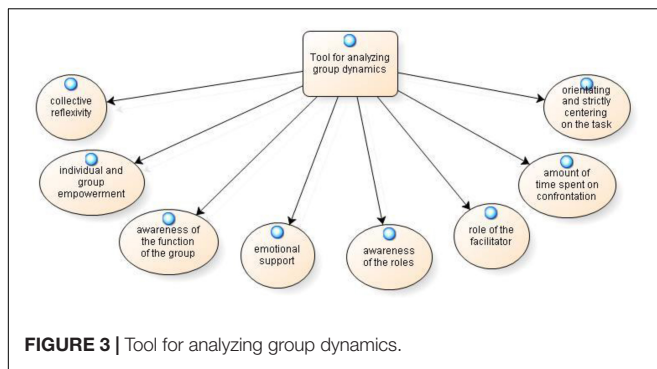
The drafting of individual and collective reflective practices also led the participants to focus their attention on those factors that allow, through the activation of **individual and group empowerment**, the achievement of a pre-established group goal:

"*For example, now I am aware that in a group there are people with different roles and that beyond their role they can help the group both to improve relationships and to achieve goals*" (IPP28).

"*Group activity first of all promotes personal and group empowerment but also the development of expressive and communication skills, stimulating creativity*" (CPG15).

"*At the group level, there was a collaborative, participatory climate of considerable attention*" (CPG10).

"*A highly motivated group can work well to achieve the ultimate goal and, consequently, a sense of well-being and gratification can arise for all members of the group*" (CPG17).

An analysis of the individual writing process determined that the participants have one greater **awareness of the function of the group**. Specifically, reflection through practice:"*…allowed me to understand how the group works, what are the characteristics of the way others behave…and it allowed me to act in subsequent meetings with serenity*" (IPP99) One of the functions attributed to the group is relative to **emotional support**, which is evident in one participant's reflective practice: "*This experience made me understand the real potential of the group in the emotional sphere; it was impactful and very illustrative of the power a group can have in supportive areas*" (IPP128).

Furthermore, the collective writing process indicates that group activities, important from a training and relational point of view, are useful in acquiring greater **awareness of the roles** within the groups. "*This experience was enriching not only from a training point of view but also from a relational point of view, and it allowed us to understand and have greater awareness of the roles assumed*" (CPG5).

Finally, the drafting of the group reflective practice is a critical **role of the facilitator** who led the group and shared creative and thoughtful comments. "*The intervention of the facilitator was important […] he was able to ask questions that generated very creative and thoughtful comments*" (CPG22).

However, in addition to the positive aspects related to being part of a group, there was no lack of critical perspectives

in the individual reflective practices. Concerns addressed by the participants included the **amount of time spent on confrontation**, both of which represented obstacles to achieving the task: "*The fact that each of us always has observations to make and, more generally, what we say can also be a critical issue. All time that had to be given to others meant we had to deal with a lot, and we risked not being able to finish the job*" (IPP33). The analysis also revealed how some participants suffered from **orientating and strictly centering on the task**, thus causing them to not pay attention to others: "*In my opinion, a certain attention toward others has failed. We have focused more on always being 'on the piece' from the point of view of the objective of the task, leaving out the possible point of view of others, which I believe has instead been listened to only as a function of his possible contribution useful for the purposes of the task, but without leaving real space for the person*" (IPP75).

Tool to Analyze Group Dynamics Online

The category tool to **analyze group dynamics online** it refers to how individual and group reflective practices proved to be a tool to bring out and reflect on the group dynamics that took place online. Particularly, four sub-categories have been identified: new experience, challenge, difficulty of involvement, and loneliness (see **Figure 4**).

As regard **new experience** many participants claimed as "*My perception of the group has partly changed from previous experiences because I am experimenting with a new form of online interaction with mostly unknown people. However, what remains unchanged compared to direct collaboration is the sense of mutual commitment. It is thanks to the cohesion of the group that the work will proceed in the best way since we are motivated not only by the activity but also by the social action proposal being drawn up*" (IPP44). From the reflective practices, it also emerged that this experience was perceived as **a challenge** that had to be overcome. "Group *work that is done in an online mode seemed to be something unattainable, but it turned out to be a real challenge that I managed to overcome*" (IPP112). Finally, individual reflective practices gave rise to concerns about **difficulty of involvement** the group as involvement was hindered by telematics. At an individual level, emphasis is placed on

FIGURE 4 | Tool for analyze group dynamics online.
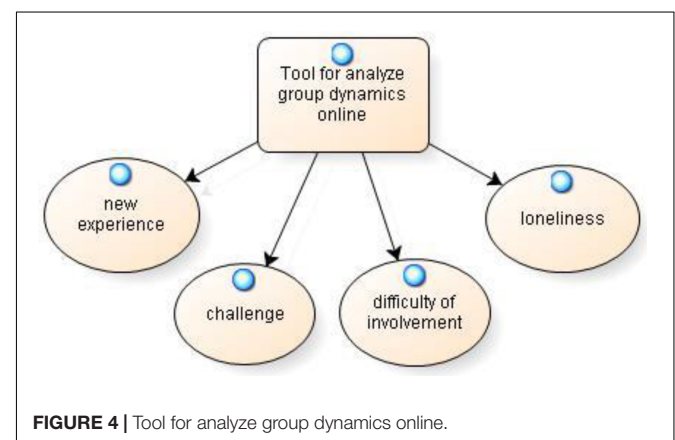
difficulties associated with emotional involvement: "*I think if we had had the chance to discuss in person, the process would have been even more emotionally engaging*" (IPP43). Another participant stated, "*technology has allowed us to create groups at a distance, but it does not allow us to recover that warmth given by the relationships in presence*" (IPP95). On a collective level, however, the perceived **loneliness** behind the screen is emphasized and is credited with making interactions among members difficult. "*Instead, the number of people who feel even more alone behind the screen has increased, thus increasing even more the discomfort for those who speak or expose themselves in front of strangers was almost manageable. In these conditions we notice a distinct difficulty in interaction that can be perceived as little participation because of the way we perceive the other changes, whereas in person we notice the non-verbal behaviors that still express a message*" (CPG12).

DISCUSSION

This study reports the findings of both individual and group reflective practices, with regard to the analysis of dynamics that occur within a group and the challenges confronting online groups. From the analysis of a textual corpus, it emerges that these practices are experienced as tools that accentuate the importance of the group's ability to develop new reflections on an individual level and increase cognitive and social skills on a collective level. Furthermore, data highlights how both individual and collective practices are a tool that facilitates not only greater **awareness of group dynamics** but it also facilitates **change** thanks to the memory of the writing of a previous reflective practice, they had implemented a different behavior and role within the group. As reported by Mezirow (2003), the process of acquiring awareness may promote change. More specifically, the experience is translated, through reflection, into a changed conceptual perspective that forces the education professional and his community of belonging toward continuous identity crises and the loss of dogmatic temptations. That said, awareness comes from the action of the subject and the representation that he has created for himself (Nuzzaci, 2011).

The research highlights the use of reflective practice as a tool for **self-reflection** within the group and for **the interpretation and processing of activities**, and as such, it is fundamental for the group itself. The literature (Boud et al., 1993) gives credence to the importance of the group as a powerful training tool, particularly in the context of team and problem-based learning where learning is socially and culturally constructed and influenced by the socioemotional setting in which it occurs. In particular, the collective reflective practices, on the other hand, allow the group **to reflect on its behaviors**, thereby activating a more **competent analysis** of the contents learned and the behaviors implemented and providing **greater awareness of the roles** embraced within the group.

More specifically, an analysis of the results indicates that both individual and collective reflections are capable of leading to a greater awareness of the functioning and importance of the group as well as to the development of **collective reflexivity**

and individual and group empowerment. Both from individual and collective practices, it became clear that a collaborative climate, the presence of different roles and high levels of motivation are fundamental to group success; as claimed, in fact, by Tarricone and Luca (2002), organization and collaboration are fundamental pillars of group skills. The literature (Fonagy and Target, 2005) speaks of reflective functioning as the process by which the behavior of others is understood, interpreted, and given meaning on the basis of thoughts, feelings, beliefs, and desires that motivate that behavior. From an analysis of the results, it is concluded that individual reflective practices are a qualitative tool that allow people who are part of a group to activate a **process of introspection, interpretation, and functional elaboration** of the group itself. Infact, in many case the writing is dictated by having experienced a wide range of conflicting feelings and reactions throughout the group activity. Furthermore, it should be emphasized that the writing of group reflective practices has allowed us to highlight that group activities increase cognitive and social skills and that, within the group itself, there is positive interdependence and co-responsibility in achieving the group's shared goal/s. In this regard, a review of Høyrup and Elkjaer (2006) indicates that from an individualized perspective, collective reflection is perceived as an individual cognitive learning process that occurs in social contexts. Again, the role of conversation is fundamental and is defined as a dimension that stimulates dialog and reflexivity (Collin and Karsenti, 2011). Reflection on action also includes the notion of reflection on the relationship, that is, on how to create and maintain links with others and on the dynamics of groups and organizations (Nuzzaci, 2011). Individual reflective practices have also highlighted certain criticalities that working in a group entails a dimension that has not emerged in collective reflective practices. In fact, it is highlighted that, while on the one hand, circular communication can lead to an increase in interactions between participants, and thus favor comparison (Rania et al., 2021), on the other hand, there is the risk that discussion times will be increased, **thereby risking the ability to fully achieve the task**. Consistent with this, Brown and Miller (2000) underscored that the pressure of time to achieve results can be a source of stress. Other participants stressed that the activity of the group **strictly focused on the task** can lead to a lack of attention toward its members or, in general, toward the individual perspectives of the other group members. Bavelas (1950) and Leavitt (1951) proposed a model for describing communication networks and how they affect the productivity of the group. More specifically, the members of a group are conceived as beings in a relationship joined through the bonds of communication, where distance and centrality are quantitative indices to describe the different types of networks. According to the authors, centralized groups complete their tasks more easily than those groups arranged in a decentralized way. However, the latter are more satisfied with the work performed. Brown and Miller (2000) differentiate the types of communication based on the complexity of the task, showing that groups working on simpler tasks tend to use more centralized communication modes compared to groups engaged in more complex tasks. Finally, the participants, through their individual and group reflections,

identified the particularities of the relational dynamics of groups that meet only through online platforms. It is, in fact, a new form of online interaction, which is increasingly widespread due to the COVID-19 pandemic and which, as highlighted in the literature, allows the individual to have positive experiences that enhance social and relational skills (Saldanha, 2020; Rania et al., 2021). In fact, interacting with unknown people in a virtual environment naturally resulted in change. However, the participants explained that the collaboration and group commitment to achieve their goals remained unchanged. In this regard, it has been found that the construction of a reflective group constitutes a protective factor for the well-being of workers (Parrello et al., 2021). The implementation of the group through the online mode was experienced by some participants as a critical issue, as there were, at least initially, difficulties linked to both emotional involvement and personal interactions, particularly for those who experience challenges speaking and interacting with strangers. The literature further suggests that the use of online platforms can present challenges, for example, with respect to non-verbal communication (Rania et al., 2021).

CONCLUSION

The analyzed results highlight that individual and collective reflective practices foster a greater awareness of the knowledge learned (Sabtu et al., 2019), the dynamics that occur within the group, and the emotions experienced, all of which, together, provide the opportunity to reflect on the learning process in its complexity (Rué et al., 2013). Furthermore, the writing of reflective practices compels students to accept co-responsibility in the learning context, which is fundamental in the development of meaningful and reflective learning (Bruno and Dell'Aversana, 2018). Among the limits of the research, it is evident that the participants would be students of the humanistic-social area, therefore more inclined, due to the type of training, to reflect on relational aspects and group dynamics. It would be interesting to use this type of reflective practices in different training contexts to verify how they can become tools of individual awareness also in other contexts and can allow the analysis of group dynamics even with subjects with scientific training.

Despite the limits highlighted, this research has also underlined some strengths; in fact, brought out as learning from experience, through reflective practices and using the group as a training tool, albeit online, can be an effective approach when used in a variety of contexts. For example, its use can stimulate reflection and comparison with one's own context,

questioning both oneself in practice and one's own identity (Bruno and Bracco, 2016).

Among the implications related to this study, we highlight its usefulness in training professionals who work in teams or even for groups of operators who use the online mode in the workplace. as well as for professions that work mainly online. As Parrello et al. (2021) point out reflective group work can be an organizational tool to maintain the well-being of workers, even more useful during the lockdown period linked to COVID-19.

Finally, although group reflective practices have received little attention (Collin and Karsenti, 2011), this research allows us to affirm that the writing of these practices allows the participants to become more aware of their roles during the learning process in a group context that favors the development of both individual and group empowerment.

DATA AVAILABILITY STATEMENT

The datasets presented in this article are not readily available because the data cannot be shared for ethical reasons related to privacy, but the authors undertake to make the data available if requested for a valid reason. Requests to access the datasets should be directed to NR, nadia.rania@unige.it.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. However, the research was carried out in accordance with the Ethics Research Recommendations of the Italian Association of Psychology and in accordance with the Declaration of Helsinki. Participation was entirely voluntary, confidential and anonymous. The participants were informed that they were free to withdraw from the study at any time. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

NR conceived the original idea of the study and supervised the results of this work. NR, IC, and LP contributed to the data processing and analysis, and wrote and organized the manuscript, presented the methodology, procedure and the data section. All authors discussed the results, presented the conclusion, and reviewed the manuscript and approved the final version for submission.

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Group Membership and Social Identities in a Formative Intervention in a Mexican Hospital

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Formative intervention is a participatory methodology that supports organizational change by means of an interactive and systematic dialogue carried out by researchers and participants. In this process, the researchers contribute to expanding the conversational space in the organization by supporting participants in examining and reflecting on their own work practices, as well as in modeling, shaping, and experimenting with innovations. Drawing on transcripts of videotaped sessions, this study analyzes how change is discursively sustained by the researchers who conduct the meetings within a formative intervention in a Mexican hospital. The quantitative and qualitative analysis focuses on the collective pronoun "we" as a membership categorization device deployed by the researchers for rhetorical and pragmatical aims, such as questioning about the state of necessity for the intervention, engaging the participants, or introducing a proposal of innovation with the participants. Results show how group membership and social identity markers are used by researchers to support emerging forms of collaboration, involvement of participants and the creation of common ground during the intervention process. In terms of the practical implications of the study, an informed and strategic use of membership categorization devices used by the researcher can increase the effectiveness of their formative and expansive role.

Keywords: social identity, formative intervention, collective pronouns, group membership categorization, rhetorical resources

INTRODUCTION

Formative Interventions for the Development of Workgroups

Formative intervention is a participatory methodology to support a group of professionals, within a work activity system, in the analysis, design, and implementation of new ways of working (Engeström, 2011). In this model, innovations are negotiated with the practitioners, and data are collected to explore the functioning and potential of such groups in their own context. The process of qualitative improvement and change pursued by this methodology is conceived as a progressive increase in the co-construction of new meanings and new work practices (Zucchermaglio and Alby, 2006). Change is approached as an emergent property of the participating organizational group, and the competencies that are needed to develop such a process are considered as located and distributed within it.

The methodology of formative intervention is implemented and developed, in practice, by means of "a toolkit called the Change Laboratory" (CL) (Engeström, 2015), inspired by the work of Vygotskij (1934/1990) and based on the activity theory (Engeström et al., 1996; Virkkunen and Newnham, 2013). This methodology has been widely applied in Europe (see Engeström, 2005), both in healthcare and educational organizations (Stoppini et al., 2009; Ivaldi and Scaratti, 2020) and is at an early stage of development in Latin America (see Montoro and Brito, 2017; Pereira-Querol et al., 2019; Brito, 2020; Vilela et al., 2020).

The CL, which is essentially based on the guided activation of "self-managed" improvement processes, consists of a series of sessions in which practitioners from an organization are supported by means of a bottom-up participatory approach in analyzing the history of their activity system, including sociohistorical tensions and contradictions. One of the main objectives of a CL process consists of unlocking the transformative agency of practitioners to become protagonists in the creation and implementation of a new model of practice (Engeström, 2015; Laitinen et al., 2016). The CL methodology does not provide prepackaged solutions "from the outside" but aims to bring out and develop in the participating group the ability to act in order to transform the activity system in which they work.

To this end, participants are actively and directly involved in the analysis, sensemaking process, and interpretation of their own activity relying on the data collected by means of individual and group interviews, microanalysis of significant and/or problematic observations, narratives, and/or video interactions (Ivaldi and Scaratti, 2020). Such a process involves several sessions and might lead to finding new solutions to problems and possibilities for organizational "expansion." This type of intervention requires the contribution and experimental attitude of the researchers who play an active role that goes beyond the traditional perspective of a casual observer and facilitator (Engeström, 2015). In this sense, for participants to take the lead in the design and experimentation of new working practices, researchers introduce their own ideas and intentions with the aim of provoking and sustaining a cycle of expansive learning.

The role of the researcher is, therefore, to expand the conversational space during the intervention in order to support participants in examining and reflecting on the current state of their activity system, as well as in modeling, shaping, and experimenting with innovations. Researchers have to sustain dialogic sensemaking when creating socially useful knowledge, acting based on a sort of anticipational fluidity (Cunliffe and Locke, 2020) as a way of relating with others when working with differences. Such differences are experienced through the unfolding living flow within the moment of conversation.

The contribution of researchers is based on the collaborative introduction and application of new tools and ideas through "determined and systematic dialogue" (Engeström, 2015). Consequently, the dynamism of the intervention stems from the interplay of ideas and intentions between researchers and participants. During a CL, sessions are videotaped for the collection of longitudinal data to analyze the intervention process and its development, including the interactions between researchers and the participating group.

In this study, the data collected from the videotaped sessions are employed to examine the discursive practices of researchers during the intervention.

Social Identity as a Rhetorical and Pragmatic Resource

Studies carried out on intergroup relations in theories of social identity (Tajfel, 1981) and self-categorization (Turner et al., 1987) have constituted one of the richest areas of experimental social psychology. Tajfel's theory explains how social identity influences intergroup behavior, whereas Turner's theory of self-categorization focuses on the psychological nature of belonging to a group and on the socio-psychological basis of group behavior. Most of the empirical research carried out in this area has concentrated on intergroup behavior between large social groups (distinguished by race, nation, ethnic group, and so forth) or in experimentally created groups (using the technique of minimal paradigms; Billig and Tajfel, 1973). But what happens in small groups, characterized by multiparty interactions between members? For discursive social psychology (Billig, 1987; Cole, 1996; Edwards, 1998), social (and self) categorization processes are situated results of negotiation discursive practices occurring in interactions with others. In this view, identity is "something that people do which is embedded in some other social activity, not something they are" (Widdicombe, 1998:191).

Sacks (1992) highlighted how social identity choices and moves are both indexical (defined by the terms used to mark the belonging social categories to give salience to) and occasioned (there is a particular social context where the categories should assume some relevance). Each group member has different identities to show and to give salience to for positioning the self and the other rhetorically (Hester and Eglin, 1997). The choice between these possibilities of positioning the self and the others (Harré, 1989; Muhlhausler and Harré, 1990) is guided by social factors such as the relationship between member, their roles, and the content and scope of the group. Identity is a resource that participants are using rhetorically and strategically during social interactions, but the possibility of using different social identities to negotiate and build ingroup-outgroup categorizations is also context-related (Zucchermaglio, 2005; Fantasia et al., 2021). Social identities can become an important negotiation content between members of a group rather than a stable characteristic and an *a priori* of discourse in interaction. The social context itself plays an active role in allowing some possible identity choices but also in defining the access of each group member to the identity negotiation process.

Many studies have shown how, even using minimal lexical choices, speakers mark those aspects of their own (or other) social identity that they intend to present as relevant in specific interactive contexts (Drew and Heritage, 1992; Sacks, 1992; Hester and Eglin, 1997). In particular, pronouns are discursive

components that, together with lexical selection (Drew, 1992), could act as a powerful "membership categorization device."

In this theoretical and methodological framework, we focus on how the researcher, as part of an intervention process, discursively supports change in the group of healthcare professionals of a Mexican hospital, through the construction and negotiation of specific social identities. Specifically, we present both quantitative analysis and qualitative analysis of how, among the various discursive devices at hand, the researcher strategically uses the pronominal markers "we" to evoke social groups and identities that are rhetorically functional to achieve the goals of the organizational change intervention. Our aim is to provide a micro- and discursive analysis of the strength and effectiveness of organizational change interventions, usually and mostly described and analyzed by considering more general dimensions of participation.

METHODS

This study is based on a formative intervention carried out during May and June 2017 in a public hospital located in the central part of Mexico (State of Guanajuato). The intervention was conducted by a multidisciplinary team of 2 senior researchers and 2 assistants with the participation of 25 members of the hospital board of directors. The intervention was requested to support the participants in the analysis of their work activity and functioning as a professional team.

The group of participants consisted of area coordinators, heads of departments, and hospital directors, both medical and administrative. The intervention was conducted through seven sessions, with an average duration of 80 min and at a rate of one per week. The language used in the sessions was Spanish. The objectives of the intervention were to increase integration, collaborative work, and improve interprofessional relations, as a starting point to enhance the performance and effectiveness of the board of directors (Montoro and Brito, 2017). As an "external" measure of the achievement of these objectives (which is not the focus of the paperwork), a questionnaire was distributed to all participants at the end of the last work session. Analysis of the responses reveals relevant clues of agentive speech in the participants and a greater willingness to engage collaboratively with coworkers.

The data analyzed in the study are the verbatim transcripts of the seven intervention's videotaped sessions. As a preliminary analysis, we first read through the transcripts to explore the presence and distribution of pronouns in the participants' discursive sequences. Since pronouns are easily identifiable in transcriptions, their occurrence constitutes a finite class that can be identified and counted. We counted, therefore, occurrences of "we" ("nosotros" in Spanish) in each session. Moreover, we also highlighted who was the speaker and which collective identity categories were marked in each session.

As pronouns in Spanish are implicitly marked by verbs that vary according to the grammatical person, their marking in discourse is not necessary: I, you, we, and so forth can, and often are, be elided as they are implicitly marked by the verbs according

to the grammatical person. In other words, their occurrence in conversation requires motivation and has a rhetorical function. For this reason, the use of the collective pronoun "we" acquires a specific relevance, as it represents a particular choice of the speaker. The quantitative analysis oriented the subsequent qualitative analysis and codification, which focused on how, when, and with what rhetorical functions the researchers used collective identity categorizations in the sessions. Subsequently, a micro- and discursive analysis focused on the identities marked during the first and fourth sessions was carried out to discuss exemplary excerpts corresponding to each identity category and rhetorical function.

RESULTS

Preliminary Analysis of Identity Category Occurrences

Our preliminary analysis on the occurrences of the "we" pronoun was functional for identifying the identity categories that emerged and how often these categories were employed by participants. **Table 1** provides a quantitative overview of the identity categories that emerged across the sessions and of the speakers marking them. Among the participants, the researcher results to be the one who most frequently invokes collective identities in every session (except for session n. 3, see **Table 1**).

TABLE 1 | Identity categories marked by the researchers during the intervention.

Session	N. "we"	N. "we" marked by researchers	N. identities marked by researchers	Identities categories marked by researchers
1	40	29 (72.5%)	4	Board of Directors Incumbent Researchers Researchers in the room All the people in the room
2	57	37 (65%)	2	Incumbent Researchers All the people in the room
3	37	12 (32.3%)	2	Board of Directors Incumbent Researchers
4	48	35 (72.6%)	3	Board of Directors Incumbent Researchers All the people in the room
5	12	7 (58%)	2	Incumbent Researchers All the people in the room
6	13	7 (54%)	2	Incumbent Researchers All the people in the room
7	32	24 (75%)	3	Incumbent Researchers Researchers in the room Group of participants in the shadowing technique

The identity categories that were codified from the data and account for the "we" marked by the researchers during the sessions are as follows:

Board of directors. This "we" was codified each time the researcher referred to the group of the board of directors, i.e., area coordinators, heads of department, and hospital directors, both medical and administrative, who could be in the room during the session or not.

Incumbent researchers. This "we" was codified when the researchers referred to themselves as senior researchers in charge of the intervention and responsible for conducting the sessions.

Researchers in the room. This code states the "we" used to point out the research team in a broad sense. It was codified each time the researcher indicated the research team made up of two incumbent researchers and two junior researchers, who were present in the session and jointly were in charge of the setting organization, video cameras placement, preparation of material, and so forth.

All the people in the room. This "we" was codified each time the researcher referred to all the participants present in the session, both members of the board of directors, senior researchers, and assistants.

Participants in the shadowing technique. This group was codified when the researcher pointed out to the participants in a shadowing exercise carried out in the last two sessions (codified just once in session n. 7).

The identity categories made relevant by researchers appeared as broadly linked to the aims of the different sessions of the intervention. We focused here on session n. 1 (**Table 2**) and session n. 4 (**Table 3**) since they were particularly central for the successful accomplishment of this intervention. The specific objectives of the first session were to question the state of necessity for the intervention as well as to engage the participants. In the fourth session, the aims were centered on supporting the participants in focusing on improvement areas and proposing alternatives and innovations to improve their work practices. In the following paragraphs, we described and provided examples of how identity categories were used by researchers in these sessions.

Identity Categories Used by Researchers in the First Session

During this meeting, the researchers presented the methodology of the intervention, describing and contextualizing its theoretical and epistemological principles. This was the first time they met with the participants and was the initial opportunity to negotiate and inquire them about the state of necessity for the intervention, as required in the formative intervention approach (Engeström et al., 1996).

Excerpt 1 (**Table 2**) provides an early example of identity categorization employed by researchers, where the "we" indicates the researchers conducting the intervention. There were four researchers in the room but two of them were juniors who observe and do not intervene in the session. Here the "we" refers to senior researchers who represent a university role and methodological expertise (how do we work?). This "we" is fielded to be depowered with respect to the "you" of the

participants, who are presented as repositories of knowledge and agency. There is a reformulation of who has the direction of the intervention, from the researchers to the participants, therefore an attempt to propose this role to the participants in order to nominate them to an active and agentic role. The rhetorical intention is, therefore, to explain the intervention methodological approach and describe what researchers do with an informative purpose, but there is also a subtle attempt to persuade the participants by requesting them to get involved in the enterprise and to be its protagonists. Without this adhesion, in fact, the formative intervention model could not have been put into practice according to its main theoretical and methodological principles (Virkkunen and Newnham, 2013).

A different nuance of the same rhetorical intent is found in Excerpt 2 (**Table 2**), where *Researcher A* explains to the participants a theoretical concept of the intervention model (the concept of *community* as a component of an activity system). *Researcher A* exemplifies such a concept by including the category "researchers in the room" (incumbent and junior researchers) as part of the *community* of the hospital activity system at that moment. In doing so, the researcher establishes a link between the practitioners and the researchers as "newcomers," offering a new and broader perspective related to the theoretical concept presented.

Excerpt 3 (**Table 2**) shows another rhetorical use of the groups' categorization. In this case, the identity marker used by the researcher refers to "we" as the board of directors, a category into which the researcher puts himself ("if we are the body"). In this excerpt, when talking about "body," the participants are expressing two meanings interrelated: body and board of directors (*cuerpo* and *Cuerpo de Gobierno* in Spanish, respectively). In this regard, the researcher solicits a reflection on the multiple relationships of the board with other organizational actors through the metaphor of the "body" but also solicits the group participation by means of asking numerous questions to the participants. The researcher asks participants a question ("I ask you") but formulates the content as if the participants had asked it ("if we are the body"). In this way, the researcher models a reflective attitude that consists of adopting the metaphor of the "body" and, in doing so, his rhetorical purpose is to support reflection and leave the participants the role of protagonists and those who have the main agency. The researcher builds such a discursive structure by means of questions and proposals, using a sort of "ventriloquism" (Carter, 2002), to encourage participants to question themselves on certain issues. At the same time, the researcher makes an effort to not be the only one to propose topics for discussion, which would be contrary to the formative intervention methodological principles. It is possible to affirm that the changing identity category of the researcher for a moment ("I ask you, if we are the body") is one of the ways in which this nondirective and participatory approach is discursively performed, but at the same time, it reveals a commitment and an important rhetorical work aimed at negotiating the engagement of the participants.

In Excerpt 4 (**Table 2**), the researcher shows a different use of the pronoun "we" referring in this case to the category "all people in the room". There is a shift from

TABLE 2 | Exemplary excerpts of identity categories used by researchers in the first session.

Spanish	English
Función retórica: Para describir y contextualizar lo que hacen los investigadores de acuerdo al modelo de intervención.	*Rhetorical function: To describe and contextualize what researchers do according to the intervention model.*
Extracto 1. Grupo evocado: Investigadores titulares	Excerpt 1. Evoked group: Incumbent researchers
Investigador A: (…) ¿cómo trabajamos?, de abajo hacia arriba, **nosotros** no llegamos de arriba como universidad con el conocimiento hacia abajo, a impartir nada, sino que **nosotros** tenemos micrófonos, equipo de grabación, porque todo lo que se va a platicar aquí, se va a analizar, los problemas y las soluciones van a surgir de lo que ustedes digan, no de lo que **nosotros** pensemos o digamos de antemano, al entrar aquí, tenemos que olvidar **nosotros** lo que sabemos, que no sirve para nada, **nosotros** venimos a escucharles a ustedes, sobre todo la solución va a surgir de ustedes mismos (…)	*Researcher A*: (...) How do we work? from the bottom up, **we** do not come from above as a university with knowledge downward, to impart anything, but **we** have microphones, recording equipment, because everything that is going to be discussed here, is going to be analyzed, the problems and solutions are going to arise from what you say, not from what **we** think or say beforehand, by entering here, we have to forget what **we** know, which is useless, **we** come to listen to you, above all the solution is going to arise from you yourselves (...)
Extracto 2. Grupo evocado: Investigadores en la sala	Excerpt 2. Evoked group: Researchers in the room
Investigador A: (…) comunidad es lo que en inglés llaman *stakeholders* que son todas las partes interesadas (…) todo aquel que tenga un interés en la actividad que ustedes hacen. Incluso **nosotros**, **nosotros** somos parte ahora de la comunidad, porque nos interesa lo que hacen ustedes, queremos aprender y descubrir, la comunidad es muy amplia y es la base de la actividad (…)	*Researcher A*: (...) community is what in English they call *stakeholders*, which are all the interested parties (...) everyone who has an interest in the activity you do. Even **us**, **we** are now part of the community, because we are interested in what you do, we want to learn and discover, the community is very broad and is the basis of the activity (...)
Función retórica: Para apoyar y sostener la participación / reflexión	*Rhetorical function: To support and sustain participation / reflection.*
Extracto 3. Grupo evocado: Cuerpo de Gobierno	Excerpt 3. Evoked group: Board of Directors
Investigador A: (…) entonces me hablan de mil cabezas, de brazos, yo veo que este es un cuerpo, yo digo pues ya casi tengo aquí el ser entero ¿no?, yo les pregunto si **nosotros** somos el cuerpo, luego está el IMSS que tiene mil cabezas, los operativos parece que son las extremidades, los brazos, las piernas, ¿si será esa metáfora adecuada para tratar de entender lo que sucede aquí? ¿Qué opinan ustedes? (…) ¿qué significa eso de que el IMSS es un monstruo de mil cabezas?	*Researcher A*: (...) so they talk to me about a thousand heads, about arms, I see that this is a body (Body means "cuerpo." In this excerpt, when talking about "body," participants are talking about two meanings interrelated: "cuerpo" and "Cuerpo de Gobierno," but in English such connotation cannot be observed in the translation of the term "Cuerpo de Gobierno" as "board of directors."), I say well, I almost have the whole being here, don't I, I ask you, if **we** are the body, then there is the IMSS (IMSS: Mexican Social Security Institute for its acronym in Spanish that has a thousand heads, the workers seem to be the extremities, the arms, the legs, is that an appropriate metaphor to try to understand what is happening here? What do you think? (...) What does it mean to say that IMSS is a monster with a thousand heads?
Director del hospital: El expresar que el instituto haciendo una analogía con un monstruo de mil cabezas es hablar de que es una institución sumamente compleja que tiene no sólo un pilar en el cual se basa la atención médica sino que también tiene atención a prestaciones económicas y sociales, que lo sabemos también es un rubro muy importante dentro del instituto y que por lo tanto la diversidad de áreas que interactúan para que se lleven a cabo los objetivos para los cuales fue creada esta institución lo hacen tan complejo como un monstruo de mil cabezas (…)	*Hospital director*: When expressing that the institute, drawing an analogy, is like a thousand-headed monster is to say that it is an extremely complex institution that has not only a pillar on which medical care is based but also economic and social benefits, which we know is also a very important area within the institute, and therefore the diversity of areas that interact to achieve the objectives for which this institution was created make it as complex as a thousand-headed monster (...)
Extracto 4. Grupo evocado: Grupo de los presentes	Excerpt 4. Evoked group: People in the room
Investigador A: Supervisión, vinculación, dirección, el modelo habla de control, esas son actividades que ustedes hacen, pero el título de la película, me están diciendo, hay un escena de acción, una escena romántica, una de guerra, pero, ¿el nombre de la película?, el modelo dice que la función o lo que ustedes hacen como Cuerpo de Gobierno se llama gestión de la unidad médica, gestión o gestión directiva del hospital, esa es su función según el modelo, ¿se sienten cómodos con esa definición?, ¿o la cambiamos, la modificamos?, es nuestra, **nosotros** la podemos hacer como **nosotros** queramos, como nos sintamos cómodos, pero sí es importante que le pongamos nombre porque si no es el monstruo de mil cabezas, da miedo, no sé exactamente, algo hacemos, un poco de esto un poco de aquello, ¿ gestión?	*Researcher A*: Supervision, liaison, direction, the model talks about control, these are activities that you do, but the title of the film, you are telling me, there is an action scene, a romantic scene, a war scene, but what is the name of the film?, the model says that the function or what you do as Board of Directors is called management of the medical unit, management or management of the hospital, that is your function according to the model, do you feel comfortable with that definition, or do we change it, modify it?, it is ours, **we** can do it as **we** wish, as we feel comfortable, but it is important that we give it a name because otherwise it is a monster with a thousand heads, it is scary, I don't know exactly, we do something, a bit of this, a bit of that, management?
Jefa de finanzas: Gestión, gestionamos, finalmente.	*Head of finance*: Management, we manage, finally.
Investigador A: La gestión abarca todo, ¿no?	*Researcher A*: Management is all-encompassing, isn't it?
Director del hospital: Si partimos de la base de que gestionar es que las cosas sucedan, pues sí, porque cada quien en su ámbito de competencia hace eso, gestión.	*Hospital director*: If we start from the premise that management means making things happen, then yes, because everyone in their area of competence does that, management.

The correspondence between the category identities marked in Spanish and its respective equivalency in English ("nosotros" and "we/us," respectively) are indicated in bold letters.

directing the question to board members to phrasing it using a broader and more inclusive identity category ("do you feel comfortable with that definition, or do we change it, modify it?"). Here *Researcher A* uses the category to activate a reflection that respects the bottom-up rule and he puts himself in the group, the group of those who seek a definition for the management activity of the board of directors. The attempt consists in constructing this enterprise as shared and

collaborative, in this way the researcher accomplishes two things, i.e., he reaffirms the participatory approach and at the same time involves and orients the participants in such a defining task.

During the first session, the collective identity markers were used to create engagement and influence in the group without being directive, trying to respect the bottom-up participatory principle through questions and proposals, through the identity

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TABLE 3 | Exemplary excerpts of identity categories used by researchers in the fourth session.

Spanish	English
Función retórica: *Para encuadrar el focus de la intervención*	Rhetorical function: *To frame the focus of the intervention*
Extracto 5. Grupo evocado: Investigadores titulares	Excerpt 5. Evoked group: Incumbent Researchers
Investigador B: (…) queremos empezar con una breve recapitulación de cómo estamos viendo **nosotros** el hospital y su sistema que implica muchas personas, este es un esquema que C (investigador A) les había compartido desde la primer sesión, aquí **nosotros** creemos que el potencial es ver el hospital como un todo, no es responsabilidad solamente de una persona, el hospital tiene su propia historia, es una actividad colectiva que sale gracias a la implicación de todos, es una red de relaciones entre áreas (…), bueno, lo que a **nosotros** nos gustaría empezar a trabajar, a partir de esta sesión, es cómo desarrollar al Cuerpo de Gobierno (…) **nosotros** queremos ponerles a ustedes en la parte protagónica como Cuerpo de Gobierno y conectar su desempeño con los resultados que obtienen como Cuerpo de Gobierno, para pensar y reflexionar hoy sobre qué herramientas o dónde podríamos ubicar las dimensiones de mejora (…)	*Researcher B*: (...) we want to start with a brief recapitulation of how **we** are seeing the hospital and its system that involves many people, this is a scheme that C (researcher A) had shared with you from the first session, here **we** believe that the potential is to approach the hospital as a whole, it is not only the responsibility of one person, the hospital has its own history, it is a collective activity that comes out thanks to the involvement of everyone, it is a network of relationships between areas (....), well, what **we** would like to start working on, starting with this session, is how to develop the Board of Directors (...) **we** want to put you in the leading role as Board of Directors and connect your performance with the results you obtain as Board of Directors, to think and reflect today on what tools or where **we** could place the dimensions of improvement (...).
Función retórica: *Para proponer recursos conducentes al cambio*	Rhetorical function: *To propose resources conducive to change.*
Extracto 6. Grupo evocado: Investigadores titulares	Excerpt 6. Evoked group: Incumbent researchers
Investigador B: No habiendo alguna más, me gustaría adelantar el siguiente paso, a **nosotros** nos gustaría, sería que de estas cuatro (áreas de mejora) que escuchamos ahorita o si llegáramos a identificar alguna otra, pudiéramos focalizarla y empezar a trabajar en ella (…) eso significaría poner a prueba un pequeño cambio pero antes de ese pequeño cambio pues podemos avanzar en la construcción del problema identificando, y si ustedes están de acuerdo, fijar alguno de estos cuatro, cuál es el que queremos mejorar, pensando en que vamos a obtener otro resultado, ponerlo a prueba y hablarlo después, esto es un modelo que **nosotros** les proponemos, digamos para ganar control sobre el cambio que se quiere hacer y al ganar control en este cambio y ponerlo y evaluarlo, avanzar en lo que se quiere, esto mismo que es digamos un, ciertamente un modelo de gestión relativamente alternativo que **nosotros** les estamos proponiendo desde ahorita, **nosotros** que les parece si después analizamos sus hojas, sus testimonios, les proponemos un área y lo ponemos a prueba (…)	*Researcher B*: Not having any more, I would like to advance the next step, **we** would like, would be that from these four (areas of improvement) that we heard now or if we were to identify any other, we could focus on it and start working on it (....) that would mean testing a small change, but before that small change, we can go ahead in the construction of the problem by identifying, and if you agree, to fix one of these four, which is the one we want to improve, thinking that we are going to obtain another result, test it and talk about it afterward, this is a model that **we** are proposing to you, let's say to gain control over the change that is wanted, and by gaining control over this change and putting it into practice and assessing it, to advance in what is wanted, this is certainly a relatively alternative management model that **we** are proposing right now, what do you think if **we** analyse your sheets, your testimonies, we propose you an area and we test it (...)
Función retórica: *Para apoyar y sostener la participación / reflexión.*	Rhetorical function: *To support and sustain participation / reflection.*
Extracto 7. Grupo evocado: Cuerpo de Gobierno	Excerpt 7. Evoked group: Board of Directors
Investigador A: (…) quisiera saber ¿qué tanto se involucra a la comunidad?, ¿qué tanto están en contacto con reuniones con el Gobierno local de Z (nombre de una ciudad)? ¿Eso está sucediendo?	*Researcher A*: (...) I would like to know how much the community is involved, how much you are in contact with meetings with the local government of Z (name of a city) Is that happening?
Director del Hospital: Mes con mes hay un comité municipal de salud, participa en representación la doctora M o va S, va la doctora V, la doctora O, tenemos aparte una vinculación con el comité municipal de vacunación (…) son alrededor de cinco comités en donde se involucra la intervención del municipio, instituciones de salud.	*Hospital Director*: Every month there is a municipal health committee, Doctor M participates on behalf of Doctor S, or Doctor V goes to, or Doctor O, we have apart a link with the municipal vaccination committee (…) there are around five committees where the intervention of the municipality and health institutions is involved.
Investigador A: ¿Cómo se podría involucrar más? (…) allá en la escuela a veces (…) se invitan personas externas para que vengan a platicar de algo (…) ¿se imaginan ustedes a un paciente aquí?, unos dicen que sí, a otros les da risa nerviosa, ¿por qué no?, traer un paciente, que el paciente nos cuente de un caso, **nosotros** veamos desde su punto de vista.	*Researcher A*: How could it get more involved? (...) there in the school sometimes (...) people from outside are invited to come and talk about something (...) Can you imagine a patient here?, some say yes, others laugh nervously, why not, bring a patient, let the patient tell us about a case, that **we** see from his point of view?
Jefa de Trabajo Social: De hecho, C (nombre del investigador 1), ya en una de las sesiones me di la oportunidad de invitar a un paciente que recibió un tratamiento de un trasplante de riñón (…) ojalá en lo sucesivo esta parte que creo si es bien importante la consideráramos.	*Head of Social Work*: In fact, C (name of researcher A), in one of the sessions I had the opportunity to invite a patient who received a kidney transplant treatment (…) I hope that in the future we will consider this part, which I think is very important.
Investigador A: Sí, en este método lo que llamamos es "romper las barreras," cruzar las barreras la barrera entre **nosotros** y ellos, esa barrera también les dificulta ¿no?	*Researcher A*: Yes, in this method what we call "breaking down the barriers", crossing the barriers, the barrier between **us** and them, that barrier also makes it difficult for them, doesn't it?
Extracto 8. Grupo evocado: Grupo de los presentes	Excerpt 8. Evoked group: People in the room
Investigador A: (…) ¿Cómo liderar?, pues como nos gustaría que nos lideren a **nosotros**, pongámonos del otro lado, a mí me gusta cuando me tratan así, a mí me gusta cuando me hablan así (…)	*Researcher A*: (...) How to lead, as we would like than someone lead to **us**, let's get on the other side, I like it when they treat me like that, I like it when they talk to me like that (...)

The correspondence between the category identities marked in Spanish and its respective equivalency in English ("nosotros" and "we," respectively) are indicated in bold letters.

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categories shown here. These identity markers are used by the researcher to promote reflection and action, but they do so by constructing the procedural directions as shared, as something that comes from the group of participants and not from the researchers. In doing so, the identity markers are employed to serve the purposes of the session and contribute to their achievement, serving mainly on *how* to achieve such purposes.

Identity Categories Used by Researchers in the Fourth Session

The objectives of the fourth session consisted in supporting the participants to identify improvement areas and propose them alternatives and innovations conducive to the development of their work practices. In Excerpt 5 (**Table 3**), the identity category "incumbent researchers" is evoked to represent the researchers as the only ones with the competence to see what the object of the intervention is from a theoretical point of view ("the hospital as a whole, a collective activity") (Engeström, 2015). These early "we's" are in some ways a transgression from considering only the participants as repositories of knowledge, even though later the "we" of the researchers is evoked to empower the board reiterating the bottom-up participatory approach ("we want to put you in the leading role"). It seems that such an approach constrains the way researchers proceed discursively. In this regard, the use of such "we" pronouns by researchers performs a sort of compromise with respect to leaving everything completely open and in the hands of the participants. However, at the same time, the researchers tend to influence toward an outcome and move the intervention forward.

Excerpt 6 (**Table 3**) is still an example of the identity category "we" as "Incumbent researchers," used in this case to support the participating group in identifying an improvement area and adopting a change proposal ("this is a model that we are proposing to you"). The rhetorical intentions linked to the category seem to continue with a negotiation process in order to launch resources conducive to change and, in doing so, stimulate participants' transformative agency. However, the use of "we" as incumbent researchers achieves a distancing from the participants and connotes the researchers as holders of a methodological competence capable of orienting some aspects of the intervention. During the fourth session, such "we as researchers" seems less participatory than in the first session but exerts more pressure not surprisingly in such a central moment of the intervention.

In Excerpt 7 (**Table 3**), the researcher supports both participation and reflection by remarking on the board-of-directors category. On the other hand, the researcher puts himself as part of such an identity category to start a discussion about how the board members get involved with the local community. By considering himself as part of this group, the researcher opens up the discussion into the topic of patient inclusion, as proposed in the CL methodology (Virkkunen and Newnham, 2013) ("why not, bring a patient, let the patient tell us about a case, that we see from his point of view?"). Establishing a dialogue with the participants in such a direction seems to highlight a barrier observed by the researcher, who adopts this identity category

to play a less intrusive role and support the participant group to overcome such barrier ("we call 'breaking down the barriers', crossing the barriers, the barrier between us and them").

In Excerpts 6 and 7, we identified a passage from "we as researchers" ("this is a model that we are proposing to you") to "we as board of directors" (why not, bring a patient . . . that we see from his point of view?). This change of identity category seems to push forward the adoption of the methodological principles that in the passage are constructed as shared and applied to the board. In Excerpt 8, the passage continues into the category "all the people in the room" that the researcher uses to support the reflection and discussion on the leadership style topic ("How to lead, as we would like than someone lead to us").

In summary, during the fourth session, the identity markers are used to frame the focus of the intervention, propose resources conducive to change, and support the collective discussion according to the point of view of researchers. This latter rhetorical function (provide support for the collective discussion) results central to engaging the participants during the first and fourth sessions and can be considered as a specific action that allows the researchers to sustain the reflection process. In this way, researchers used such identity markers to develop the intervention and achieve its methodological goals.

DISCUSSION AND CONCLUSION

In this study, we focused on how the researchers, among the various discursive devices at disposition, use the pronominal markers "we" to evoke social identities that are rhetorically functional to achieve the objectives of an intervention process carried out with a group of healthcare professionals.

In the data presented, researchers rely on the use of identity categories to engage participants in shared meaning making (Sacks, 1992), to negotiate their active involvement in the intervention, and to promote actions leading to change. Results show how the identity categories are strictly linked to the aims of the different sessions of the intervention. The identity categories marked by the researchers were used either as an affiliative device to create a closer engagement ("we" as "all the people in the room") or to present the intervention as a shared and collaborative activity ("we" as "board of directors") (in the first session) or rather as a distancing device between researchers and participants in order to assert knowledge of researchers and epistemic authority in finding proposals that lead to change ("we" as incumbent researchers) (in the fourth session).

We observed a tension connected to the identity categories used by researchers, consisting in the action of influencing, making proposals, and adopting an active role, as they try not to intervene too much and to respect the bottom-up participatory principle. This tension, in contrast, is just what qualifies and characterizes the "philosophy" at the base of the CL, as "guided activation of "self-managed" improvement processes" (Engeström et al., 1996; Virkkunen and Newnham, 2013).

The observed tension exemplifies a crucial aspect in relation to how the formative intervention model is discursively

operationalized, particularly, in relation to how researchers seek to accomplish rhetorically its epistemological principles (Sannino and Engeström, 2017). The data presented contribute to shed light on an area of usefulness to analyze the formative intervention process and the contribution of researchers from an innovative approach. The empirical analysis of group membership and social identity markers has proved to be useful to assess emerging forms of collaboration in the context of the intervention and, more generally, as indicators of the effectiveness of professional practice of researchers in the formative intervention.

Future research developments plan to use such micro- and discursive analysis not only to investigate other contexts of formative intervention but also to analyze the use of social identity markers by group of participants as a "measure" of their involvement in the development of innovation in their work activity system.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

This study was reviewed and approved by Local Research and Ethics Committee, Mexican Institute of Social Security, approval number R-2017-1003-10. Written informed consent was obtained from all participants for their participation in this study.

AUTHOR CONTRIBUTIONS

HB provided the conception and design of the study, contributed to the data collection, analysis and interpretation of data, and drafting the article. FA and CZ provided the conception and design of the study, analysis and interpretation of data, drafting the article, and revised it critically for final submission. All authors have read and approved the manuscript.

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The Training Setting as a Social and Liminal Space for Professional Hybridization

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This article addresses the liminality concept as a way to explore a particular group context, relating to a training setting intended as a liminal space, and to highlight its potential to trigger evolutionary personal and organizational identity trajectories. Dealing with a contemporary uncertain, volatile, and ambiguous organizational scenario, people are asked for consistent and quick professional hybridization processes. This article refers to a case study related to an action research process aimed at a cultural transformation and nurturing organizational learning inside an extra-hospital Rehabilitation Center, challenged by a strong organizational reconfiguration and the creation of new functions and roles, among which the one *coordinator*, responsible for the operational activity to be managed within the units of the organizational context. This article also highlights both the main features that characterize a training setting as a liminal space and identifies the possible plots of professional hybridization paths that a training group as a liminal space can trigger and develop.

Keywords: liminality, liminal space, hybridization, narrative space, training

INTRODUCTION: ADHOCRATIC ORGANIZATIONS AND PROFESSIONAL HYBRIDIZATION

The evolution toward pluralistic organizational scenarios, which are characterized by an understanding of different goals and interests among the groups that are internal and external to organizations, requires the activation of an agile working mode (Harris, 2015, 2016; Fregnan et al., 2020; Ivaldi et al., 2021) and an adhocratic approach to organizational architecture (Mintzberg, 2009, 2012).

People and organizations are called to a challenging learning path, seeking to cope with ever more demanding complex situations and environments, to solicit the relations between identity (professional and organizational), knowledge, and practice. They are facing to a runaway object (Engeström, 2008), which is progressively defined, shaped, and shifting, as the unfolding progress of its achievement is emergent due to a multi-faceted, complex, and often contradictory combination of participants, communities, instruments, rules, and the division of labor.

Hence, the solicitation of consistent and quick professional hybridization processes, dealing with contradictions in the daily organizational them (Ivaldi and Scaratti, 2020), experience and the simultaneous need to make sense of them, seek new possibilities of action related to the unfolding object-oriented activity. The challenge is about opening a portal (Engeström, 2020) to enhance a new and not yet explored a way of thinking about something, seeing differently and fitting action, sense-making, future-oriented vision, and conflicting dynamics.

Tackling of organizational contexts characterized by meaningless and uncertainty, in which people have to deal with unforeseen problems, criticalities, and trouble situations, requires the adoption of an anchoring forward step perspective (Sannino and Laitinen, 2015). It entails coping with transformative actions and sense-making processes connected to the experience of stepping into the unknown and improvising paths for new actions and meanings.

This article aims to explore how much a particular group context related to a training setting intended as a liminal space supports and facilitates professional hybridization processes within an organizational context undergoing restructuring and transformation. To this end, a training experience is presented within a research-action path, developed in a health and social center, in which the identity transition path of some key figures was monitored: the coordinators of operational units. The goal is to grasp how an appropriately configured liminal training space has facilitated the evolution of identity trajectories, allowing processes of adaptation in one's professional, and organizational identity.

There are two research questions that the article intends to develop:

- What are the pivotal features that characterize a training setting as a liminal space?
- What are the possible plots of professional hybridization that a training group as a liminal space can trigger and develop?

To answer these research questions, we refer to a socio-constructionist approach, both at the theoretical and practical level, to gather a narrative (Ibarra, 1999; Ibarra and Barbulescu, 2010) and conversational (Zucchermaglio, 2013) material within the training context and to be also used as a space for a discussion and collective validation of the empirical evidence collected, thus enhancing the concrete experiences of practitioners involved and giving space to their voices as practical authors (Cunliffe, 2001).

This article unfolds as follows: we begin by highlighting the concept of liminality and its connection with the challenging trajectory of professional hybridization. Thereafter, we address the pivotal aspects of a training setting as a liminal space and conceive it as learning by experience and transformative path (Mezirow, 2000; Scaratti, 2017). Then, we point out a specific training experience related to a specific organizational context, underline the methodological perspective adopted for gathering empirical data from the field, and present the main findings connected to the experience of people involved. Finally, we conclude by addressing some transversal dimensions at stake and by suggesting hints for further research.

LIMINALITY, PROFESSIONAL HYBRIDIZATION, AND TRAINING SETTING AS A LIMINAL SPACE

Beech (2011) points out how the notion of liminality relates to social anthropology (Turner, 1984) as a ritual of transition (Van Gennep, 1909/1960) that entails a time and space "betwixt and between" (Turner, 1966; Chreim, 2002). Such a time and space condition in the ancient societies was ritualistically defined while nowadays it is more blurred and nuanced; however, maintaining the meaning of a liminal process through which a position of ambiguity and uncertainty is crossed. At stake is the intersection between persons and social structures (Ybema et al., 2009), dealing with the rituals of transition that accompany the individual/group's change of social status, described by Van Gennep (1909/1960) as separation (divestiture), transition (liminality), and incorporation (investiture). The reconstruction of identity is required to cross a *social limbo* (Turner, 1982; Czarniawska and Mazza, 2003) in which the rules of daily reality are suspended, as at theater (Turner, 1984), facing the disruption to the sense of self (Noble and Walker, 1997).

We follow Beech (2011) in pointing out the potential of liminality conceptualization for using it in the organizational field as the changeful nature, the multiple meanings, and the psychological consequences to tackle with the "instabilities in the social context, the ongoing ambiguity, and multiplicity of meanings, the lack of resolution (or aggregation), and the substitutability of the liminar…as a longitudinal experience of ambiguity and in-betweenness within a changeful context" (Beech, 2011, p. 288). Indeed, practitioners who are engaged in actual organizational contexts are asked to explore "processes of learning from the fields, connecting action and thought and trying to open new visions not yet available for transforming and improving their daily practices" (Scaratti and Ivaldi, 2021, p. 5). In a Volatility, Uncertainty, Complexity, and Ambiguity (VUCA) scenario (Bennett and Lemoine, 2014), they often work on more than one object simultaneously, experiencing plural and different approaches to the same workplace task and living a fractional (Law, 2002) relationship with the organizational processes of differentiation and integration, which underpin the concept of organization as organizing (Czarniawska, 2008).

Hence, the challenge of professional hybridization processes is related both to hybrid managers who are pivotal in the dynamics of organizational change and to all professionals who require to view organizational issues through plural and often divergent windows and perspectives (Ibarra, 1999; Ferlie et al., 2005; Chreim et al., 2007; Ellis and Ybema, 2010; Ibarra and Barbulescu, 2010; Beech, 2011; Ivaldi and Scaratti, 2019; Engeström, 2020). At stake is the possibility to address the multiple dimensions of precariousness and lack of knowledge to be faced, looking progressively for exit routes (search actions, taking over actions, and breaking out actions: Sannino and Laitinen, 2015), using transitory and actionable knowledge (Shotter, 2008, 2010) to

help a sustainable positioning in uncertainty, moving into the trouble area, and trying to get out. Professionals and practitioners are asked to rethink their working practice and to address the intersection between activity, experience, and context (Green, 2009).

The *activity* is a configuration of specific actions and operations-oriented to an object and endowed with its own structure, which is defined through historical, social, and cultural processes and is based on material and immaterial conditions that allow its realization (Engeström, 1999). Each activity system is crossed by tensions and contradictions that mark its evolutionary process, and the possibilities of transformation, passing through constant learning processes (expansive learning) that constantly configure and reconfigure tools, rules, the division of labor, languages in use, participants, and object of the activities in which people are involved. Professional practice has to do with positioning oneself within these systems of activity and with the possibility of expressing one's transformative action in them.

The *experience* refers to our life as it is characterized by different levels of awareness, memory, orientation to the future, the relationship with space, time, emotions, feelings, affections, sensoriality, and corporeality. Professional practice is embodied and deeply inserted in an experiential texture that connotes and expresses it, crosses it, and innervates it.

The *context* refers to the material and immaterial background that constitutes the symbolic and operational plot within which our concrete work is located. Professional practice cannot be conceived if not situated in contexts in their extensional configuration (material, logistic, and structural) and intentional (meanings, languages, attributions, etc.), which settle in tacit knowledge, in routine, in widespread implicit uses, in meanings taken for granted, and conveyed through rules and rituals. Rethinking working practice solicits the transformation of professional identity, which was reinterpreted and understood in the process of tuning between the worker and context through negotiations and joint constructions of culturally shared meanings.

Referring to Bruner (1990, 1995), we could advocate a social and distributed professional identity, meaning that the contextual dimension and the constant dynamic of shared construction of knowledge were in constitutive dialogue with the social and cultural landscape that characterizes the human being. The process of professional hybridization requires a hermeneutic, negotiation, and conversational disposition that the practitioner establishes in constant transactions with others and with the world, learning to relate to the events he/she encounters and to position him/herself appropriately in the relational, professional, and working dynamics that he/she lives and goes through. Such a stance entails the intertwined declination of three relevant dimensions: phronesis, praxis, and aporia (Green, 2009).

The concept of *phronesis* addresses a process incorporated in constant interaction with contexts, practices, experiences, common sense, intuition, and judgment, in which what is at stake is the ability to configure action-oriented knowledge, especially in situations in which neither already acquired knowledge nor scientific references are available (Dunne, 2005).

The principle of *praxis* refers to the concept of "good" action, oriented toward good, opening up the theme of the connection between our actions and the ethical dimensions connected to them, both at the level of personal choices and at the collective level. The possibilities of pursuing a good job, the capability of being done well, and the capability of generating common value and personal pleasure/satisfaction are the essential references for a professional positive identity.

Finally, the notion of *aporia* refers to the confrontation with inevitable paradoxes and contradictions that require the assumption of our responsibility, our positioning, and making decisions in a scenario characterized by high ambiguity and changeability. These are increasingly frequent situations, in which the professional is required to act even if it is not clear to him/her what will happen next and has to improvise (Polkinghorne, 1997), dealing with a structural uncertainty.

Facing such challenges requires the activation of liminal spaces (Thomas and Linstead, 2002; Beech, 2011), which are socially connoted and capable of allowing the focus of one's own identity trajectory, avoiding losing the plot (Thomas and Linstead, 2002), as well as the crossing of organizational boundaries and the mobility between different social and professional groups (Czarniawska and Mazza, 2003).

We specifically address a particular configuration of the training setting, focusing on the lived and contextualized experience of the professionals, as a liminal space for enhancing the generative and developmental exploration of the relationship between professionals and organizations. As a social context, such a training setting conveys the possibility to cope up with different interpretations, plural personal/professional narratives and trajectories, multiple and often contradictory ways of understanding the same work or organizational place (Scaratti, 1998). The training setting itself becomes a liminal space, in which a provisional separation is enacted from the activity system, creating the conditions of an in-between zone among the *here and now* of the training setting and the *there and then* of the daily course of action in which people are involved (Scaratti, 2010, 2017). Liminality is configured with blurring and merging of distinctions (Czarniawska and Mazza, 2003), seeking to achieve new perspectives as well as to improve transformations triggered by the training process (Scaratti and Kaneklin, 2010).

Following a socio-constructionist approach, such a training setting offers proper conditions for a dialogue between self and social identity (Watson, 2009), prompting the participants to adopt both a centripetal and centrifugal perspective (Bakhtin, 1981): the first relies on what people internalize from the society and external sources while the second is about what people externalize from their own experience. Both the movements facilitate the enhancement of liminal practices as *experimentation, reflection, and recognition* (Beech, 2011). The practice of *experimentation* means that through situated exchanges, participants share the experience to shape and reshape their professional and organizational identity, coping up with individual differences, contextualized multiple voices, and intertwined practices.

The practice of *reflection* conveys a reflexive work upon subjective, intersubjective, and institutional levels, addressing the

liminality to the day-by-day lived experiences, reviewing and questioning history, language, discourses, and actions.

The practice of *recognition* improves the personal and social process of the acknowledgment of own identity unfolding accomplishment, giving the participants the opportunity to meet plural narrative and discursive trajectories as the training setting becomes the loci of the constitutive place of professional and organizational identity.

Hence, these liminal practices may be addressed in an *organizational narrative space* (Scaratti, 2021), where linguistic accounts (stories and tales, discourses, conversations, documents, and contextual emergent processes) are the connecting keys of intertwined and unfolding plots of actions, people, and events. Approaching cultures, languages, and representations with which participants see, look at, and organize their daily experience generates a meeting place between the different participants who reciprocally exchange reconstructions and stories, to shape an organizational knowledge that has an impact both in professional trajectories and in the evolution of the system of activity at stake (Scaratti et al., 2009).

Such a liminal training setting as a shared workspace becomes itself an ongoing narrative, which is defined by the negotiations and constructions and by the agreements on the realistic sustainability of the process agreed by the participants. It requires a desire for mutual listening, the willingness to let oneself go to imaginations and openings, which postulates a context of sufficient serenity and investment as well as the availability and sustainability of the actors to express and socialize their accountabilities relating to events and situations of the common organizational experience. Organizational actors also potentially become the authors of a possible and unpredictable renewed narration of the pact that binds them and of the reformulation, acceptance, or rejection of agreements on their future history and professional path (Cunliffe and Scaratti, 2017).

In the next section we point out the case and the organizational context in which the described liminal training setting was realized, highlight the methodology adopted to gather knowledge, and describe the main findings acquired through its use.

THE CONTEXT AS A PLACE OF ORGANIZATIONAL RESTRUCTURATION, TRANSFORMATIONAL CHANGE, AND PROFESSIONAL CHALLENGE

The organizational context to which we refer is a private non-profit health service, born in 1966 as a "Psycho-Pedagogical Medical Center," and currently configured as an Extra-Hospital Rehabilitation Center, following an accreditation provision required by Italian national policies and laws. The Center operates in northern Italy, dealing with children and young people suffering from multiple pathologies: neurological pathology from central and peripheral neurological damage;

psychic disorders; autism spectrum disorder; and behavioral disorders associated with intellectual disability.

The Center offers residential, daytime, outpatient, and clinical interventions, in line with the needs of the patient and his family. With a total of 300 employees, 120 places are offered for resident patients, 60 places are offered for daily service, and about 150 places are offered for outpatient services.

The mission of the Center is inspired by the typical Christian values of its founder, providing care and cure to young guests, responding to their specific needs, both clinical and social.

The pivotal activity of the center is the residential service. It is an extensive treatment in which the patient's living environment and the quality of relationships with the clinical education team and peers are the essences of the multidisciplinary and integrated therapeutic rehabilitation project. Such a therapeutic approach asks for a high level of emotional holding (Winnicott, 1964) and a relational style to be adopted as appropriate to the particular clinical characteristics of the users. The needs of the patient and his family are the focal points of the health assessment followed by the design of specific treatments.

The daytime service is configured as an intermediate reception structure, designed to support the suffering family unit, thereby allowing the guest to continue living in their own home. It is an intervention with therapeutic, rehabilitative, and educational–occupational functions aimed at children with neuropsychiatric and neuromotor disabilities; the "taking charge" is flexible and allows to safeguard the needs and priorities of the user, including, for example, school attendance.

The outpatient clinic service deals with neurological and psychiatric diseases in developmental age such as epilepsy, infantile cerebral palsy, psychomotor disability, "intellectual disability, autism, malformed syndromes, movement disorders, neuromuscular diseases, neuropsychological pathologies related to language and learning disorders, relationship and behavioral difficulties, and minor mental disorders."

A complex organizational chart of 11 Operative Units, divided into specific fields of intervention (Autism Unit, Serious Cerebrovascular Unit, Psycho-Organic, Intellectual and Relational Disability Unit), involves a plurality of professional groups and disciplines, with practitioners devoted to different functions, tasks, and pathways (medical, nursing, social, physiotherapy, psychotherapy, administrative, economic, logistic, etc.). The organizational daily process entails a wide variety of professional families, matching long-lasting belonging practitioners with new comers and novices (with different training, specializations, and subcultures), plural structural and material spaces (most of the units are located in the principal building of the center, while others have a peripheral location), and different conditions and histories (due to the geographical location of the center, across different regional borders and related institutional rules and regulations).

After the death of a religious founder, the Center is managed by a President and a Management Board, composed of a General Director, a Health Director and Vice Director, HRM, Economics Manager, and Logistic Manager. Each is responsible for coordinating the activities across each function: managing employees and practitioners with different professional and job

profiles and organizational levels, i.e., clinicians (doctors, nurses, psychiatrics, and psychotherapists) and professionals (educators, auxiliaries, and administrators).

In Spring 2015, the Center's General Director asked one of the authors, as an academic consultant, for a training intervention related to the residential and semi-residential service (initial participants: the clinicians).

At the beginning of the 2nd year of training, the clinicians proposed spreading the training to all the practitioners in their units. The Management Board approved the project and called for an action research process aimed at a cultural transformation and at nurturing organizational learning widely (Cunliffe et al., 2019). The goal was to develop and enhance a common perception and representation of transversal issues related to organizational processes, conflictual dynamics, and the problems within the daily integration processes between plural and diverse professionals, trying to identify some critical issues and opening interventions of sustainable transformation. At stake were specific issues related to the work experience of the people involved; the search for transformative actions; the possibility of improving common knowledge connected to new meanings; and sense-making paths through a reflexive process of expansive learning.

It is important to underline as relevant features the aspects of organizational restructuring and transformation triggered by the action research process, which mobilized energies and resources, involving various professional figures and generating turbulence and dynamics of conflict about the problems to be faced, sources of uncertainty and insecurity. The training setting as a liminal space is specifically suitable to address such transformative situations, in which practitioners are required/pressed to rethink and reshape their professional plot, interpreting the blurred boundaries they have to cope not only as of the possible cause of personal and organizational opacity, rather also as an opportunity to cross through the social construction of their unfolding identity.

Within the context described, one of the organizational reconfiguration interventions was the creation of the *role of coordinator*, responsible for the operational activity to be managed within the aforementioned units. Alongside the clinical and therapeutic responsibilities assigned to various figures and levels (medical director, psychologists, neuropsychiatrists, and nurses), management supervision of each individual unit is in fact requested. This assignment requires complex attention to the multiple work processes that mark the daily life of the units, from work turnover to the verification of the implementation of scheduled activities, to internal and external communication with other figures and stakeholders, up to the connection between the various professionals and teams. These are middle manager figures with hinge and connection functions between the strategic indications and objectives to be pursued and their translation into daily operational practice. The choice of the managerial board for the assignment of this role was to invest in the figures of senior educators already working in the units, thus valorizing their knowledge of the contexts and their professional experience, instead of turning to resources outside the organization.

Such an organizational restructuring challenged the identity trajectory of many educators, both triggering competitive dynamics and expectations and generating fear and ambiguity in relation to a not yet defined role to be taken.

Hence, the opportunity to provide a training setting as a social and liminal context for shaping and acknowledging common meanings and facing the potential disruptive solicitations to the own professional and organizational identity. They had to face a new phase of their professional trajectory, crossing a period of ambiguity as a limbo, coping up with a disruption of their traditional identity and tackling with the shaping of a new experience, practicing, acknowledging, and reflexing on their new role.

Within the training setting, the incoming coordinators questioned the evolution of the coordination role in the light of experiences of consolidation and comparison between the different professional families, units, and structures to which they belong. The multiple nature of the role and the need to manage different levels, implications, and tasks guided the reflection of the group in comparison with regulatory constraints, contextual and organizational criticalities, individual, group, and organizational resources, and possible levers. The management of their co-built "mobility" and "hybridization" was introduced as part of the possibility of experimenting with a way of being in the role that can be experienced in a positive and proactive way, despite uncertainties and contradictions, adopting a sustainable way from material and relational point of view, in terms of opportunities and not only of constraints.

Methodological Aspects

We adopted a methodological approach to gathering knowledge that is strictly related to the coordinators' experience and situated in their specific working contexts. Following a socio-constructivist epistemological orientation, we actively involved coordinators to co-construct a social text (Chia, 1996), getting close to their daily experience as middle managers. In the first step of the training setting, we negotiated with the coordinators the opportunity to provide narratives and tales of their routed practice (Ibarra, 1999; Ibarra and Barbulescu, 2010), at-home ethnographical accounts (Alvesson, 2009), organizational documents, portraits of organizational events, and processes, reported discourses. In this way, we gathered a vast array of qualitative empirical data, upon which we prompted the discussion related to how they were shaping their social and organizational reality, discussing, constituting, and reconstituting their role identity.

Topics such as turnover, or the reception of new hires and other similar, have opened a space for a discussion on paradigms and models, approaches, and artifacts in use and potential, highlighting representations and interpretations about the nature of the work within the center, its constrains and potentials, reflecting its lights, and shadows in a balanced way.

The training setting involved 16 coordinators of different organizational units for a period of 6 months after their formal role's acceptance, from June to November 2017, providing eight meetings of half a day for a total of 32 h, approximately one for each month. The training objectives were to achieve a convergent interpretation of the common role, sharing the main contradictions to be faced and developing sustainable trajectories for enhancing the hybridization professional process

(the educators became coordinators as well as other middle managers related to different professions).

The possibility of discussing and sharing the aspects of sustainability of everyday working life and service management, touching on issues of culture and professional identity, practices, contradictions, and inertia of organizational life, provided by the multiple accounts gathered by the coordinators, generated a vast array of linguistic, discursive, and conversational materials. The liminal training setting became itself a source of individual and collective discourse, comments, social constructions of commonly shared meanings (Zuccermaglio, 2013), giving coordinators voice for becoming practical authors of their organizational context and conveying authenticity and depth to the training process.

For the data collection, we requested informed consent from participants for recording the training meetings: they accepted the audio recording while disagreeing with the videotaping. The audio-recorded conversational data were transcribed, following Jefferson's approach, and compared with the field notes of one of the two researchers involved in the meetings (one with the role of a conversational facilitator, the other as a participant-observer in the interactive process, tackling ethnographic notes). Since the data have been collected in the local language and subsequently translated into English, we worked as follows: first, we realized a translation done by a native speaker, and then we asked the other two different native speakers to validate the translation and to select the excerpts that achieved a convergent assessment rating of appropriateness.

The researchers analyzed the data coming from the interactive sessions, seeking to view the conversational text as a culturally situated practice, highlighting the historical and situated nature of the specific conversational social context (Drew and Heritage, 1992).

Both the main plots and the excerpts, highlighted in section "Key Findings: Crossing the Social Limbo of the Liminal Space," were proposed by the researchers and discussed in the final meeting with the participants, who validated the proposed findings through a social discussion, at the end acknowledging and approving the emergent data. In this way, we valorized the relevance of professional groups and communities, sharing a sense-making process and highlighting personal and organizational trajectories to be followed.

In section "Key Findings: Crossing the Social Limbo of the Liminal Space," we address the attention to the main plots generated by the training setting interpreted as a liminal space, dealing with a content analysis related to some excerpts picked up from a large basket of the available conversational data collected from the earlier depicted interactive setting.

KEY FINDINGS: CROSSING THE SOCIAL LIMBO OF THE LIMINAL SPACE

The exchange and conversational discussion between the coordinators within the training setting have gradually brought out some plots of meaning as shared interpretations in dealing with common role interpretations.

The first plot is about *dwelling the boundaries between roles*: it refers to sustainability as a delicate issue in the management of different roles by the same professional. Transversality and adaptability are required with respect to often unclear perimeters and increasingly blurred identity and organizational boundaries, as in the following conversational excerpt [related to the second training meeting after 1 month from the role's acceptance by coordinators (in the excerpts C1, C2,...refer to the different coordinators)]:

(C1): It is difficult to balance an educator/coordinator figure. For M. is evident . . . she is the coordinator, maybe she intervenes in an emergency but only when there is a need. We are coordinators 24 h a day and take time away from both the educational and the coordination part.
(C2): It is the hot potato of coordination; it is difficult to continue to work as an educator . . .
(C1): Sometimes you should do your work at home, and it doesn't seem right; I went to Lidl (a brand of a supermarket) to work on turnover. . .really, they often call you while you are in the supermarket. Each unit has its own critical issues, our kids cannot rest easy, and we cannot break away without putting their colleagues in crisis.
(C3): I find it difficult to interface. . . as coordinator I should interface with all the realities of the center, but it happens to see people sporadically, to speak little, it is difficult to hear each other. It becomes almost heavy for colleagues; I am absent as a meeting coordinator. I have been on the other side, all these moments when I walk away are difficult to understand, you are there in the spot. The question is what do colleagues expect next? It is a dichotomy: I am also an educator, when I can I work in the field, but I also have the other aspect to pursue. There is confusion, I do things on Sunday mornings when it is calm, otherwise 30 people enter the office. . .
(C4): Yes, yes, . . . How far are we available? If I am available, you pay me, give me a mobile phone....colleagues can have a certain freedom of action..... in the obvious gravity that I want to be called, but in general I am not the supreme leader, there are things they can handle they. I AM LIKE THEM, an educator. I do and act as coordinator, but besides what do my colleagues expect from me, what do I expect from them? Coordinator is a new figure. . . sometimes it passes that you are the supreme leader.
(C5): It depends on what you want to pass..... welcome when the operators act, I delegate a lot.
(C3): They do it to make me participate. But chat, social . . . you are inside your work 24 h a day.... is that right?
(C1): When it works everything is fine, but if something doesn't work, look at what the coordinator did not do, following the job.

Coordinators experiment with confusion and strong social exposition, without having a defined perimeter of their role. It is difficult to find in the job description alone the meaning and limits of what one is called to be and do within a complex organization. If the job description arises, therefore, as necessary

but not sufficient, an adequate ability to manage intersections and mobility must be increasingly exercised. The training setting gives the possibility to exercise liminal practices of reflexive thought, recognition, and experimentation of common events and situations, thematizing the reciprocal acknowledged boundaries, and plural expectations related to their role (the "part to be played"), and the function (conscious and transversal attention to various areas). The calibration and balance of time and space to be dedicated to different mandates, as well as the relationship with colleagues, are also strongly linked to the theme of delegation (or non-delegation) and the theme of physical and "virtual" availability.

The second plot is about to *manage "new entries"*: the evolution of professions and the differences between the professional families can create a feeling of disorientation with respect to the presence of new practitioners who meet the work and organizational reality of the center. The perception of new recruits as inflexible and unable to accommodate the reality of the chosen profession creates gaps and distances that can make it difficult to support a reconfiguration of one's professionalism, avoiding the risk to escape from the organization.

In this regard, the conversational excerpt below (related to the fifth meeting after the acceptance of the role) sheds light on some routed in practice aspects:

> (C6): Who comes to us? trainees, some who have yet to decide, others who have already decided. There is a time for the presentation of the structure and ways of working that precedes our interfacing with the person who arrives. Fascinating and showing that this is a good place to work is one thing, the first worries me, finding people who come to see first, especially educators.
>
> (C5): I bring you my modality, not extrapolated from books, created *in itinere*. What is meant by new? When is one no longer so and walking alone? Over the years the center has changed its position compared to the new one: first educators came in because they needed to work, no need to create a charm; now several people pass by to whom an attractive product needs to be offered. Some people who arrived did volunteer days, then ran away. The personnel management asked us to welcome, propose work as if it can offer immediate satisfaction. I am asked to sell a product. I try to mediate. I ask for expectations upon arrival (3 days of volunteering, then people decide whether to stop) and if they expect to work in a group. A very simple interview. Then I explain how we are organized, the day, the type of guests, but without going into detail, superficial because the person could leave immediately. I tell them to observe the dynamics and interactions of the group (patients, operators,....), let them experience it.
>
> (C8): Fear plays a lot on evaluation. . .
>
> (C5): Then they are taken by the patients, I recommend that they read files and propose to ask questions if not clear and to copy rules and group dynamics. Not to take too much initiative or too little, a balanced way. After 2–3 weeks, return to the person and request their feedback. There comes the flaw, maybe I'll do another one later,

but the method is not complete. If you have to suggest. When is one no longer new? When can you manage the group in the absence of older educators? It happens that I solicit certain things and then the operator does not apply them, sometimes with the intervention of clinicians. The departure is similar with everyone, then each educator is different, and you have to adapt to his personality. I see in my method the limit of an effective continuity; it is lost when one is "inserted." On two occasions, personal management asked me to make evaluations on a form. . .

The work of adapting to the context, integrating what has been studied with the actual life and functioning of the organization, is complex. The need to create spaces for knowledge and contact with new potential new entries (students, practitioners seeking a new job, junior professionals, etc.) to create internship opportunities that convey value and knowledge are some possible tools for promotion and visibility both for the organization, which must present itself as attractive and create interest and for the units, prime mediators of the impact between newcomers and the working environment. These spaces, inhabited by the coordinators together with other figures, can generate paths and activities, products and materials that take into account the challenges, the beauty of the work, the differences between professional families, and which are the result of a concrete work of weaving and communication.

A third plot refers to *bridging different professional/organizational cultures and families*: coping up with a progressive rooted in practice experience as coordinators, they become aware of the dynamics and needs within a complex structure that requires the group to be "open" and work for integration. Dynamics that can generate sustainable balances or lead to the loss of boundaries even between the professional families (nurses who "They act as educators," director of a "factotum" structure). Prompting alliances, intersections, and goodwill can allow a more synergistic functioning in the absence of resources, but at the same time it can generate a lack of clarity of roles that produces further confusion. Finding moments of meeting between the individual professionals to talk about the professional family and their identity and contribution becomes a decisive element in reworking and regenerating a professional culture identified despite its flexibility, as the excerpts below (related to the sixth meeting) point out:

> (C9): There is a demand for flexibility and porosity that unites us, but many guys (he means the operators, "young people trained") who came to me ran away. We asked ourselves questions. I thought I had Cracco's (a famous Italian cook) kitchen. Perhaps they have particular training. It happened to me that they asked me for a recipe for each situation and one is disoriented with respect to the expectations these guys have on our work. We ask them to integrate in everything and this has made them explode and we with them. There is the turnover of people who try to train and support from all points of view.... this youth that arrives, what we do to them?

(C11): A new figure of psychiatric rehabilitation therapist arrived and she thought she was working one by one, one patient at a time, not being catapulted into a group of psychiatrists. When we started, there wasn't all this protectionism. We put ourselves in this way, for protection, let's make him feel at ease.... there is everything, but then the reality is this, of pain, suffering, physical and psychological risks.... but this is part of the game! maybe it's a training problem? I have seen different availabilities over the years.

(C5): An educator expects certain things, a therapist quite other.

(C10): We lack educators and are replaced with occupational therapists and other figures that are quite distant in terms of training. . .

(C6): We all come together for each module, to ensure communication, information and training, to help each other in everyday life between the observer, educators and nurses. Nurses do not come often from the central building, and they are new, they need a job of socialization and to help them understand the difficulties of the users.

A fourth relevant plot is about *facing contradictions while seeking for a good work*: in the final meetings, the fatigue and hindrances related to tackle the complexity, the ambiguities, and the intertwined tangle of the texture of coordinators practice arise. Problems and difficulties of the practice are soliciting the professional identity, as well as the troubles of reshaping own's professional identity meet and draw unfolding practices. The conversational excerpts below (seventh meeting) are emblematic:

(C7): I can't keep banging against the doors, there are crystallized situations that remain there.... it's not that the kettle from 90° goes to 50, it goes to 120 but it's in the pressure cooker, everything doesn't calm down if no decisions are made.... how can I, coordinator with "all this power," help what happens.... if I tell you that someone is sick, how can you tell me "Not that one because he knows xy, I don't want that....?" Even benefits, in my group there are people who give even exaggerated availability and I don't give benefits. There's the smart one who stays home sick. I have people who automatically change turnover to work together. It's been made clear that it's not okay, but they do their own bullshit. As coordinator I cannot intervene because they tell me "Flexibility....," but this is a big limitation. And the directional board that tells me: "It's a big problem. Let's move on to something else . . ."

(C4): There are colleagues who make the sign of the cross when they work in a group with the coordinator because they work with one less. . .

(C7): I have to ask someone to please come and I have no power to change hours if there is not an emergency. You are in limbo, some you cannot touch them, some things you cannot do.... should be healed. With C.4 I have dealt with a lot.... he represents the vanguard of the proposal that the Center is giving. His schedule is separate from that of the others and he tells me: "I think this is the point of arrival."

Which means taking on even more commitments. I can go directly to the source, to the social worker, avoid seven bureaucratic steps because I have it in the job. Obviously he takes up time and he is not working among the flowers, but he is ahead. and in my opinion this mode is closer to the idea of coordinator than in the other units it has not been done. We clash with resources, limitations. but to bring even just a part of our timetable beyond.

Contradictions challenge the unfolding process of shaping the coordinators' identity (eight meeting):

(C6): Ours is not a good job, we are everyday all day in contact with suffering. I like it, but it's not a good job, maybe the good job is the ice cream maker. There is a way to do it better or in a certain way. Propose in groups a quality of work and create something that is beautiful.... this makes it easier to ask for more from colleagues, one extraordinary or other. Quality depends on many things, tools, interface with the territory. The organization must provide tools and I must motivate the organization to provide them. If I do a cooking workshop with the kids, I can't get a camp stove.

(C12):. . . mmhhh. . .yes, yes, but what does make a job a beautiful one? Why you don't apply as ice cream maker? (all people laughing).

(C1): . . .of course we face a lot of troubles. . .really. . ..but I think that we are living our life annuity facing all this magmatic material. . .

Doubtless, a job in contact with suffering and inhabiting the contradiction of offering a quality service in the face of limited resources is a challenge. You need an identification with the work object and with a sense to be given to one's action, as well as an awareness of the organization around the practitioner and his/her relationship with the work object as a "good job" (Gardner et al., 2001). It is a competent job, which fully exploits individual abilities, generates satisfaction and value for individual and for others, it is a job whose object is developed and experienced as pleasurable and sustainable. Creating personal and collective sustainability through interpretations of the possibilities, synergies, and usable resources is part of a "good job," capable of responding effectively, and satisfactorily to the real and complex needs of the professional.

DISCUSSION AND CONCLUSION

The described plots highlight how the liminal space of the training setting can develop both a reflexive and an imaginative work about experiences of identity separation vs. continuity, of ambivalence and insecurity. At stake is the possibility to share meanings with respect to one's own experience as a possible outcome (neither predictable nor automatic) of moments of exchange and comparison. The liminal space becomes the scene of concrete events and situations, through which the coordinators give meaning and shape their contexts and practices. The idea of organization as a social artifact, as an arena of negotiated

(dis)order, appears concrete and tangible through the flow of voices, languages, actions, tacit knowledge used to interpret and shape one's activity, and organizational role.

Indeed, the implementation of a process of hybridization, required by the current organizational scenarios, characterized by uncertainty, rapid evolution, complexity, and ambiguity (Bennett and Lemoine, 2014), entails a progressive transition of personal, professional, and social identity. People are asked to face the challenging activation of a *nomadic movement* because one moves from one point to another, one unit to another, one work object to several, often divergent objects, according to a trajectory only partially pre-definable and constantly exposed to turbulence and uncertainties that require visual navigation, with continuous adjustments and adaptations.

All the organizational actors are called to an articulated movement that requires keeping up with mental (representations, expectations, and orientations), relational (exchanges, relationships, and integrations), and corporeal (fatigue, resistance, and rhythm) aspects. A movement related on knowing when to speed up and when to slow down, how to adjust the many degrees of speed; movement as an often acrobatic search for sustainable balances for oneself and for others, to be built and implemented in a creative way.

By analyzing the emergent plots in the liminal training setting and the liminality on which it is embedded and routed, it is possible to highlight the four relevant movements that are closely intertwined and give rise to the plural manifestations of professional hybridization, necessary to stay within adhocratic organizations capable of governing the unexpected in the concrete work contexts in which one is called to operate.

The first movement is internal, relating to personal investment, expectations, taking a choice on how to answer the question "why do I do the work I do?"

The second movement is operative, concerning the professional identification with a work object that is transformed and can take on multiple tasks, plural levels of work, different and often contradictory objectives to be faced.

The third movement is reflexive, connected to the need to transform being absorbed into specific deliberate tasks and efforts, thinking critically about one's position and actions, and acquiring thematic intentionality (Yanow and Tsoukas, 2009) about what to do be made.

The fourth movement is institutional and concerns the construction of a sufficiently good alliance with the horizontal and vertical stakeholders with respect to the possibility of activating organizational work (Cecchinato, 2019), through which the framework of meaning and recognition of one's work, the things to do and how to do them, the power relations, and the division of labor and the existing possibilities for development are socially negotiated.

Undertaking and interpreting these movements mean assuming a *nomadic vision*, dealing with a work object that reconfigures itself rapidly and with constantly changing scenarios; it implies living in a borderline position, like tightrope walkers who go through multiple tensions and interpret a precise representation of their role.

Recognizing these movements becomes part of the responsibility of those who are called to exercise managerial and social skills within organizations, feeding articulation processes related to the generation, maintenance, and change of agreements, actions, regulations between people and organizational units functional to achieve common objectives and goals. The training setting as a liminal space can trigger and develop connections between different parts and components, weaving and stabilizing relationships to share skills, resources, and knowledge (Scaratti et al., 2017).

The activation of such dynamics is not taken for granted and leads to the first research question related to the pivotal features that characterize a training setting as a liminal space. We can underline its peculiar configuration as an *organizational narrative space* that requires peculiar hallmarks and conditions, which ensure its sustainability and effective practicability:

- The acquisition of dimensions of *trust and mutual recognition* (in terms of value and credit attributed) constitutes a preliminary variable for respectful and interested listening, both by the researcher/consultant toward the organizational actors and their context and by various stakeholders among themselves. The reciprocal exposition of one's own narratives is neither obvious nor automatic and requires the activation of appropriate listening and protection situations.

- An adequate *regulation of proximity/distance* with respect to the events that occur and their implications for organizational and working practices. This is an indispensable element to convey interest and mobilization toward constructive and relevant outcomes for the participants involved. This does mean welcoming the narrative fragments already present and facing their affective implications (Cunliffe et al., 2019), proposing ideas around which circulating readings and reconstructions could converge and find acceptance. This makes it possible to identify the organizational processes and real problems present in the common field of experience, opening concrete spaces for a re-reading of one's own interpretations, and configurations of meaning.

- A proper use of a *variety of linguistic and discursive accounts* (tales, stories, conversations, and written documents) enabling multiple levels of involvement (that of the researcher/consultant, various actors with their individual stories, the organizational narrative reread and restarted, and the narratives woven by the practitioners with their organizational units to which they belong) and enhancing a sort of dialogic and narrative texture, which feeds stories in turn generators of renewed narrations.

- An *institutional mandate* to address concrete situations and organizational events through which the framework of meaning and recognition of one's work is socialized and negotiated, as well as the things to do and how to do them, the power relations, the division of labor, and the existing development possibilities.

In relation to the second research question, about the possible plots of professional hybridization that a training group as a liminal space can trigger and develop, we highlighted four emerging wefts: dwelling the boundaries between the roles, managing "new entries," bridging different professional/organizational cultures and families, and facing contradictions while seeking for good work. All of them are

triggered by in-between liminality spaces as the described training setting, through which a personal and social identity accomplishment is improved and reflexively thought.

The need to deal with ambivalences related to the complexity of the profession and the managed role has emerged in a more focused way on perspectives that offer relief in the face of problems as they arise. The opportunity of achieving finer adjustments and long-range textures, which creates a sustainable level of programming and adjustment, has been progressively thematized.

The possibility to conceive professional and organizational identity as blurred and continuously reshaped, going beyond a formal job description of a specific position in a hierarchical structure, allows experiencing an actionable and a transitory place in which uncertainty, vulnerability, and insecurity can become a trigger for transformational changes.

In conclusion, the concept of liminality, associated with the metaphor of social limbo, with its potential expression of generative evolutions, sounds suitable and good to be applied to professional and organizational landscapes, specifically those entailing interactive, collective, and social processes.

DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Department of Human and Social Sciences, University of Bergamo. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

GS and SI participated to the action research and described and wrote the theoretical part of the manuscript. EF was involved in analyzing, selecting, and writing the empirical data to be used in the excerpts. All authors contributed to the article and approved the submitted version.

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Helping as a Concurrent Activity: How Students Engage in Small Groups While Pursuing Classroom Tasks

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This study examines interactions in which students help each other with their learning during classroom instruction, forming groups in the process. From a conversation analytic perspective, helping is assumed to be a sequentially organized activity jointly accomplished by the participants. As an activity that proceeds alongside other ongoing classroom activities, helping can be conceived as part of a *multiactivity* that poses students with multi-faceted interactional and moral challenges. While previous research on helping in educational contexts has primarily focused on the influence of helping on learning outcomes and social dynamics in helping interactions, the present study investigates how students cope with the intricacies of moral commitments inherent in helping as a concurrent activity. The aim of this paper is two-fold. First, we aim to elaborate on how students' dual involvements – i.e., their involvement in classroom activities while simultaneously providing help – manifest in the ways in which groups are constituted, maintained, and dissolved. The analyses reveal that both the compatibility of helping with the activity already in progress as well as the students' problem definition are consequential for the sequential and bodily-spatial unfolding of the help interaction, inducing different arrangements that constitute a continuum, at each end of which there is a dominant orientation toward the *shared space of helping* or toward the *individual/collective space*. Furthermore, from a methodological perspective, our study aims to demonstrate the extent to which multimodal interaction analysis is applicable when examining naturally occurring groups, in this case, in interactive processes of helping. The study is based on a data corpus that comprises video recordings of mathematics and German lessons from two fifth-grade classrooms.

Keywords: helping, classroom interaction, multiactivity, dual involvements, space, moral commitment, multimodal interaction analysis

INTRODUCTION

Students helping each other is an ordinary activity in the classroom, and educational research has emphasized its relevance for self-regulated learning (Newman, 1994). At the same time, it is often assumed that students' help processes need to be improved in order to promote learning. To find out how to increase the effectiveness of helping for learning, internal and external factors influencing help, such as cognitive and affective abilities (Newman and Goldin, 1990; Karabenick and Knapp, 1991; Tobias and Everson, 2002), the quality of group interactions and group dynamics (Kempler and Linnenbrink, 2006; Webb et al., 2006), and the social composition of groups (Oswald and Krappmann, 1988; Zornemann, 1999; Campana Schleusener, 2012; Wagener, 2014) were

identified. In these studies, the actual interactive contexts and moral orders in which spontaneous help is given in the classroom have so far remained unconsidered. In our data, helping occurs during individual work periods and whole-group discussions and competes with the students' commitment to working on an assignment, paying attention, and/or contributing to an ongoing multiparty discourse. The fact that helping in the classroom is often a *concurrent activity* poses complex interactive and moral challenges for the participants and the way they constitute a group while helping. This article reconstructs these challenges as well as the practices students draw on to tackle them. The background is the assumption that these interactive and moral orders cannot be ignored and that interventions that seek to improve the learning potential of help interactions must take them into account.

Drawing on conversation analytic work, we understand helping as a jointly accomplished and sequentially organized activity (Svahn and Melander Bowden, 2019) for which participants employ various discursive practices and communicative resources. Most importantly, we account for the fact that helping among students is often part of a *multiactivity* (Mondada, 2011; Haddington et al., 2014), such as when students are simultaneously expected to help a classmate *and* to participate in a whole-class discussion or to work on an individual task. Based on the works of Goffman (1963, 1964) and his notions on the structuring of social gatherings, this means that in the context of helping, the students initiate a *face engagement* or *encounter*, which is defined as an association "of two or more participants in a situation joining each other openly in maintaining a single focus of cognitive and visual attention – what is sensed as a single *mutual activity*, entailing preferential communication rights" (Goffman, 1963, p. 89). A characteristic of an encounter is that the participants feel a moral responsibility or "we-rationale" for their actions (ibid., p. 97f.). At the same time, the students are part of the classroom *gathering* (Goffman, 1964) that, due to its institutional purpose, involves focusing on and completing collective or individual assignments. Therefore, when students respond to requests for help from their classmates during activities, they must simultaneously manage two involvements (Goffman, 1963; Peräkylä et al., 2021) and two moral commitments (Clark, 2006; Raymond and Lerner, 2014): the obligation to help and the obligation to work on the teacher's assignment. Our interest is in how students cope with these *moral intricacies* inherent in helping and in the varied and complex tasks they must manage when seeking and providing help as a *concurrent activity*. Specifically, the focus is on the following analytical questions: (i) How do students sequentially organize help interactions and (ii) what bodily-spatial arrangements do they make for engaging in helping as a concurrent activity in the classroom? On this basis, we discuss how their dual involvements manifest in the ways in which groups are constituted, maintained, and dissolved. We address these questions by investigating help sequences between fifth graders in naturally occurring interactions within different classrooms, during individual work periods and whole class discussions.

Drawing on multimodal interaction analysis, we describe different ways in which participants, depending on their *definition of the problem* as being more or less complex, insert help into concurrent courses of actions and balance two competing moral commitments. How these commitments are balanced is reflected in the practices participants draw on: help can be either achieved by rather short adjacency pairs (Schegloff and Sacks, 1973) or more extended discourse units (Wald, 1978). Participants' prioritization of a certain commitment also becomes manifest in the bodily-spatial arrangements they create while helping. Building upon work by Ciolek and Kendon (1980), we conceptualize different spaces that participants create and orient to: the *individual space of task processing,* the *collective space* of the (teacher-led) classroom activity (Schmitt, 2013), and the *shared space of helping*. We propose that the orientation to the individual/collective space and the shared space of helping constitute a continuum, at the ends of which students either heavily commit to helping or remain primarily focused on the individual task or the plenary activity. The different orientations can also be considered key resources for handling multiple moral commitments and to create different degrees of "withness" (Ciolek and Kendon, 1980, p. 244) and involvement with the group. At the same time, we trace that orientations are also subject to negotiation and can change in the course of the activity.

We begin by discussing educational and linguistic perspectives on helping in the classroom. Based on a conceptualization of helping as a concurrent activity, we explicate how we utilized multimodal interaction analysis to uncover sequential, spatial, and moral orders of helping. In our analysis, we present two sample cases of helping activities that differ in how complex students define the problem and whether they judge helping to be compatible with the activity already in progress. The analysis addresses different sequential and bodily spatial arrangements when helping and illustrates how these arrangements are consequential for the constitution of the group. The paper concludes with a discussion of the findings and the methodological approach.

THEORETICAL FRAME

Helping in Educational Settings

Previous research on helping in educational settings can be categorized into two major strands of research that approach helping either more quantitatively, from the perspective of educational psychology (e.g., Nelson-Le Gall and Gumerman, 1984; Newman, 1990, 2002; Newman and Goldin, 1990; Ryan and Shim, 2012; Schenke et al., 2015), or more qualitatively, from the domain of educational science (e.g., Oswald and Krappmann, 1988; Kauke and Auhagen, 1996; Zornemann, 1999; Campana Schleusener, 2012; Koole, 2012; Melander, 2012; Wagener, 2014; Svahn and Melander Bowden, 2019). While works from educational psychology tend to focus on the individual, those from educational science focus on helping as an interaction.

In the field of educational psychology, a vast number of studies have dealt with help-seeking as an "adaptive strategy of self-regulated learning" (Newman, 1994, p. 285) and with

effective help behavior (e.g., Webb and Mastergeorge, 2003), i.e., conducive to learning, that correlates positively with school success (Webb and Mastergeorge, 2003; Ryan et al., 2005; Ryan and Shim, 2012; Schenke et al., 2015). These investigations have determined internal and external factors influencing individual help(-seeking) behavior. Internal factors include cognitive (Karabenick and Knapp, 1991; Tobias and Everson, 2002; Tobias, 2006), affective-emotional (Newman and Goldin, 1990), and social competencies, as well as individual academic achievements (Newman, 1990; Newman and Goldin, 1990; Ryan et al., 1997) and achievement goal orientations (Karabenick, 2004; Karabenick and Newman, 2009, 2010). These studies illustrate that highly developed metacognitive skills and a positive self-concept contribute to effective, instrumental help-seeking (Nelson-Le Gall, 1985, p. 67), whereas help-seeking is impeded by low cognitive skills and self-doubt (e.g., Karabenick and Berger, 2013). Aspects such as the classroom climate (Karabenick and Newman, 2009), the quality of group interaction and group dynamics in cooperative learning settings (e.g., Kempler and Linnenbrink, 2006; Webb et al., 2006), and familial and instructional socialization processes (Newman, 2000) have been investigated as external factors. Karabenick and Berger (2013, p. 239ff.) have developed a model that depicts the help-seeking process in an ideal-typical way and involves a series of stages and decision points, but they have focused primarily on the individual's cognitive mechanisms. Drawing on extensive research efforts, they also worked out the competencies required for the accomplishment of this process and designated cognitive, affective-emotional, contextual, and social skills (ibid., p. 245ff.). Although educational psychological research points out that "seeking help [...] involves others" (ibid., p. 238), the significance of communicative and interactional competencies is mentioned only incidentally (cf. Nelson-Le Gall, 1985, p. 76–77; Newman, 2000, p. 352).

These primarily quantitatively designed studies stand in contrast to educational science studies, which investigate helping as an interpersonal process, using predominantly qualitative approaches. This second strand of research can again be further subdivided into two branches. On the one hand, some studies focus on different varieties of interactions regarding social features of the process of helping and describe, among other things, participant constellations (e.g., mixed-age, age-homogeneous, mixed-ability, and friendly vs. non-friendly dyads; Kauke and Auhagen, 1996; Zornemann, 1999; Benkmann, 2004; Campana Schleusener, 2012), courses of interaction (e.g., Oswald and Krappmann, 1988; Zornemann, 1999; Wagener, 2014), and help actions (Campana Schleusener, 2012; Wagener, 2014) in different types of classroom settings, such as mixed-age groups (e.g., Campana Schleusener, 2012; Wagener, 2014), age-homogeneous groups (e.g., Oswald and Krappmann, 1988; Zornemann, 1999), or inclusive learning groups (e.g., Beaumont, 1999; Benkmann, 2002, 2004). Wagener's (2014) work (2014, p. 257–263) regarding the interactional requirements of learning-related helping is particularly relevant. Based on observation protocols, she traces the interaction process of mutual helping and reconstructs four phases. Hence, the participants must first (1) initiate the interaction. Subsequently, they must (2) negotiate the (non-)occurrence of the help, (3) accomplish the activity of helping, and finally (4) agree on the consensual completion of the help process. This reconstruction provides initial insights into the sequential unfolding of helping-in-interaction and already suggests the interactive and also discursive complexity of the activity. The sequential organization of helping is also examined by Svahn and Melander Bowden (2019). Based on video recorded interactions between a tutor and group of students in a mathematical homework support setting, these authors reveal that helping involves a series of interactive jobs that participants engage in together, including (1) initiating a help request, (2) localizing the problematic assignment, (3) presenting the problem, and (4) providing instructions or explanations. Through their multimodally framed analysis, Svahn and Melander Bowden further expose the importance of "participants' use of gesture and other forms of bodily activity to establish mutual orientation to particular objects within the local environment" (ibid., p. 18) and elaborate on the crucial role of material resources, which, as epistemic resources (ibid., p. 18), significantly contribute to the determination of the problematic issues. Through these detailed analyses, they illustrate that the process of helping is highly complex on an interactional level and is always accomplished through the participation of and cooperation between all interactants.

The state of research outlined in this section shows that helping in educational settings has been investigated from different perspectives. Research from the field of educational psychology emphasizes the central role of helping in individual learning, while interactional approaches in educational science emphasize social dynamics, revealing that help interactions and actions in educational contexts are highly diverse. Beyond that, conversation analytic studies focus specifically on interactive characteristics of helping and examine it as an interactional and embodied achievement of all participants. These works demonstrate that the activity of helping is challenging and quite delicate for participants at many levels. In the following section we now shed light on helping from a linguistic perspective.

Helping and Related Practices From the Perspective of Linguistics

In the first place, the notion of *helping* is a lay term or ethnocategory which is based on the understanding that the help recipient is supported in his or her actions by the helper relieving the recipient of difficult or problematic actions or action steps that overburden him or her. This help can be provided both verbally and non-verbally, through talk and/or practical acting (Pick and Scarvaglieri, 2019, p. 26). Examples of this would be when a clerk at the department of public welfare explains to the client where to find the missing document for his/her application and what steps to take next, or the educator takes over tying the shoes of a child who has not yet learned to do so (ibid., p.26). Depending on the situational context, helping can fulfill different functions: On the one hand, it can aim at enabling the help recipient to accomplish the corresponding action himself/herself (as with the clerk's explanation), or, on the other hand, it can more or less completely replace the recipient's action without

promoting his/her own agency (as with the educator tying the shoes). Regardless of these different functions, the helping person is assumed to have a certain knowledge, skill (ibid., p. 7) or possession (e.g., Wagener, 2014; Wakke, 2021).

In discourse analysis, the term *helping* has been used primarily in the context of advising as a generic term for different advisory forms of action (cf. also Pick, 2017, p. 430f.). An examination of helping as a linguistic and interactional phenomenon in its own right, however, has remained unconsidered for a long time and has only recently begun. Pick and Scarvaglieri (2019), for example, focus on a conceptualization of *helping in and through language* (ibid., p. 19) that follows the tradition of discourse analysis, describing it as a complex activity that goes beyond a single action, comprises several sub-actions that need to be managed interactionally, and is in turn embedded in superordinate actions. Kendrick and Drew (2016) also examine, in a conversation analytic way, helping and its recruitment in mundane interactions, but use the term of *assistance* (ibid. Drew and Kendrick, 2018; Kendrick, 2021), which is largely synonymous with the term of *helping* that we use. In the vein of conversation analysis, they conceive *assistance* and its recruitment as "a basic social organizational problem for which participants have practiced solutions" (Kendrick and Drew, 2016, p. 2; see also Kendrick, 2021, p. 79).

Help interactions can be organized both as longer discourse units (Wald, 1978) or as adjacency pairs (Schegloff and Sacks, 1973). For longer help interactions, discursive practices such as *advising* and *explaining* are typical. What characterizes these discursive practices is that they are organized globally on a sequential level and therefore exhibit a certain complexity. We only discuss explaining in this paper because this practice is particularly relevant to our analysis. On a structural level, explaining includes five jobs that have to be successively accomplished by the interactants, thus providing the sequential organization of and an orderliness to the interactively constituted explanation process. Within these five jobs, the interactants are required to establish topical relevance; constitute an explanandum; explicate procedural, conceptual and/or causal relations; organize the closing; and transition to the interrupted or a newly begun activity (cf. Morek, 2012; Heller, 2016; Quasthoff et al., 2017). To jointly accomplish these jobs, the participants use various devices, which are realized through a range of linguistic, prosodic, and non-verbal resources. Morek further states that explanations "are usually linguistically complex in the sense that they involve the construction of coherently structured units above the sentence level" (2015, p. 239f.). Similarly, advising ranges from more locally organized, sentence-based advice to globally organized, complex advice sequences (Heritage and Sefi, 1992; Locher and Limberg, 2012). Consequently, the discursive practices are not only sequentially complex, but also linguistically demanding.

In contrast, as Kendrick and Drew (2016, p. 10) already pointed out, helping can also be organized locally through *adjacency pairs* (Schegloff and Sacks, 1973; Schegloff, 2007, p. 13; see also Kendrick, 2021). The sequential organization of these shorter units arises via so-called local conditional relevancies; i.e., normative expectancies between utterances (ibid., p. 13, 20).

Typical adjacency pairs in the context of helping are, for instance, requests for information – answer, offer – accept/decline, and request – grant/decline. Therefore, at the linguistic level, helping is highly diverse and can be realized with different practices of varying complexity, adopting different forms. Like educational research, linguistic research has not yet investigated students helping each other as part of multiactivities. However, these are likely to represent a common context of helping in everyday school life. We suggest that everyday manifestations and organizational forms of helping between students in the classroom can only be understood more accurately if helping is understood to be part of a multiactivity. In the following section, we will introduce this concept, which is central to our analysis, and explain our analytical approach, which takes sequential, moral, and spatial orders of helping into account.

MATERIALS AND METHODS

Analytical Concepts

In our data, spontaneously occurring help interactions among students are usually characterized by the fact that helping is not the sole activity, but is embedded in an activity which has previously begun, such as the individual processing of a task or a whole group discussion. Conversation analytic research refers to such involvements in concurrent courses of action as "multiactivity" (Mondada, 2011; Haddington et al., 2014). This form of interaction is typical of many contexts, including classroom interaction. While classroom interaction is often conceptualized as a single activity with only two participating parties – the teacher and the class – on closer examination, it turns out to be characterized by a multitude of "parallel activities" (Koole, 2007) that may be initiated, tolerated, or overlooked by the teacher.

In conversation analysis, multiactivity is analyzed as an interactively accomplished phenomenon (Haddington et al., 2014) that draws on the participants' ability to divide their "involvements," i.e., their concerted attention to some activity at hand" (Goffman, 1963, p. 43). Rather than focusing on individual cognitive processing of multiple tasks (multitasking), this line of research is interested in the ways in which participants engage in and coordinate multiple activities and participation frameworks (Goodwin, 1981); i.e., participants' bodily arrangements that create an environment for mutual attention and perception and are thus fundamental to joint meaning making. To examine helping in the classroom as a multiactivity, our analytical approach addresses three dimensions: the sequential, moral, and spatial dimension.

As to the *sequential dimension* of multiple activities, participants need to deal with the practical problem of coordinating the simultaneous demands that each activity poses with regard to its sequential organization and the use of communicative resources. Multiactivities can entail either two interactive projects or one individual and one interactive project. The concurrent courses of action can be organized simultaneously, such as when handing an object over to a customer while telling other customers a story

(Raymond and Lerner, 2014). In cases like this, most of the communicative resources can be divided between the two activities. In the example with the customers, while verbal resources are reserved for the storytelling, the hands are used for handing over the change. The fact that gaze is used, even if briefly, for both activities indicates that a competition of resources may occur. If two strands of action are not compatible due to a competition of resources, they will be organized successively; i.e., one activity can be embedded in another one which is temporarily paused and later resumed (e.g., Haddington et al., 2014). Multiactivities can also involve multiple dis-engagements and re-engagements. For example, this can be observed in class during individual work. Szymanski (1999) examines how third graders sitting at group desks deal with the challenge of engaging in talk with another child who is currently working on an individual reading or writing assignment. The practices for re-engaging with fellow students include sequence-initiating actions such as questions, announcements, and noticings. Dis-engagements, in contrast, are achieved by visibly and audibly continuing with the individual task. The examples show that different temporal orders can be established for the accomplishment of multiple activities and that multimodal resources play a central role in this process. In our analysis, we trace the sequential order established in helping during individual tasks and plenary announcements by the teacher.

The *moral dimension* of helping-within-multiactivities implies that multiactivities bring along the need to establish a hierarchy between competing activities. While one activity is treated as a priority (Mondada, 2014b) or main involvement (Goffman, 1963), the other activity assumes the status of a side involvement (Goffman, 1963), less important or postponable action (Deppermann, 2014). For example, Raymond and Lerner (2014) describe two forms of "adjusting actions": suspending (e.g., suspending the act of seasoning one's own food in favor of fulfilling a concurrent request to serve food) and retarding (e.g., delaying a payment routine to simultaneously remind the customer to take the coffee with them), that enable different relations between two relevant courses of actions. We argue that this relation is not just a matter of sequencing but is also related to moral orders: When members engage in activities (or are in charge of the execution of certain actions qua role, e.g., a seller being responsible for a purchase transaction), they commit themselves (Clark, 2006; Raymond and Lerner, 2014) to the activity and the purpose it serves to fulfill (Clark, 2006; Raymond and Lerner, 2014). Committing oneself to an activity means holding oneself as morally responsible for it. The simultaneous performance of multiple activities presents participants with the challenge of managing these responsibilities. This problem comes to a head in the case of student help interactions in the classroom, because there is both a strong moral obligation to help and a strong obligation to follow the teacher-directed course of actions. In our analysis, we describe the practices students draw on to tackle this dilemma.

The *spatial dimension* of helping-within-multiactivities refers to the bodily spatial arrangements that participants create to pursue two courses of action. A common arrangement, especially for small gatherings, is the F-formation (Kendon, 1990); i.e., a spatial configuration with which people establish "an overlap of their transactional segments [...], enabling them to use these segments as a joint interaction space" (Ciolek and Kendon, 1980, p. 241; cf. Hausendorf, 2013; Mondada, 2013), which is also called "o-space" (Ciolek and Kendon, 1980, p. 243). Ciolek and Kendon describe different F-formations that are open or more closed. When people come to stand or sit vis-à-vis and face each other directly, they constitute a closed arrangement, because they shield their encounter from other participants. In contrast, when people stand or sit side-by-side, facing in the same direction but still having full access to each other's transactional segment, they create an open arrangement with fuller access to the immediate environment. The authors argue that the different shapes are not only related to the physical environment and the type of activity, but also document different degrees of involvement: "By standing close or far, by orienting fully or only partly to one another, participants may express the extent to which they are involved in the encounter at hand that is, whether their attention is wholly or only partly taken up with it" (ibid., p. 237f.). Thus, the different shapes can be also considered key resources to create different degrees of interactional and social "withness" (ibid., p. 244) and involvement in a group activity. In multiactivities, participants manage two interactional spaces (or an individual and a joint transactional segment). Our analysis describes the context-specific forms this takes in the classroom, because a collective interactional space (Schmitt, 2013) is usually established here to which participants must somehow relate when constructing parallel dyadic interactional spaces.

Methodologically, our analytical approach is informed by multimodal interaction analysis (Goodwin, 2000; Streeck et al., 2011; Mondada, 2014a), a micro-detailed approach to the study of human interaction and sense-making in diverse social and material environments. Drawing on methods and insights developed by conversation analysis (Sacks, 1995; Sidnell and Stivers, 2013) and context analysis (Ciolek and Kendon, 1980; Kendon, 1990), this approach allows for the exploration of the students' practices for constituting, maintaining, and dissolving groups when engaging in help through examining a broad range of spatial, material, and multimodal resources: materials on the students' desk, body posture, gaze, gesture, facial expression, prosody, and talk.

Data Materials

Our study is based on naturalistic data consisting of video recordings of 22 German and mathematics lessons in two fifth-grade classrooms, one class each from a Gymnasium and a comprehensive school[1]. The seating arrangements in the classrooms varied. In the comprehensive school class, the students' desks are organized in clusters; at the Gymnasium, students were seated at tables aligned parallel or perpendicular to the blackboard. The lessons were recorded with a total of four cameras, one following the teacher (who wore a wireless microphone), a second one recording the entire classroom from

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[1]After elementary school, the German school system is multi-tiered and distinguishes between Hauptschule, Realschule, Gymnasium (leading to a general qualification for university entrance), and various forms of comprehensive schools.

the front of the class (total view), and two more cameras capturing groups of students (with additional voice recorders on the students' desks).

For the data preparation, all "candidates" for help interactions among students were annotated in MAXQDA. In order to be able to describe everyday help interactions in their multi-faceted nature, no narrow criteria were applied in the annotation. Instead, all phases of instruction (introduction, individual work, and class discussions) were examined. With one exception, the four teachers did not explicitly ask students to help each other. All of the help interactions captured were therefore spontaneously initiated by the students. The objects of the help interactions were varied and ranged from requests for class materials to questions about the spelling of a word and other complex content-related issues. Overall, a total of 143 sequences were identified in which a request or offer for help occurred. They cover both self-initiated and other-initiated help interactions.

The total of 143 sequences were transcribed according to the notation conventions of "Gesprächsanalytisches Transkriptionssystem 2" (GAT 2, cf. Selting et al., 2011). This method of transcription captures not merely what was said, but also how and when something was said. It also allows researchers to register multimodal actions, such as material arrangements, changes in body posture, gestures, and facial expressions in terms of their temporality and their alignment with the verbal utterance. GAT 2 transcripts thus enable the researcher to analyze the intricate actions that characterize help interactions and the ways in which they are coordinated with other activities (e.g., writing, solving math problems). Anonymized still images were integrated into the transcripts to illustrate relevant spatial arrangements and embodied actions in the transcript.

ANALYSIS: HELPING AS A CONCURRENT ACTIVITY – HANDLING MULTIPLE COURSES OF ACTION AND MORAL COMMITMENTS

Help activities can be set relevant at almost any time in class, such as in individual work phases in which students are requested to work on a pre-determined task, within phase changes, and in plenary activities. Regardless as to when interactive negotiations of helping emerge among students, helping and the concomitant group formation process constitute an activity competing against the already ongoing course of action, so the students are in a state of having to manage these competing activities and the moral commitments they entail. Using two examples, this section reconstructs how the students' problem definition as complex (Section "Helping in Handling a Problem Defined by the Students as Complex") or uncomplex (Section "Helping in Handling a Problem Defined by the Students as Uncomplex") affects the students' organization of the help interaction and their handling of dual moral commitments. In order to expose how students manage their moral commitments to both helping and individual/plenary tasks, we will first address the sequential

organization and then the bodily spatial arrangements. Finally, we bring the findings together and discuss the extent to which different arrangements are consequential for the constitution of the group (Section "Summary").

Helping in Handling a Problem Defined by the Students as Complex

The first sequence (**Excerpt 1**) is taken from a German lesson at the comprehensive school, in which the students are involved in an individual task and are assigned to type a response letter on their laptops. During this individual work phase, Paula encounters a spelling problem while writing the term "Lieblingsfächer" (favorite subject), and approaches Tijen. Note that in their negotiation, Paula and Tijen interactively define the problem to be solved as highly complex.

Sequential Organization

At the beginning of the sequence, Tijen indicates that she is not complying with the teacher's previously imposed commitment to complete the task. Instead, she talks to Jonah (line 002) and then rubs her eye, which seems to be causing problems (lines 003f.). In the context of a copresent student group, Szymanski (1999) refers to such activities as pre-re-engagement actions preceding a re-engagement since "[copresent] individuals may make visible a place for re-engaging talk by discontinuing individual work" (ibid., p. 8). Paula takes this opportunity and initiates a help interaction by raising a help request in the form of a polar question while detaching from typing the letter (line 005). By doing so, she indicates epistemic uncertainty and constitutes an explanandum, so that over the further course of interaction, an explanatory discourse unit is to be expected (Morek, 2012, p. 68f.). Since Tijen does not instantly respond to this question, Paula poses a summons (Schegloff, 1968), to which Tijen replies metadiscursively ("hang on," line 008) in order to clarify that the action in progress, i.e., the processing of the letter, which she resumed shortly after the summons, still has to be continued until a caesura. In doing so, she establishes a hierarchy between the two courses of action, constituting typing the letter as the *main activity* and helping as the *side* (Mondada, 2014b, p. 46) and *interjected activity* (Raymond and Lerner, 2014). After reaching the caesura, Tijen pauses the main course of action, turns to Paula's problem, and Paula re-constitutes the previously established explanandum in a modified form (line 013). Tijen then displays a lack of knowledge by shrugging her shoulders, so that the transition into the expectable explanation fails (line 014).

Subsequently, this failure is followed by a series of verbal and embodied affect displays. Paula curses and produces response cries (Goffman, 1978). Furthermore, she puts her head back, rubs her face, and forms her hands into the shape of a gun, with which she shoots at the laptop in temporal alignment to cursing. These displays are similar to Kendrick and Drew's (2016) trouble alerts for recruiting a potential helper, but here serve less to initiate a help sequence (ibid., p. 7). Rather, because of their sequential position, the affect displays serve as resources to keep the recipient in line. Although Paula does not immediately succeed at this and Tijen re-engages in the interaction only after Paula too has independently returned to her work (line 024),

```
            tij: Tijen,  pau: Paula,  jon: Jonah¹


    001   pau:    ((writes))
    002   tij:    ((talks to jon))
    003           ((rubs her eye))
    004           ((looks at the laptop screen, rubs her eye))
    005   pau:    is #1 lIEb|lings FALSCH geschrieben,                    |
                  is     favorite    misspelled
                             |((turns to tij, points to screen with lif, averts gaze))|
```



```
    006           (0.3)
    007   pau:    TIjen,
    008   tij:    |(0.2)             | [|WARte ma;|              ]
                                        hang on
                  |((rubs her eye))|  |((types))|
    009   pau:                         [((turns laptop to tij))]
    010   tij:    ((types))
    011           ((looks alternately at pau's and her own letter #2 #3))
    012           #4 <<pp> (              )>
```



```
    013   pau:    warum is da n STRICH drunter?
                  why is there a line underneath it
    014   tij:    ((shrugs her shoulders))
    015   pau:    ((looks at her letter, 1.5 sec.))
    016           ((puts head back))
    017           ((sighs, turns laptop back #5))
    018           ((rubs her face))
    019           <<angry> scheiß |teil #6 SCHUle_af->                    |
                            shitty thing     school_f
                                      |((points with bh pv, f spread to laptop))|
```


---
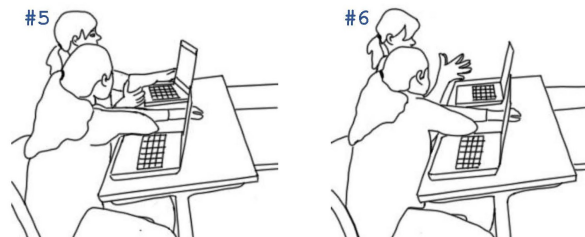
¹ Abbreviations used in the transcripts:
   lif/rif – left/right index finger; f – finger; lh/rh – left/right hand; bh – both hands; pv – palm vertical

EXCERPT 1 | (Continued)

```
020    tij:    ((turns away))
021    pau:    du |SCHEIß;                                        |
               you shit
                  |((forms a hand gun and points at laptop))|
022            (1.8)
023    pau:    (xxx)
024            ((tij and pau continue typing, 16.5 sec.))
025    pau:    |(↑xxx xxx) #7          |
               |((puts palms together))|
026    tij:    [((clicks her tongue and sighs, throws rh up))]
027    pau:    [wird #8 lIEblings                 ][fächer vielleicht
               is       favorite                    subject maybe
               zuSAMmengeschrieben?]
               written as one word
028    tij:                                               [((types))
                               ]
```

#7   #8
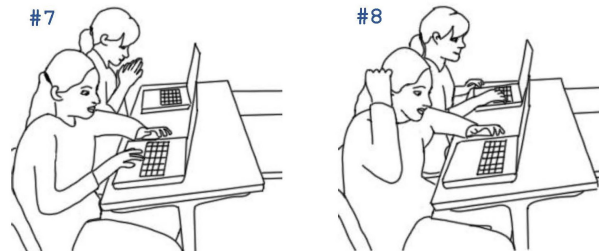
```
029            |°hh? (.) ich WEIß #9 warum;|
                         I know why
               |((turn to pau, raises rif))|
030            ((points at pau's screen))
031            <<pointing> du musst> das el
                         you have to
               |GROß (machen); #10                          |
                capitalize the L
               |((places elbow on lh, supports head with rh))|
```

#9   #10
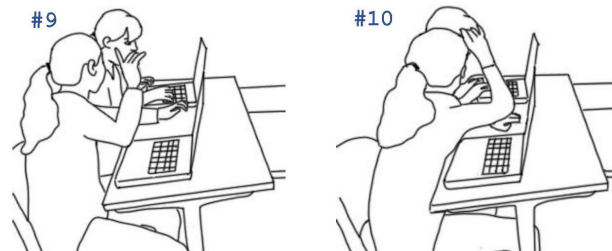
```
032            (1.1)
033    pau:    dIE: LIEBlingsfächer.
               the favorite subjects
034            ((looks to tij))
035    tij:    du musst das el GROß machen.
               you have to capitalize the L
036            (1.6)
037    pau:    ((types))
038    tij:    |(xxx)               |
               |((moves closer to pau))|
```

EXCERPT 1 | (Continued)

```
039   pau:   [wird lieblingsfächer         ] [zusSAMmen          ]
              is    favorite subject          written as
              geschrieben,#11
              one word
040   tij:   [((moves to edge of the chair))] [((places head on rh))]
```



```
041   tij:   (-) [((nods))]
042   pau:       [JA;=ne,  ]
                 it is, isn't it
043          (WARte mal/ERSTmal).
             (hang on/first of all)
044          (1.0)
045          (hier)(xxx)
              here
046          ((corrects the word))
047          |DANkeschö:n. #12|
              thank you
             |((hugs tij))    |
```



```
048   pau:   ((types))
049          ((looks at her exercise book))
050   tij:   ((looks to the front))
051          ((returns to her place, continues writing #13))
```


EXCERPT 1 | 3DU_120907_15_2.

based on Goffman (1978), we assume that this form of public self-talk or outburst is directed at Tijen as a copresent other due to its fundamental display character. Note, however, that its inherent conditional relevance is rather weak, and therefore, it is up to Tijen to pursue the request for help or not (ibid., p. 794, 799). By using this practice of indirect, barely binding mobilization of help, Paula is taking into account the facts that Tijen is simultaneously pursuing another commitment and that she is not entitled to Tijen's help. After Tijen does not respond to these affect displays and Paula continues working, Paula re-initiates the help interaction in line 027 by proposing an explanation and subjecting it to negotiation. Immediately thereafter, Tijen also expresses a change of state referring to Paula's problem (line 029) and provides an alternative explanation

in the form of minimal instruction (line 031). From this point on, the established hierarchy shifts, the former main activity is put on hold for a longer and interactively quite intense duration, and the help process is temporarily constituted as the new main activity.

In the further course of interaction, the alternative explanatory accounts provided by the two students – i.e., capitalization on the one hand and compound spelling on the other hand – are successively processed and verified and an explanation to the question "why is there a line underneath it" (line 013) is co-constructed in permanent mutual inclusion and constant confirmation (lines 031–046). The fact that both participants devote their undivided attention to answering the questions shows that they consider the problems as both complex and important. After solving the problem, the interjected explanatory
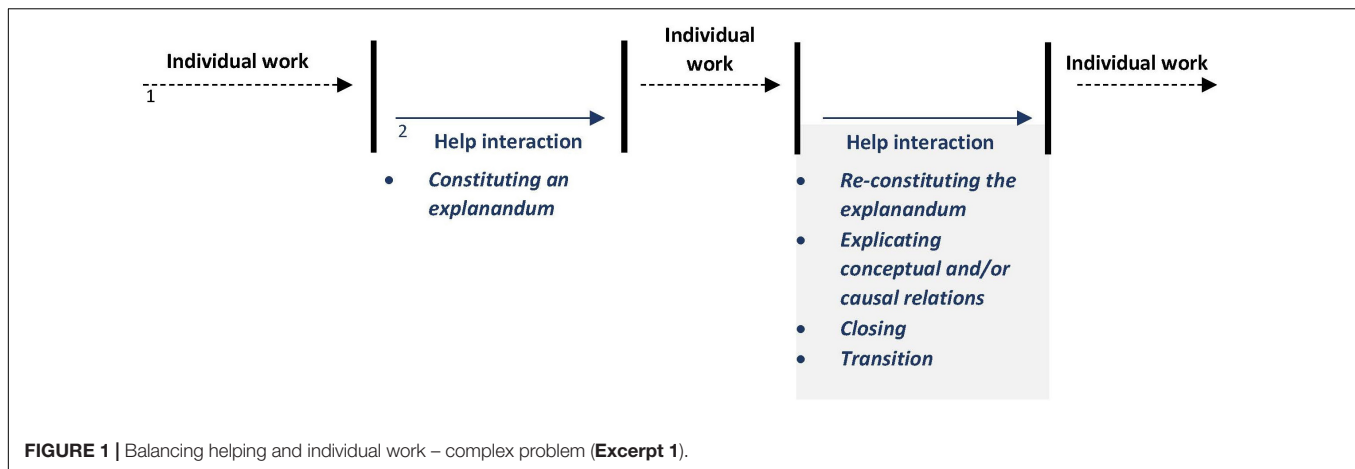
FIGURE 1 | Balancing helping and individual work – complex problem (**Excerpt 1**).

sequence is closed by a sign of thanks (Morek, 2012, p. 84f.). Yet again, the affective charge of this interaction becomes evident in Paula's exuberant embrace. Finally, the students refocus again and solely on typing the letter (cf. Morek, 2015), so that the change in hierarchy and prioritization is reset. **Figure 1** outlines how the two courses of action are intertwined and processed. The numbering of the respective black and blue arrows refers to the two competing courses of action.

The sequential analysis of this sequence reveals that the juggling of these two courses of action and the associated two moral commitments is anything but trivial. As can be seen at the sequential level, the individual assignment given by the teacher is generally prioritized over the request for help and the latter is suspended in favor of it. Nevertheless, this hierarchization and prioritization can also be reversed in the course of interaction, so that the help interaction is temporarily designated as the main activity. Moreover, it emerges that whenever the problem at hand is defined as complex by the students, the actual help, e.g., a collaborative explanation, requires extensive communicative effort. We now turn to the spatio-organizational dimensions of interaction and examine the embodied and spatial arrangements of the participants engaged in helping.

Spatial Organization

A prerequisite for engaging in helping is that the participants not only establish a shared focus of attention (Melander, 2009, p. 70) within a domain of scrutiny (Goodwin, 2003, p. 221) but also an interactional *space* for focused interaction. In addition, depending on how relevant and complex the participants define the problem and whether solving the problem also requires shared access to certain materials (screens, books, etc.), the interactional spaces are more or less stable and involve the use of various bodily resources. We illustrate how the way in which an interactional space is established reflects the moral order established by the participants and is also consequential for the constitution of the group as more or less transient.

As the teacher's assignment for each student was to write an individual response letter on the laptop, the students are expected to orient their attention to their individual transactional segments; i.e., to the laptops in front of them (line 001: Paula, line

004: Tijen). These spatial segments are normally used exclusively by the person who creates them. Ciolek and Kendon (1980, p. 240) point out that "when people engage in writing, they do so within a small zone of space extending between themselves and a writing pad, and they will carefully maintain their exclusive access to this space." In school, these segments are pre-designed for specific institutional purposes: learning-related activities. For this reason, we refer to them as being within the *individual space of task processing*. These individual spaces are embedded within the collective space of the classroom (Schmitt, 2013). To engage in help, participants need to direct their orientation away from their individual spaces and establish a shared space. In the present example, this takes three attempts.

Paula makes her first request for help (line 005) while looking at her screen (#1). When formulating the question ("is favorite subjects misspelled"; screen: "lieblings fächer"), she briefly turns her gaze to Tijen, yet her main orientation remains her text. Likewise, Tijen continues to gaze at her screen. Since both girls maintain their visual attention in their individual spaces of task processing, no shared space is established and the request remains unanswered.

After a short pause, Paula makes a second attempt to request help (line 007). This time, the two girls coordinate their detachment from their individual spaces by producing a summons (line 007) and a metadiscursive reply (line 008: "hang on"). Overlapping with this, Paula turns the notebook to Tijen (line 009) and begins to establish a "joint interaction space" (Ciolek and Kendon, 1980, p. 241); i.e., an overlap of their transactional segments. Her left hand remains on the laptop and delimits the dyad to the outside. Tijen's visual orientation alternates between her own and Paula's screen (line 11), with her left hand touching her own laptop. She responds to the repetition of the question (line 013: "why is there a line underneath it") by shrugging her shoulders (line 014), thus indicating both a lack of knowledge and commitment to deal with Paula's problem. Paula then reverses the establishment of a joint interaction space by moving the notebook back to its original position and returning to her individual space of task processing (line 017). By sighing, she expresses her regret, but at the same time, her acceptance that she has no right to receive help from Tijen.

Shortly thereafter, Tijen also reverts to her individual space (line 020) and both girls continue working individually on their tasks for 16 s. Again, no group has been constituted and Paula's problem remained unresolved.

Before initiating her third request for help, Paula indicates a detachment from her individual transactional segment by putting her hands together (line 025). After Paula's attempted explanation (line 27: "is favorite subject maybe written as one word"), Tijen initially remains oriented toward her individual space and then turns her upper body toward Paula while displaying a change of state (Heritage, 1984) and this way announcing a solution (line 29: "I know why," #9). Her pointing to Paula's screen – i.e., the place where the problem is located – establishes a joint interactional space. Since both participants have the rights and responsibilities to perform actions that are relevant for the joint activity of helping within this space, we refer to it as the *shared space of helping*. Note that Tijens's pointing is made possible by a rotation of her upper body. By doing so, she produces a "body torque," (Schegloff, 1998), a posture that is characterized by "divergent orientations of body sectors above and below the neck and waist, respectively" (ibid., p. 536). This postural configuration is not only used to display dual involvements, but also a specific hierarchy of these involvements. The orientation of the lower body parts usually indicates which of the two concurrent activities is prioritized and going to be continued. The fact that Tijen only rotates her head and shoulders at first indicates a merely temporary involvement (line 029). Then, while proposing a solution (line 031), she rests her elbow next to her laptop and her head on her hand (#10), rotating the whole upper body inward and establishing a "stable-for-now home position" (Schegloff, 1998, p. 563), indicating a temporary but intense moral commitment to the help interaction. By turning away from her individual transactional segment, she demonstrates that she now gives priority to solving Paula's problem and temporarily puts her own task on hold. Tijen indicates that her commitment to Paula's problem is of a temporary nature by maintaining the orientation of her lower body to her individual space. The shared space of helping is therefore constructed as transient and fragile.

Paula checks Tijen's proposal by putting the noun marker in front of the noun (line 033) and then implementing the suggestion (line 035; screen: "Lieblings fächer"). As the problem persists, as indicated by the fact that the text is still underlined, Tijen moves closer. When Paula proposes another solution, compound spelling (line 039), Tijen moves further forward, now also aligning her lower body with the shared space of helping and resting her head on her right hand (#11). With this thinking posture (Heller, 2021) and the full alignment of her body, she indicates that her orientation to the shared space of helping has assumed dominance and that she has fully committed herself to the search for a solution. At the same time, the bodily orientation along with the material arrangement makes the girls clearly identifiable as a group. Their intercorporeal arrangement shelters their interaction from being interfered with (cf. Ciolek and Kendon, 1980, p. 245) and enables an in-depth examination of the problem. Nevertheless, Paula's request to wait (line 043) until the proposal has proven to be successful shows that from the point

of view of the person seeking help, helping is a fragile concurrent activity and always runs the risk of being abandoned prematurely.

After the implementation of the suggestion leads to a solution of the problem (screen: "Lieblingsfächer"), Paula puts her arm around Tijen's back (#12) so that they both sit shoulder to shoulder, staying visually oriented to the jointly mastered problem – the spelling, which is now error-free. The successful help therefore culminates in a tactile engagement through which both girls establish a high degree of closeness and withness (Ciolek and Kendon, 1980). The help interaction is then closed by both girls successively turning back to their individual spaces (lines 048–051).

In summary, the shared space of helping is established and constantly shaped through summons, response cries, requests, material arrangements, and bodily resources. With reference to the latter, body torque was shown to be a particularly flexible resource. Depending on how many body parts rotate and whether individual body parts such as the elbow assume a fixed position in the joint interactional segment, the shared space is arranged as more or less stable. The most stability is achieved through a full bodily alignment that also includes the lower body. All in all, the arrangement of the screens and the turning of the bodies away from the surrounding classroom shields the girls from the others present and visibly constitutes them as a group. It can be observed that in the more stable formations, there is deeper reflection on the spelling problem, which manifests in the extended explanatory activity. Especially in the classroom, a place with a large number of participants pursuing diverse courses of action, an arrangement such as this one seems functional in order to be able to focus one's own attention on the problem and to signal to the outside that temporarily, no other attempts at interaction are desired. In addition to these cognitive and organizational functions, the closed formation of the shared space of helping is also associated with an affective charging of the interaction. The hug (Goodwin, 2017) as an intertwining motion of the body enabled mutual perception of tactile intimacy, affection, and witness. Together with the expression of gratitude, it worked as a "tie sign" (Goffman, 1971, p. 188–237) that was used to "affirm and support the social relationship between doer and recipient" (ibid., p. 63) and to build social trust between group members.

As various linguistic studies have already illustrated above, the complexity of the interactive elicitation of help interactions can vary to a great extent. While the example analyzed in this section reveals that the processing of a complex problem can entail considerable communicative effort, the opposite will be shown in the next sequence, in which the students interactively define the problem at hand as uncomplex.

Helping in Handling a Problem Defined by the Students as Uncomplex

Unlike **Excerpt 1**, this sequence (**Excerpt 2**) does not take place entirely during the individual work phase, but during the transition from individual work to a teacher-led plenary activity. The students Marco, Karsten, Niko, Niclas, Robert, and Normen are sitting at a group table and are working on different tasks in which they learn how to write formal and informal letters.

mac: Marco, rob: Robert, nic: Niclas, tea: teacher, nor: Norman

```
001    mac:    ((writes))
002    rob:    ey marco ich war BESser als <<lacht> du;>=
               hey Marco I was better than you
003    mac:    <f> |wie #1 schreibt man             |
                    how do you write
                    |((squints at rob's and nor's worksheets))|
               #2 |wie schreibt man| |PAAR:;=> #3               |=
                    how do you write    pair
                    |((looks to nic))| |((looks to the teacher's desk))|
004            =((two children start to fight))=
005    mac:    =|wie #4 schrei?  |
                    how do you write
                    |((looks to nic))|
```

#1
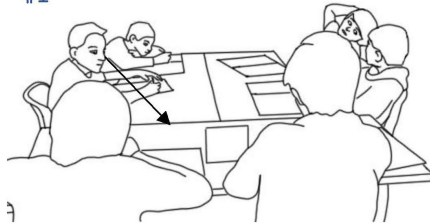
#2

#3

#4
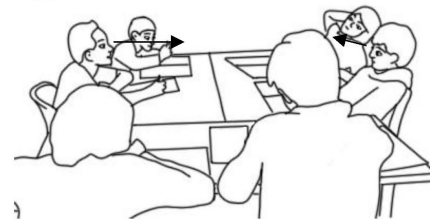

```
006            ((turns to the fighting children))
007            ey #5 wie |schreibt man #6 Pah°-              |
               hey      how do you write      pair
                         |((turns back to his group table))|
008            ((turns to the fighting children))
009            wie #7 |SCHREIBT [man-   ]                    |
               how do you write
                      |((turns back to his group table))|
010    tea:             <<ff> [STOPP-]>
                                stop
012            (0.4)
013    mac:    ((turns to tea, holds 4hp v)) #8
014    rob:    <<p> oh ↑MAN;>
                    oh man
015            (--)
```
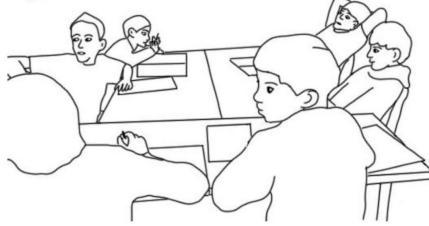
#5

#6
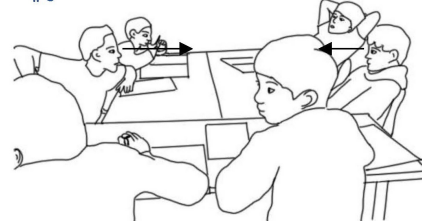
EXCERPT 2 | (Continued)

```
016   tea:   wir MACHen (.) eine:-
             we take
017          wenn ich FERtig bin mit rEden. (--)
             when I am done talking
018          machen wir eine (--) kurze TRINKpause.=
             we will take a short break to get something to drink
019   mac:   =MUSS man was trin[ken,]
              do you have to drink anything
020   tea:              <<f> [was ] mir noch nicht geFÄLlt;> (--)
                             what I do not like yet
021          IST; [(0.6)                                            ]
             is
             (0.3)
022   tea:        [((places bH on the table, looks at the worksheet)) #9]
```



```
023   tea:   dass mAnche (.) es NICHT schaffen. (-)
             that some of you do not manage
024          [sich SO zu disziplinieren,
             to discipline themselves
025   mac:   [((writes/paints on pen))
026   tea:   dass ALle Arbeiten können. (1.3)]
             so that all can work
027   mac:                                    ]
((...))
037   tea:   <<p>GUT;>
                  good
038          jetzt dürft ihr was TRINken nebenher?=
             now you can have a drink alongside
039   mac:   =|<<p> wie schreibt man PAAR,> #10|
                   how do you write pair
              |((leans forward, talks to nic)) |
```


EXCERPT 2 | (Continued)

```
040    tea:    nich dass es n geMURmel gibt,
               not that there is any mumbling
041            [ihr dürft einfach nur      ] was TRIN[ken,]
               you may just                    have a drink
042    mac:    [((looks in exercise book))]       |[pe: ]          |
                                                    P
                                                   |((looks to nic))|

               [|a: a: ER;=ne, #11|         ]
                 A   A   R   right
               |((turns to rob)) |
043    tea:    [trinkpause heißt jetzt was] [TRINken,]
               taking a break means having a drink now
044    mac:                            [(PAAR;) ]
                                         pair
045            |[wie schreibt man PAA#12R;]|
                how do you write pair
               |((leans forward))         |
046    tea:    [und REaltiv schnell    ] danach weiter arbeiten.=
               and continuing to work quite quickly afterwards
```

#11   #12

```
047    mac:    =pe: a: a: ER,
                P   A   A   R
048    rob:    (.) WAS;
                   what
049    mac:    PAAR;(.)
               pair
050            PAAR:;
               pair
051    rob:    (1.0) pe a: (0.6) a: ER:;
                      P  A          A  R
052    mac:    |JA; #13                       |
                yes
               |((returns to his place, writes))|
```

#13

```
053            (1.2)
054    rob:    so wie !HAAR:!; ((laughs))
               like      hair
055            (-)
056    rob:    ey ich hab n |MUFfin da.       |
               hey I have a muffin there
                            |((turns to nor))|
```

EXCERPT 2 | 3DU_120905_11.

While Marco is writing his letter, he is confronted with a spelling problem and seeks help at his group table to solve this problem. During his first initiation attempts, still within the individual work phase, a dispute and disturbances break out in the class, prompting the teacher to issue an admonition directed at the entire class. Thus, in this sequence too, the students are required to balance two courses of action and two moral commitments. However, in this case, the second commitment does not (mainly) consist of the task to be done individually, but in following and sharing the plenary activity initiated by the teacher.

Again, we will first reconstruct the sequential organization and then focus on bodily and spatial dimensions.

Sequential Organization

While Marco continues writing after fooling around with Niko and Niclas, the other students are engaged in activities of their own: Karsten and Normen are working on their assignments, Niko and Niclas are conversing about the cameras set up in the classroom, and Robert is following this conversation.

In the immediate process of detachment from his own task, Marco realizes a first help request in the form of a request for information: "how do you write how do you write pair (line 003). Note that here, this question is not addressed to any of the students in particular. While asking this question with a raised voice, Marco eyes Robert and Normen's papers, then turns his gaze to Niclas, who sits opposite to him but is looking to the front of the classroom, and finally looks himself to the teacher's desk. In line 004, Marco attempts to re-engage the others again (Szymanski, 1999) and tries to establish eye contact with Niclas. Due to a disturbance caused by the dispute between two students in the back of the class, which attracts Marco's attention, he abandons his turn in the middle and turns to the disputing children. It is striking that Marco brings forth his question again while still facing the fighting students and only gradually turns to his addressees; this time he incorporates the interjection "hey" (line 007) as "an 'attention-getting' device" (Schegloff, 1968, p. 70). Since Marco still fails to initiate a help interaction, he repeats the information question a fourth time, but cuts off again immediately after the teacher intervenes to stop the commotion (lines 008f.).

So far, there are two aspects that become evident: First, Marco's verbal and embodied behavior (note that he is the person seeking help) shows that his attention is divided and he does not entirely devote his attention to the help process. Accordingly, he establishes a rather weak moral commitment to attending to his problem. At the same time, by instantly suspending his help request after the teacher intervenes in the students' dispute, he prioritizes the teacher-led activity. This is also evident in the further course of interaction. Therefore, Marco postpones his problem throughout the teacher's talk and only takes it up again when, in line 037, the teacher signals the conclusion of his admonition by the discourse marker "good" which indicates relaxation in the tense situation, and subsequently transitions into a short break (line 036). Again, Marco does not gain the attention of his addressees and does not succeed at recruiting a helper right away (line 037), so he then modifies his help request by repeatedly placing a candidate answer (Pomerantz, 1988) for disposal, which basically only requires ratification (lines 042 and 047) (ibid., p. 366). In line 048, Robert finally responds to Marco's request, initiating a repair to get access to the problem at hand. Marco then only states the term his spelling problem revolves around (line 049f.) and Robert spells it out. With Marco's confirmation of the spelling in line 050, which functions as a "sequence closing third (SCT)" (Schegloff, 2007, p. 118) and ends the question-answer-sequence, Marco finally revalues his epistemic status, which was initially devalued due to the help request. Marco detaches himself from the help interaction and returns to the main activity, i.e., writing the letter (line 052), although the teacher has announced a break. After a short delay, Robert adds a mnemonic rhyme in the

form of a comparison (line 054), but Marco does not visibly take note of it.

Recapping the sequential organization, it is apparent that the problem to be solved is not only not prioritized compared to the teacher's activity, but was also defined as being of minor complexity and to be dealt with incidentally. As depicted in **Figure 2**, at its core, the help process comprises a simple question-answer adjacency pair sequence (Schegloff, 2007, p. 78) that is expanded with a third element (confirmation as a SCT), and an expansion of the helper's answer (mnemonic rhyme). Furthermore, the help process is woven around the teacher's activity so that the parallel courses of interaction do not seem to compete with each other to a considerable extent. Because of this clear prioritization and hierarchization of the different courses of action and the problem definition as a simple problem that can be solved later, and – most importantly – incidentally, the difficulty of balancing the two moral commitments does not arise to the same extent that it does as in **Excerpt 1**.

Spatial Organization

Considering the embodied and spatial arrangements the students make, it is apparent that **Excerpt 2** not only differs with regard to the sequential organization from the first example, but also varies in the extent to which an interactional space is established and a group is constituted. Unlike in **Excerpt 1**, the shared space of helping assumes an open formation. This is usually accompanied by the fact that the group is also constituted as a transient association.

Since the request for help is made parallel to an announcement from and admonition by the teacher, the students direct their attention to the collective space. As already described above, Marco does not establish eye contact with a specific student when making his first request for help; while formulating the question (line 003), he gazes at his neighbors' worksheets (#1), then to Niclas (without establishing a mutual gaze, #2), and finally to the teacher's desk (#3). Twice, he abandons a repetition of the question while turning around to watch the fighting children at a different group table (lines 005–006, 007–008); a third time when the teacher calls "stop" (lines 009–010). Marco's visual attention is oriented neither to his individual transactional segment nor to the classmates sitting at his group table, but outward to other children and the teacher, who walks from the back of the classroom to the front, projecting an upcoming plenary phase.

When the teacher reaches his desk in the front of the classroom, Marco performs a two-handed Vertical Palm Open Hand Prone gesture (Kendon, 2004, p. 252f.), which is directed to his classmates at his group table (#8). The gesture suggests that a course of action is interrupted. Simultaneously, Marco performs a body torque by turning his head and gaze toward the teacher, establishing a hierarchy between two concurrent activities: The direction of his head indicates his momentary orientation to the teacher in the collective space, while the direction of his lower body segments, which are still aligned with the group table, indicate that the group activity is the one to be continued. The division of resources – gaze vs. body posture and orientation – serve to keep both spaces, the collective and the potential shared space, present in the participants' attention. In

FIGURE 2 | Balancing helping and plenary activities (**Excerpt 2**).
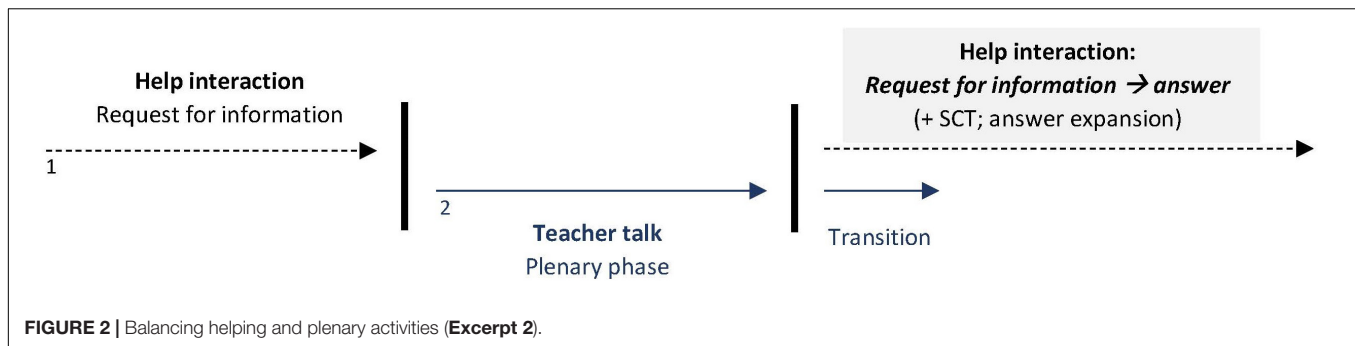
the present case, however, no shared space had been established beforehand. With the gesture, however, it is retroactively implied and the expectation is established for the classmates that they enter into a focused activity with Marco after the end of the teacher's announcement.

During the teacher's announcement (lines 016–036), Marco puts down his hands and begins to draw on his page (#9). His attention is no longer focused on the collective space, but on his individual transactional segment. Temporally coordinated with the closing of the teacher's admonition, Marco addresses his fifth request for help to Niclas, who, however, is looking in a different direction (#10). While formulating the sixth request for help as a candidate answer, Marco turns to Robert (line 042). In doing so, he turns his head, leaving his hands in his individual transactional segment (#11), thus embodying his adherence to his individual space of task processing. A repetition of Marco's request for help (lines 044–045) is accompanied by leaning his upper body forward into Robert's transactional segment (#12). By approaching Robert's individual space, an overlapping transactional segment, i.e., a potential shared space of helping, is established. However, the joint behavioral space is characterized by the fact that only one participant has bodily and visual access to the problematic spelling, because the worksheet remains in Marco's individual transactional segment. Furthermore, the shared space is achieved unilaterally: Robert does not lean forward and even puts his head back a bit. In doing so, Robert assumes a body position from which he can simultaneously look at Marco and keep the teacher in view. Hence, Robert displays no dominant orientation toward Marco. As a consequence of Marco's half turn and Robert's forward-facing body, no closed formation emerges (Ciolek and Kendon, 1980) and the brief association of the two boys is not externally recognizable as a group, which minimizes the risk of being admonished by the teacher for not paying attention. Nevertheless, it can be observed that Robert takes up the request for help by indicating an acoustic comprehension problem (line 048). This allows him to spell out the word himself (line 051), therefore claiming more knowledge or a higher epistemic status (Heritage, 2012; Melander, 2012; Heller, 2018). Simultaneously, with a brief confirmation (line 052), Marco dissolves the body torque and with it the shared space of helping and returns to his individual space of task processing. This also dissolves the group.

Several aspects are worth mentioning here: Similar to example 1, multiple requests for help were necessary. Unlike in example 1, they had to be reconciled with the moral expectation to focus one's attention on the teacher. The fact that several students did not respond to Marco's request for help documents that, from the students' perspectives, the moral commitment to follow the teacher's activity was a priority. Another difference from example 1 is that the shared space here was established unilaterally and was characterized by an open formation. Parallel to the orientation toward the shared space, both boys maintained their orientation toward the individual space of task processing (Marco) or teacher (Robert). Thus, they were not recognizable as a group to outsiders. Overall, little effort was put into establishing the shared space: No material was moved, nor did any of the participants change their sitting position. The only resources that were used entailed repeated verbal requests and candidate answers, gaze, reducing distance, and body torque (limited to head rotation). This comparatively low effort in establishing the shared space enabled its rapid resolution when the help interaction was closed. It is also reflected with regard to the sequential organization, since at its essence, the help interaction merely comprises a canonical adjacency pair. Again, sequential as well as bodily spatial dimensions are closely linked to each other.

For a quick handling of the problem, a spatial arrangement such as the one used by Marco and Robert and their use of resources seems quite functional. Note, however, that the arrangement of the tables and the formations that emerge from them also influences the participants' arrangements. While an I-shaped F-formation (**Excerpt 1**) (Ciolek and Kendon, 1980, p. 249) basically facilitates the establishment of a shared space of helping, in the case of an L-shaped F-formation, (**Excerpt 2**) (ibid., p. 249) this requires more (physical) effort. Finally, another difference to **Excerpt 1** is that helping was not accompanied by affective engagement. Instead, Robert's information about the spelling of the word only received a brief confirmation.

Summary

The analyses have shown that students helping each other while pursuing classroom tasks have to balance two parallel, sometimes competing courses of action. They do this by hierarchizing these courses of action, prioritizing one activity over the other, and giving them space to varying degrees, both literally and figuratively speaking. In this process, it is crucial whether the problem being negotiated is interactively defined as either more complex or less complex. Depending on the complexity, the interactive negotiation requires more or less space. On a

FIGURE 3 | Dominant orientations within help interactions: A continuum.
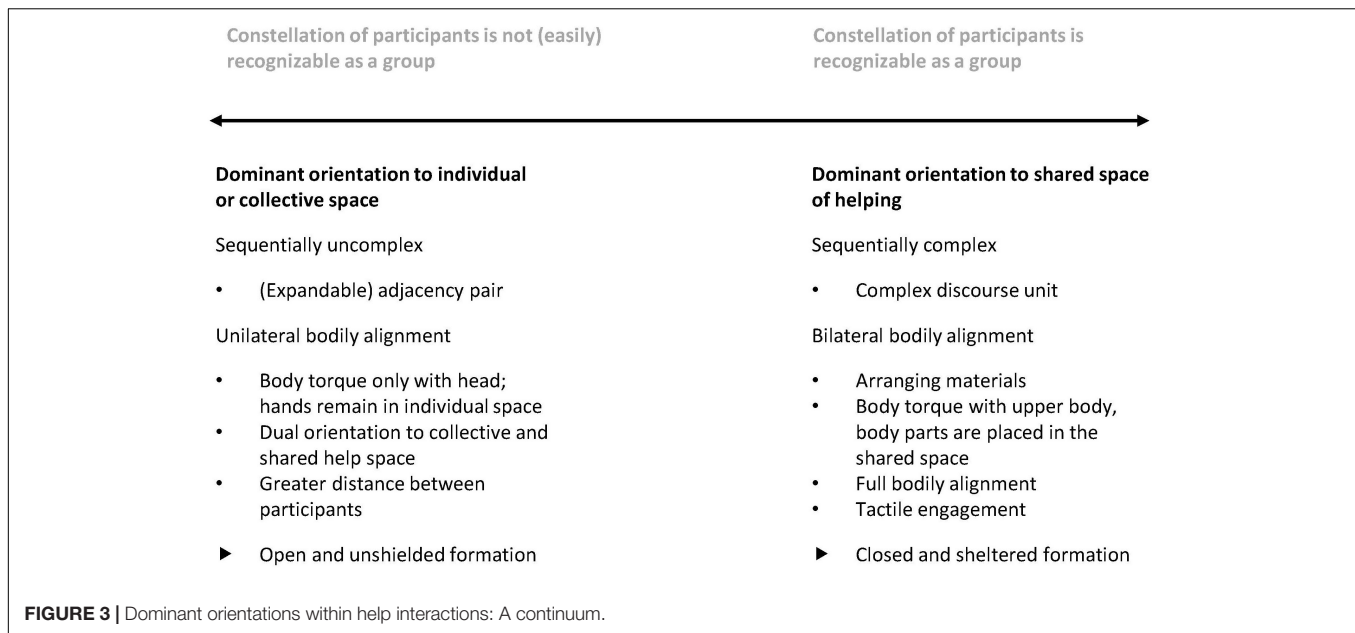
sequential level, this space is given through the provision or withholding of conversational space; in terms of the bodily spatial organization, a shared space of helping is created where all participants have equal access and the right to perform actions that are relevant for the joint activity of helping. Therefore, the extent to which the balancing of two moral commitments poses a problem is reflected in the embodied and spatial arrangements the students make. The more complex the students define the problem and the more they prioritize helping over the individual or plenary task, the more they engage with each other.

We argue that the differences uncovered by our systematic comparison of the two prototypical sequences represent ends of a continuum between different dominant orientations. One end of the continuum is formed by dominance of the orientation to the shared space of helping, while the other end is formed by dominance of the orientation to the individual or collective space (cf. **Figure 3**). Analysis of our overall data set shows that help interactions are located between the ends of this continuum and differ with regard to which resources are used. Note that the two organizational forms are not related to the setting (individual work vs. plenary activities), but rather the interactively negotiated problem definition and compatibility of helping with the ongoing activity determine which form is established. Thus, even in the former setting, i.e., during individual work, we find rather short and less elaborate interactions that are more likely to be assigned to the right pole. The continuum further reveals that even within a single interaction, participants' orientation constantly moves between these two ends of the continuum.

The intensity of the interaction and the way in which a shared space of helping is established is consequential for the constitution of the group. The more both interactants orient their visual and bodily orientation toward the shared space of helping and shield themselves from the outside, and the more conversational space they provide, the more they are recognizable as a group. The joint orientation to a shared space of helping also

documents their moral commitment to find a solution and a high degree of withness.

DISCUSSION

Based on conceptualization of spontaneous helping in the classroom as a multiactivity (Haddington et al., 2014), the present study examined the different sequential and bodily spatial arrangements students adopt to manage dual involvements and, consequently, dual moral commitments (Raymond and Lerner, 2014): helping on the one hand and individual work or plenary activities on the other. Drawing on a video corpus comprising lessons in mathematics and German in two fifth-grade classes from different schools, the analyses revealed that helping can take various forms, ranging from very brief and seemingly low-effort to extended explanatory interactions. By conceptualizing helping as a multiactivity, it was shown that these different forms were not simply due to students' motivation or willingness to help. Rather, the participants' definition of the problem as more or less complex and important was a key moment for the constitution of these arrangements. Furthermore, the nature of the activity already underway, more specifically, the relative weight of the moral obligation associated with it played a crucial role. While the processing of an individual task was temporarily downgraded in its relevance or urgency (**Excerpt 1**), this was not the case with the teacher's announcement to the class in **Excerpt 2**. In this case, the request for help was suspended until it no longer competed with the teacher's activity. As a result, the way in which helping in the classroom is organized by students depends largely on how complex and relevant they define the problem at hand and whether they consider helping to be compatible with the ongoing activity.

We argue that the exemplary arrangements presented in this paper constitute a continuum, at the ends of which

students either heavily commit to the help interaction and establish what we called a *shared space of helping* to which they temporarily orient themselves predominantly through bilateral bodily alignment, or momentarily insert helping into an ongoing course of action and remain primarily oriented toward their individual or a collective space (unilateral bodily alignment). In the first case, the students are publicly recognizable as a group due to their closed bodily-spatial formations (Ciolek and Kendon, 1980), the arrangement of relevant materials, and the duration of the interaction. In conjunction with the consideration of different settings, i.e., helping during an individual work phase or during teacher-led plenary activities, it also becomes evident that these groups are fragile and capable of dissolving, but also of forming at almost any time. In this context, Goffman (1963, 1964) dynamic notion of "engagement" proved central. It enabled us to show that participants' engagement in helping continually oscillates between engagement and disengagement and is related to how they balance the moral obligations associated with the two activities.

Furthermore, we were able to show that the students use various practices to increase their fellow students' moral obligation to provide help. Thus, they employ diverse affect displays, such as response cries, curses, and self-talk. Remarkably, these practices do not recruit help explicitly, but rather indirectly, by displaying the help-seeker's affective experience of the problem. Using these resources, help-seekers establish only weak conditional relevancies and take into account the fact that they are not entitled to help if the other party is simultaneously pursuing another obligation.

With regard to quantitative research that models helping primarily as a cognitive activity and aims to optimize helping processes (Section "Helping in Educational Settings") our qualitative approach has clarified that helping does not merely require certain cognitive steps, but rather perseverance in recruiting help as well as sophisticated interactive skills for balancing dual involvements and moral commitments. These requirements of helping-in-interaction are, in our view, important to keep in mind when systematically promoting helping between students. Thus, for promoting helping in the classroom, an important prerequisite is to provide students with opportunities and time for helping. Therefore, classroom activities would need to be arranged in such a way that helping can be better reconciled with competing tasks.

Finally, multimodal interaction analysis proved to be a productive approach with regard to methodologies used to study groups. Examining help interactions between students from the perspective of multimodal interaction analysis allowed us to highlight the moral intricacies involved in helping as a concurrent activity and to unpack the dynamics of engagement (Peräkylä et al., 2021) by describing the different sequential and bodily-spatial arrangements students created. Combining conversation analytic and context analytic concepts and procedures made it possible to reconstruct how participants coordinate both talk and bodily-spatial and material resources to create and orient to a shared space of helping and accomplish helping as a joint activity. Although we have analytically separated the description of the sequential and bodily-spatial

organization of helping, they are interdependent and tightly intertwined (Goodwin, 2000). As a result, help interactions in which the participants are predominantly oriented toward the individual or collective space tend to be comparatively short, whereas those in which the orientation is dominantly toward the shared space of helping are sequentially more complex. Multimodal interaction analysis enables us to highlight precisely this interplay and to better understand the various ways in which groups are formed in interactive processes of helping.

DATA AVAILABILITY STATEMENT

The data analyzed in this study is subject to the following licenses/restrictions.The dataset presented in this article is not readily available because participants did not give written consent to share the data. Requests to access these datasets should be directed to VH, vheller@uni-wuppertal.de.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

VH collected the data. DW identified and transcribed help sequences. DW and VH were equally involved in the development of the theoretical frame and the empirical analyses. Both authors contributed to the article and approved the submitted version.

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Becoming a Psychotherapist: Learning Practices and Identity Construction Across Communities of Practice

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Within a perspective that views groups as communities of practice and sites of construction of knowledge, learning, and identity, this article aims to explore the contribution that participation in different groups over the course of one's life provides to the development of the professional practices of psychotherapist trainees enrolled in the C.O.I.R.A.G. school, an Italian graduate program in group psychotherapy. Through qualitative analyses of 10 semi-structured interviews, our study empirically shows that by participating in groups, the trainees not only learn the practices of that group but also develop a sort of meta-learning which takes place across groups. The results highlight that: (1) Transversality, duration, and informality are found to be the group properties with the highest formative value; and (2) Learning practices across different groups have common characteristics: are organized around complex topics of group life (e.g., how to manage conflicts, how to join and leave groups, etc.), began in early group experiences, are in continuous evolution, are associated with a critical event, and a negative affect. At the same time, it seems that these critical events are exactly what triggered and sustained the learning practices. Data from the interviews also showed how professional identities are constructed as the outcome of learning in different communities of practice. The study outlines how the experience made in different groups is elaborated in and through meaningful self-narratives, highlighting them as a fundamentally collective and culturally shaped sense-making process. Overall, these results contribute to a better understanding of learning processes as situated and jointly constructed through multiple group participations over time. Furthermore, they contribute to highlighting the role of self-narratives as a primary way through which trainees shape their identity as self-reflexive professionals who are competent in reading group dynamics. Directions for future research and suggestions for psychotherapist training paths are outlined in the conclusions.

Keywords: groups, community of practice, situated learning, group psychotherapists, Italy, professional identity

INTRODUCTION

What do we learn in the groups we participated in throughout our lives? How do these experiences affect the acquisition of useful skills for the profession of group psychotherapist? We contribute to answering these questions with a qualitative exploratory study that we frame within the literature on situated learning (Resnick, 1987; Lave, 1988; Lave and Wenger, 1991; Rogoff, 1995). According to this research tradition, learning and knowing, as well as social identity, are the result of participation in communities of practice. As Wenger has suggested, participation refers to "not just to local events of engagement in certain activities with certain people, but to a more encompassing process of being active participants in the *practices* of social communities and constructing *identities* in relation to these communities" (Wenger, 1998, p. 4; emphasis in original).

In his analysis of an insurance company, Wenger (2000) described how a complex dynamic between participation and non-participation underlies the work practices and the professional identity of the employee community. In this framework, participation (and non-participation) is not just a physical action or event; it involves both action ("taking part") as well as connection with practices and with others (Wenger, 1998). Since 1991, when it first appeared (Lave and Wenger, 1991) and over the years, the concept of community of practice has been a powerful tool for understanding the social and learning processes, and the perpetuation of a practice in time. This concept helps us to conceive groups not as social objects with defined boundaries, roles, rules, but as forms of joint practicing (Orr, 1996; Wenger, 1998; Gherardi, 2009). The practice, from this view, is what shapes the group, what holds together a configuration of people, artifacts, and social relations. Practices are not, therefore, just mere descriptions of what people do; they are knowing, meaning-making, identity-forming, and order-producing activities (Chaiklin and Lave, 1993; Schatzki, 2001; Gherardi, 2006; Nicolini, 2009). Many studies describe the interplay between learning practices and the construction of social and professional identities in communities of practice (Alby and Zucchermaglio, 2006, 2008, 2009; Zucchermaglio and Alby, 2012, 2014, 2016; Alby et al., 2015; Little, 2015; Gherardi and Rodeschini, 2016; Nicolini et al., 2018). Other studies particularly outline the role played by reflective learning practices in shaping the professional identities (Alby, 2018; Gherardi et al., 2018; Scaratti et al., 2019).

Moreover, the concept of "practice" emphasizes that the process of learning is, at once, social and cognitive, and is linked to participation in groups (Brown and Duguid, 1991, 2001; Little and Horn, 2007). Whereas, in the traditional Cartesian tradition, knowing starts with a subject facing an object, in this perspective the practice itself is seen as the "site of knowing" (Nicolini, 2011). The knower and what is known—the knowing subject and the knowing object—emerge together in practice. The term "site" also indicates that human phenomena are situated within a historical-cultural context that gives them meaning and provides a background understanding of what is relevant, and counts as an object of knowledge (Lave, 1996).

Close to this tradition, Dreier (1999) uses participation as a key concept of his psychological theory in which people are defined as participants in structures of an ongoing social practice. In Dreier's thought, a context of social practice is understandable, only considering its interrelationships with other contexts. People constantly move from one context to another, continually rearranging their forms of participation in different practices. By moving across contexts, people change their structures of personal relevance, copying with contradictions and building a personal life-trajectory. Contradictions play an important role in personal development; this is often overlooked by most personality theories which focused more on coherent structures of goals, needs, and life plans (Dreier, 1999). By composing a personal life-trajectory across contexts of social practice, individuals face complex and difficult tasks. Contradictions between heterogenous practices and contexts are not easily resolved in a personal synthesis. Developing a personal stance requires an individual's continual negotiation of "self" within and across multiple communities of practice, which may generate intra-personal tensions, as well as instabilities and changes, within the communities. Within this literature, which overlaps with the work of the actor-network tradition (Latour, 2005; Lindberg and Czarniawska, 2006), individuals are, in fact, depicted as carriers of practices and as a medium through which communities innovate and change.

Drawing on these previous research findings and concepts, this article aims to explore learning practices in and across communities of practice by taking the particular perspective of psychoanalytic trainees, i.e., psychologists enrolled in an Italian graduate school in group psychotherapy. Specifically, our research studies their experiences of participation in and across the groups that they encountered during their life, and the formative value of such experiences for both their social life and future profession.

MATERIALS AND METHODS

The data corpus of the study is composed of 10 interviews with students of the C.O.I.R.A.G. (Confederation of Italian Organizations for Analytical Research on Groups) graduate school, a program aimed at training group psychotherapists. The study occurs within a research collaboration agreement between the school of psychotherapy and the university department of the authors. The graduate school is based in Italy and the recruited students are from the section based in Rome. The theorical framework reference of the school is psychoanalysis, and, in particular, its applications to groups (i.e., group analysis, analytic psychodrama, and institutional analysis). In the theoretical perspectives adopted by the school, discursive and intersubjective practices are highly valued and are considered a primary tool for therapeutic works (Lemoine and Lemoine, 1972; Lo Verso and Di Blasi, 2011; Kaës et al., 2012). As the director of the school explained to us in an interview, the school aims to teach the following core professional competencies: ability to think on various levels and see issues from multiple points of view; being open-minded, able to mentally engage with others; and ability to pay attention to collective phenomena and read group dynamics in any context. Moreover, the school requires a personal analysis as part of the training plan.

The program lasts for four years. Educational activities take place for 500 h a year, during the weekends, every two weeks. In addition to lessons on theories and clinical topics, the school uses teaching methodologies based on group devices, in which, unlike lectures, dialog among students, active participation, and autonomous development of concepts and competence is first promoted, using an experiential learning approach. This choice, as we read in the school educational program, was made because the school recognizes that the group is a pivotal tool for developing a shared understanding, deep knowledge, and learning processes. Students therefore participate each year in the numerous meetings of a tutoring group, an experiential group, a clinical observation group, a supervision group, and an annual national residential workshop. All groups are managed by one or more professors.

The interview was inspired by the literature on situated learning and aimed at grasping forms of knowing and learning in groups and across groups in everyday life. The interview, lasting about an hour, was conducted through Zoom by the first author, who presented herself as a researcher in social psychology (indicated as R. in the interview transcripts). The interviews were conducted in Italian and were videorecorded. Interviewees were recruited on a voluntary basis among the students of the last two years of the program.[1] The participants were informed about the aims of the study and signed a consent form. Interviewees were 6 men and 4 women. Their average age was 34. All of them have a university degree in psychology; they work as private psychologists, cultural educational assistants (AECs) in schools, workers in communities for minors or in the therapeutic communities, and tutors for learning disabilities. The interview guide (see **Appendix**) explored the experiences of the students in terms of participation in groups of different areas (work, education, and free time/private life). The interview starts by illustrating the purpose of the research ("The research aims to explore how the experiences of participation in groups affect the construction of the professional skills of a psychotherapist"). After reminding the participants to keep in mind the aim of the research, the first instruction was "list the most significant groups that populate or have populated your life in recent years, considering both the working and the educational area, together with the private life and free time." From this list, the interviewee is then invited to choose the three most relevant groups, one for each area (working life, training, free time, and private life). The following questions were focused on the aim, members, roles, main activities, positive and negative episodes, and learned practices of the group. Question number 12 asked about the practices learned in one group and used in another group to explore connections and paths across groups. We also collected an interview with the school director and documentation from the school website that we used for a background field analysis. The analytical procedures used on the data *corpus* included the following: (1) verbatim transcription of all the interviews, (2) frequency analysis of the elicited groups, and (3) thematic analysis of the interview transcripts (Hsieh and Shannon, 2005;

Braun and Clarke, 2006; Alby and Fatigante, 2014) to find learning practices across the groups. We used an inductive process for the construction of coding categories. In the first phase, the researchers read the transcripts of the interviews identifying the categories to be used for coding. In the second phase, these categories were compared and revisited. These codes were subsequently used to carry out the final coding of the transcripts. We coded any reference to learned practices in other groups, which were found to be relevant in the group at hand, for instance "I associate this *(episode about an educational group)* to what I have said so far about the group of friends." The saturation level of the data was a matter of discussion and the data collected were considered sufficient for qualitative exploratory analysis. The verbatim quotations of the selected interviews in the article are representative of the identified categories. Ethical approval for this study was obtained from the Department Ethics Board (approval number 1332) of the authors.

RESULTS

We present our findings in two sections: the first one focuses on the characteristics of groups as learning sites for professional practices; whereas the second one focuses on the reflexive narratives and meta-learnings of the interviewees across groups (how and what they learned from participating in various groups throughout their lives).

Groups as Learning Sites for Professional Practices

This section analyzes the answers to the first two questions, in which the interviewees had to indicate the most relevant groups in their lives for the acquisition of useful practices for the future profession.

In the sphere of private life, interviewees mainly quoted the family groups and groups of friends, which are characterized by longer-term participations than the groups in the other two areas. In the educational area, the class of the graduate school in psychotherapy has been mostly mentioned, while the teaching group devices set up by the school (e.g., experiential group, supervision group, observation groups, and national workshop) are much less mentioned. In the work area, a variety of contexts have been mentioned, all pertinent to the psychological profession (cf. **Table 1**).

Overall, interviewees have selected groups that exhibit some common formative characteristics:

- *Long-lasting and with a constant attendance*. For example, the annual national workshop organized by the school is mentioned but not chosen in the shorter list of the most significant groups because the contact between the participants is not continuous, as reported by an interviewee. The class, which received many mentions, has, in some cases, gone beyond the limit of its formal duration: "I already graduated from the school, but I did not leave the class for real, in the sense that the group has somewhat changed form, it is not anymore a training group within the

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[1] At the time of the interview, two students recently discussed the final dissertation and formally ended the program.

school but it is a group that has been maintained and it is still there; so in the eyes of the school I got out but really I did not";

- *Crosses several areas*. This is the case of the graduate school class, which is very much chosen as a significant group in the educational area, but whose transversal nature is often underlined by the interviewees: "as regards the educational area, I choose my class group, even if it is halfway between a training group and a friends' group, (...) let's say it is certainly formative, but I honestly also find in it a lot of affection, of friendship that goes beyond the training (. . .) with two people of this group, and with one in particular, a very strong friendship has formed, that is with a girl I met at the open day, three years have gone by now, and I consider her as if she were practically my sister"; another example is provided by a theater class : "I see theater as something between my training and my social life (...) I feel like all the people I met there, it might be trivial but, bonds are created, knowledge and ties that I have brought with me, even with some who no longer do theater, I still have them in my life anyway, they are still friends with whom I exchange gossip, opinions, evenings";

- *With informal generative moments*, which create bonds and support learning. An interviewee talks about this, speaking about the school class: "we have always been a group that shared a lot at the lunch breaks which were really a ritual (...) I think we don't have an official photo with everyone in line, we only have photos eating around the table (. . .) these were precisely the moments in which we exchanged a lot, let's say it was all informal but the group was always the one of the class." Another example is provided by a work group in a hospital: "there were some moments of meeting with the manager, however, in addition to the formal moments, there were also a series of moments that I would say informal but which were not completely informal in the end, we still talked about work and what was happening."

In moving from one group to another, people bring the practices with them, ways of doing and reasoning about things. On the one hand, this changes the communities, while on the other it creates the opportunity to shape personal learning paths across groups, as discussed in the following paragraph.

Reflexive Narratives and Meta-Learning Across Groups

Almost all the interviews contain reflexive narratives that connect the experiences made in the different groups (work/education/private life). There were very few cases in which this did not happen, and this is probably due to the contemporaneity of the group experiences; the lack of a temporal perspective makes it difficult to make a comparison.

In such passages from one group to another, the interviewees seem to rely on the practices used in previous groups to manage problems and complex matters of social life. However, the learned practices are not the same; the interviewees reconfigure and refine them through participation in different communities.

The narratives concern central themes of both the group life and the work of a group psychotherapist, such as: how to manage conflicts, how to join and leave groups, the emotions solicited by being in a group, talking and communicating with others, being and behaving as a team, feeling judged by others, and the sense of responsibility. Each topic is the pivot around which the narrative of the interviewee revolves, and it is covered only in that interview.

The properties of such narratives are:

a) the organization around complex issues related to one's own behavior in groups, issues that have a personal relevance (they are in fact different for each interviewee);
b) the presence of a foundational group, which acts as a point of reference for the experiences in the following groups. This group is often the one that is first mentioned in the

TABLE 1 | Groups in the areas of free time/private life, education, and work.

Area*	Groups /N	Average members per group	Average duration in years
Free time and private life	- Friends 4 - Family 3 - Theatre 1 - Soccer 1 - Buddhist practice 1	10	17
Education	- Class 6 - Clinical observation (internship) 3 - School supervision group 1	11	2.7
Work	- Community for adolescents 2 - Speech training class 1 - Alcoholics' group 1 - Community for psychotics 2 - Private supervision group 1 - Psychologists' group in hospital 1 - AEC (cultural education assistant) group in school 2	16	2.2

In the groups of the private life and education, the interviewees are involved as ordinary participants, while in the work area, they are involved as psychologists.

interview, but also the temporally oldest (e.g., the family of origin);

c) the rise in a difficult moment, a critical event, to which a negative affect is associated (e.g., "negative feeling," "discomfort," and "fear"), and to which a formative and evolutionary value is acknowledged; and

d) the absence of a resolution or a point of arrival; it is rather a progressive work, of continuous regulation and integration, in which different aspects are gradually brought together.

In what follows, we list interview samples that show the highlighted properties of the learning paths across groups. Within the quite rich data, the analytic comments focus on pointing out movements and connections from one group to another.

T. and the Group Problem-Solving Processes

Interviewee T., 30 years old, chooses to speak, for the sphere of free time, of a group of friends from his hometown, a group that lasted about seven years "which actually broke up just during this last year." Interviewee T. describes it as his first group of friends and the most important one: "In adolescence I didn't have many friends (...) I had seen this a bit like a relational wound, let's say that over time this group has helped me to overcome this thing."

Initially, it is a group of seven friends, which was then reduced to five because a couple decided to leave the group following an argument. This quarrel is told by T., as a significant event that they made it a recurrence with a name created by mixing the words quarrel and anniversary:

> T : We argued with this couple and... since then the five of us who stayed have been very close. So much so that I remember that, after a few months, one or two months after this quarrel, we made ourselves a bracelet, those fortunate ones, all colored, the same for all, all five, we also took a souvenir photo with all hands close together, and... at the beginning let's say we were very much against the couple who had left, so much that there is one thing that we did, I do not know if it makes you laugh or not though, we, every year, celebrated what we called it the "quarrel-versary" (*litigiversario, in Italian*) (laughs), that is, every year we met again in the same places where we had met that evening with that couple with whom we discussed, remembering the quarrel that had actually allowed us to get closer as a group.
> R: What was the quarrel about?
> T: In fact, we have never discovered the real motivation. There was a night when-, there were grudges within the group, we knew it. And then one evening, this couple, in particular him, maybe a bit for the alcohol I don't know, however, he had begun to behave a little, aggressive let's say, against everyone, saying he was angry with us but we couldn't understand why. The fact was that, at a certain point, he ran away, on foot, leaving his girlfriend there with us. We then had to take his girlfriend back at home, and then, however, in the following days we asked them several

times to meet again in order to clarify, to understand what had happened that evening but they never wanted.

According to T., the quarrel was a difficult but formative moment prompting the group to decide to talk to each other in a more direct and frank way: "from that moment we decided that whatever was wrong, any bitterness between a person and another should be made explicit within the group." When asked by the interviewer about what he had learned by participating in this group, T. replies: "resolving conflicts or problems in a group context."

The issue of the quarrel is also recalled by T. later in the interview regarding the graduate school class, which he chose as the most important group in the training field. The topic of joining and leaving the group and the difficulties they entail were also reissued. Hence, T. seems to use the previous experience in his friends' group to encourage communication in the class and maintain open, porous boundaries:

> T: Last year in the class group, during the annual workshop, we had- there was a strong discussion, in which we practically divided in two factions arguing against each other, and we were in the midst of the workshop so we couldn't even manage it well between us (...) it was a really strong fight. I remember that I had been, I became a bit of a promoter of talking about it, the one who says "ok let's talk about it though" (...) the reason was a new entry into our class group. We talked about this person and at a certain point I remember I was the one who said, "oh well I'll throw the bomb, we argued because of this, and therefore it is right that now we talk about it because otherwise we won't solve anything." I associate it to what I have said so far about the group of friends, I associate that a little with this.

For his future work as a group therapist, T. also considers this experience useful: "thinking about that experience there, I feel a bit to associate it with some practices that one day I will find myself doing with a therapy group maybe. For example, at that moment, having felt discomfort, not knowing how to manage it, let's put it this way, I think that eventually it was still useful".

The discomfort experienced is presented as a useful emotion, as something that has promoted a training need, activated a curiosity, and/or set something in motion. This personal involvement is also recognized by T. as part of the professional competence required to a therapist.

The issue of communicating in a group is taken up again by T. when he talks about the AEC group (cultural educational assistant) chosen for the work area. In this case he emphasizes the importance of *not* communicating, or rather of knowing how to be silent about some things, considering the hierarchy, roles, and institutional dynamics. The following are the aspects that participation in this group highlights:

> T.: This is the first time that I worked in a group where we were all under a manager, a director and so on. So, it actually taught me to understand the hierarchy, let's say, of the work, and to be careful even to the words, the

information that is conveyed within the group. It could then maybe get to the wrong ears.

In the interview, T. illustrates an interestingly focused reflection on group participation centered on the issues of conflict management, communication in groups, closed or permeable group boundaries. These topics are brought into play in the different group experiences, each time an aspect is added to the picture and the topic gets more faceted. The quarrel and the inexplicable departure of two members from the first group of friends arises as a critical event at the origin of the trajectory. The discomfort arises as the affect associated with the event.

In displaying a narrative organized in this way, T. present himself as someone capable of self-observation, able to connect events (e.g., the quarrel) with the configuration of the group, able to take into account the emotions experienced as an informative fact, able to share and open up in a joint reflection process. So doing, T. displays himself as competent in the approach promoted by the school and, through this very narrative organization, as a kind of professional who constructs himself through self-reflection. Reflexive narratives are indeed occasioned by the interview. Nevertheless, they are also the culturally situated way of the community of giving shape to one's initial professional identity.

D. and the Memorable Rejection

A second example of a learning path across groups is provided by D., 34 years old.

Interviewee D. tells an episode related to his family that he had chosen as a particularly significant group in the private life area. The episode refers to his rejection at the high school final exam. He presents it as a positive episode due to the understanding shown by family members but also describes it as "a bad period":

> D: I failed the final exam in high school, it was a bad period, my mother had just got divorced, in short, a great chaos; this rejection came to me a little unexpectedly in reality because it was a period in which I did not actually notice how I was doing or how I was in school, (...) I remember that the first time I saw my mother, that I saw my aunts, I expected disapproval and I expected a lot of it, instead what came to me was, not consolation, but understanding on their part, for what was happening, perhaps more understanding than what I had at that moment, it was a turning point for me, for my attitude toward studying, it changed me a lot. It was a Sunday, if I remember correctly, it was a Sunday at lunch. I had to repeat the school year but there I pulled myself together a little bit, about what I was doing, where I was going and why, I changed my attitude a lot.

The exam rejection is presented as a consequence of a disruption in the family order (divorce, chaos), and as a failure or a fault that should generate disapproval. Instead, the positive reaction of family members leads to a different reading and to a "turning point". Subsequently in the interview, D. refers to this experience in the family group to explain his behavior in the group of the graduate school class; influenced by the "memorable rejection",

he later adopted a very studious attitude, which sometimes isolated him in the class:

> D : The first year was a bit complex (...) there were cohesion problems in the group. It was quite a difficult moment, emotionally, for the whole group or for almost everyone in the whole group. To be true I was less in this type of emotion, I was more, I was in a phase like "okay we study we work we graduate," but, mindful of the memorable rejection, "above all we study!" (laughs) this thing quite bothered the rest of the group; they were more on an emotional stance.

The narrative of D. concerns demanding issues such as failure, judgment, and guilt. It originates in the family group and in the critical event of failing the high school exam, which is presented as both a positive and a negative event at the same time: difficult and painful but also evolutionary and promoter of change. Following this event, D. changes his attitude toward studying, perhaps pushing himself too much in the opposite direction in a way that was unwelcomed by the school class ("that kind of attitude that afterward I realized was not the most functional in that moment"). The narrative of D. well shows how in this learning process there is no point of arrival, but rather continuous adjustments to contexts. His narrative also points at group dynamics (in the family, the class) which are used to interpret events and his own behavior. By adopting such a two-fold focus on both contextual dynamics and himself, D. discursively constructs his identity as the outcome of a negotiating and intersubjective process.

V. and the Risks of Leadership

Another example of reflexive narrative on learning practices across groups is provided by V., 31 years old. Explicitly, V. links the experience as the first born in the family group and that of being project leader in a therapeutic community:

> V:(...) The relationship with my brothers, in which I was a bit the leader of the group, of the subgroup (...) let's say this leadership brought with it issues of responsibility, positive issues and negative issues, that I then carried as baggage in the rest of my life. For example, it occurs to me that at work I am easily offered tasks of responsibility. In facing these proposals, I have sometimes pulled back because I have learned in the family group how being responsible, having responsibilities, being a leader brings complex issues with it, it is not only pleasantness but also responsibility and risk.
> R: Risk in what sense?
> V: Well because when you have a job responsibility- let's, for example, think of the community where I work. The role of project manager represents an important role with respect to a relationship with patients, with respect to thinking about the project to be built, but it is also a risk because then you have the responsibility to put your personal signature on it and then if you make a mistake, in that case, it can mean a lot, it means taking responsibility for what happens for the boy, and I learned this at home,

especially in moments in which I felt I was put in the middle by my parents, within the problems between my parents and my brothers. So, in this sense responsibility is positive but also negative and risky.

Subsequently in the interview, he tells of a work assignment in which he had to manage a therapeutic group in particularly difficult conditions. He felt unprepared and refers of the burden of the anxiety: "that session was very heavy for me, it was all on me!" This was followed by an interruption of the experience and a renegotiation of the work conditions with the therapeutic community.

The narrative of V. deals with the issue of responsibility in a group, highlighting all the above-mentioned emotional weight, the risks of error, and his safeguarding strategy of backing out. The critical events at the origin of the trajectory are the family quarrels in which he was put in the middle between the parents and the younger siblings. Interviewee V. connects current work assignments and the ways he manages and feels them to his participation in the family group. In doing this, V. discursively presents himself as the result of these multiple and demanding participations.

CONCLUSION

This article contributes to describe and to analyze the learning processes as situated and jointly constructed through group participation over time. Data from interviews show how the experience made in groups of different practices is elaborated in and through narratives, highlighting it as a fundamentally collective and culturally shaped sense-making process. Occasioned by the interview, reflexive and meaningful self-narratives stand out as the culturally situated way of the community in giving shape to the formation of professional identity as the outcome of multiple and demanding group participations. Our study described the narrative forms through which professional identity is shaped. The psychoanalytic trainees discursively build themselves as reflexive and self-aware professionals who are competent in reading the implications of their group participations. They do it by elaborating in certain ways on what they have learned and by connecting group experiences in the different realms of private, educational, and work life. The organization of their narratives displays a focus on processes and practices that goes beyond the formal or the temporal group boundaries and a stance that values the comparison and connection of different experiences.

For the psychoanalytic trainees, self-awareness within relationships is an important expert practice to develop, which is, in fact, promoted during training in several ways, including through a personal psychoanalytic therapy.

Moreover, our study contributes to a better understanding of learning processes which happen across groups. We empirically show that, by participating in a group, people not only learn the practices of that group but also develop a sort of meta-learning which takes place across groups. In particular, the interviewees faced similar problems in different groups and use

similar practices to manage them. In moving from one group to another, however, there is an evolution, a learning, and a modification "*in situ*" of these practices, which became part of a personal repertoire to be used in other and different groups. This study contributes to the literature on situated learning by showing some features of the personal learning paths of the psychoanalytic trainees across groups. In particular, their narratives appear to be organized around complex topics of group participation; they begin in early group experiences, are associated with a critical event and a negative effect, are in continuous evolution and construction, proceeding by subsequent adjustments in relation to the different groups. Our study points to the emotional strain that the interviewees endure in these early group experiences to manage the complexities of group life. At the same time, it seems that these critical events are exactly what trigger and sustain learning trajectories. Future research might look further into these "crises", investigating in more detail how such learning paths originate and how affect, motivation and cognition are involved in these moments.

Our data also show how, through experiences of participation in groups over the course of life, future therapists progressively elaborate ways and practices of managing the complexities of being in groups. However, not all groups contributed equally to promoting the learning of professional practices. In particular, the groups with the highest formative potential were found to be those: (1) transversal to several areas (they combine private life, education, and work); (2) which have a certain duration and continuity over time; this allows for the creation of a sense of belonging, a history of participation, and formation of bonds between the participants; (3) which involve informal shared moments and events. The graduate school class, which is also transversal to the educational groups set up by the school, revealed a strong educational potential, depicting itself as something that is much more than a simple grouping of students who followed the courses together for four years.

These analyses might lead to rethinking the characteristics of some learning contexts for group psychotherapists. A first hint is to overcome the distinction between formal educational contexts and other life contexts, and to consider, instead, the outlined properties of the groups: transversality, duration/attendance, and informality. In our data, groups with these characteristics seem to produce a high level of engagement. Further research and reflection are needed to explore how to create educational configurations – in and out of the school- that could exploit these group characteristics for the benefit of the training of the professionals. Moreover, further studies should verify whether these formative characteristics are found in the group experiences of other professionals, besides group psychotherapists.

Finally, it is interesting to notice how the interview, besides being a tool for data collection, turned out to be also an opportunity for self-reflection, as some of the interviewees pointed out. Similar kinds of encounter can potentially play a relevant role in the training path of the psychoanalytic trainees, by fostering the capacity to build up and by collectively reflecting upon the building up of meaningful self-narratives on group participation and on identity construction as the result of learning in different communities of practice.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Ethical committee of the Department of Social and Developmental Psychology, Sapienza University of Rome. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

FA provided the conception and design of the study, the data collection and analysis, the drafting of the article, and revised it critically for final submission. CZ contributed to the design of the study, the data collection, and analysis. MF revised the article critically for important intellectual content. All authors contributed to the article and approved the submitted version.

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APPENDIX

Interview guide

- Socio-demographic information (age, gender, work activity, previous education).

1. The research aims to explore how the experiences of participation in groups affect the construction of the professional competence of a psychotherapist. With this in mind, please list the most significant groups that populate your life or have populated it in recent years, considering both working and educational areas as well as private life and free time.

2. Please, now choose three groups, one for each area (working life, education, free time / private life). Then I will ask you for some information on each of these groups.

(To be repeated for each of the three groups):

3. What is the aim of the group?

4. Who and how many are the members?

5. Which are the main group activities?

6. When/how did you join the group? When/how did you leave? How long di your participation last?

7. How do you recognize a member of the group from one who is not?

8. Sometimes groups speak some sort of familiar lexicon; do you have typical terms or idioms that others outside the group don't use? Please provide some examples.

9. What did you learn by participating in this group?

10. Tell a positive and a negative episode related to the experience of participating in the group.

11. If you had to give advice to a friend of yours who will join that group, what would you tell him?

12. Are there practices (i.e., ways of doing, ways of reasoning, tools, reflections) that you have learned in this context and also used elsewhere? If so, which ones and where?

13. How useful do you find participating in this group for your training as a psychotherapist? On a scale of 1 to 4 where 1 = nothing, 2 = little, 3 = somewhat, 4 = a lot.

A Communication-Ecological Account of Groups

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This article presents a novel conception of groups and social processes within and among groups from a communication-ecological perspective that integrates approaches as different as Garfinkel's ethnomethodology, Heideggerian praxeology, and Luhmann's systems theory into an innovative social-theoretical framework. A group is understood as a social entity capable of collective action that is an object to itself and insofar possesses an identity. The elementary operations of groups consist in social processes with communicative, pre-communicative, and non-communicative episodes. Groups operate in a number of environments that are conceived of as both correlates of their own processes and providing groups with the raw materials for the fabrication of their constituents. These environments include but are not limited to spatial, discursive, emotional, institutional, semiotic-medial, psychic-personal, technical, and groupal environments. The article paves the way to combine studies on intergroup and intragroup communication in one comprehensive theoretical framework situated on such an abstract level that it can be concretized in view of utterly different cultural contexts and the emic perspectives of actors therein. Accordingly, the framework provides researchers with the conceptual devices to balance the comparability of different lifeworlds with the faithfulness to actors' inside views. The methodological implications laid out in this article prioritize qualitative, especially ethnographic methods as a starting point for research on group communication.

Keywords: group, communication, collective identity, group identity, social theory, ethnography, environment, ecology

INTRODUCTION

It is certainly not a coincidence that a publication (Verbeck, 2001) on increasing efficiency through team management praises "group research" as a trait of the 20th century. Not only academic studies (re-)discover groups as a subject. Everyday life in general experiences a group euphoria. Schools and universities celebrate learning groups, while post-Fordist companies implement and encourage team work. Despite the common designation, "group research" is everything but homogeneous. In humanities and social sciences, neither a common terminology nor a consensus regarding a general concept of groups have been established.

Even within the field of group communication, there is no consensus regarding the theoretical base or the phenomenal range. Individual studies operate in different paradigms. As a result, theoretical and empirical insights are not organized in a unifying conceptual frame, which makes communication among scholars difficult, if not impossible. At least, a number of common flaws of different approaches can be identified.

Firstly, there is a tendency to consider shared aims, norms, and/or values the defining characteristics of groups. This might be faithful to the self-descriptions of certain groups such as

groups that operate in corporate contexts. The *a priori* assumption of all groups bearing these characteristics, however, may be a product of ethnocentrism. Non-reflective theorizing may lead to a similar bias in the sense that the researchers' own relevance structures and political, economic, cultural, etc., situatedness are not explicated, further contributing to an objectivistic or universalistic understanding of groups.

Secondly, a Cartesian or cognitivist bias obscures pre-reflective processes that underlie the constitution and operating of groups. In no study of group communication, pre-reflective processing is consequently taken into account, which involuntarily leads to a misrepresentation of everyday life reality where reflective processes as represented by propositions and logical operations are everything but the norm. Inter-corporeal, embodied, tacit, emotional, and other layers of social reality are simply disregarded. Moreover, many studies bear a tendency to depict groups from a rational choice point of view, which forces group phenomena into a tight conceptual corset leading to a disregard of socio-cultural differences.

These two points often lead, thirdly, to a preference of experimental group research that does not pay attention to emic views. Fourthly, even approaches that do consider the constitution of boundaries and the groups' relations to their contexts can be biased by the theoretical preferences researchers have, as a result of which the aporiae of structuration or rational choice theory may act as hidden determinants of research results.

Groups may, fifthly, be considered as functional units of society that operate in accordance with specific communication modes such as personal communication. Everyday perspectives are functionalized to explain the workings of society while the constitution and inner logic of groups are neglected. While communication is societally overdetermined here, it is conceptually underdetermined or completely undefined by many studies of group communication. This leads, sixthly, to a variety of epistemological and theoretical limitations of research on group communication.

This article presents a novel, communication-ecological model of groups intended to introduce a new theory of group communication that avoids the outlined pitfalls while conserving the benefits of the different approaches. Research on communication in small groups and research on intergroup communication will be united in one overarching model that helps to establish a comprehensive framework to organize the phenomenal scope through unified conceptual distinctions. Different paradigms of intergroup and intragroup communication will be presented and social processes will be determined that influence communication processes.

Building on approaches as different as Garfinkel's ethnomethodology, Heideggerian praxeology, and Luhmann's systems theory, a communication-ecological model is developed that is able to conceptually integrate a broad range of empirical phenomena while paying close attention to the emic views of groups and individuals. The model serves as an innovative comprehensive theoretical framework for group communication research. A group is understood as a social entity capable of collective action that is an object to itself and insofar possesses an identity. The elementary operations of groups consist in

social processes with communicative, pre-communicative, and non-communicative episodes. Groups operate in a number of environments that are correlates of their own processes and provide groups with raw materials for the fabrication of their constituents. These environments include but are not limited to spatial, discursive, emotional, institutional, semiotic-medial, psychic-personal, technical, and group environments. This ecological model is faithful to inside views but also offers a base for comparisons of different lifeworlds. It acts as a theoretical framework situated on such an abstract level that it can be concretized across social and cultural differences. This way, the model can be employed in the "empirisch begründete Theoriebildung" (Kelle, 1997) inspired by Strauss and Corbin (1998) and Glaser and Strauss (2009) and thus supports the "quasi-inductive evolution of science" (Popper, 2002). It sensitizes researchers for cultural differences and prevents positivist self-misconceptions, which will be discussed in the section "Methodological Implications."

To reach its aims, the article starts with a deconstruction of existing approaches to communication in small groups and intergroup communication (section "Approaches to Group Communication"). Especially their phenomenal scope and theoretical preconceptions are scrutinized. The approaches addressed are functional theory, symbolic convergence theory, structuration theory, the bona fide perspective, the social-psychological approach to intergroup communication, and systems-theoretical conceptualizations of groups.

The concept of groups will be introduced in the subsequent section "Groups." Due to its centrality for the definition of groups, a multifaceted concept of identity will be developed thereafter (section "Identities"). The ensuing section "Social Processes and Group Communication" is dedicated to the conceptualization of social processes, particularly different types of group communication that are constitutive for groups. The ecological model employed to depict groups as well as social processes in and among groups will be introduced in the section "Environments of Group Communication," whereas the methodological implications of the presented approach will be addressed in the section "Methodological Implications." The article concludes with a discussion of its findings (section "Discussion").

APPROACHES TO GROUP COMMUNICATION

The approaches to be deconstructed in this section have been chosen for the simple reason that they explicitly focus on both groups and communication and are as such discussed in different branches of communication studies and neighboring disciplines. Such a selection necessarily excludes some works that are not irrelevant to group communication or can be considered interesting addresses for valuable comparisons with the theory developed here. The micro-sociological tradition (e.g., Goffman, 1966, 1967; Collins, 2004) provides interesting insights in social interactions but has not produced a coherent group concept and is not concerned with conceptual issues of communication.

Hansen's (2009) rich and highly nuanced work on collectives bears a lot of valuable insights for the study of relations among collectives, but it completely abandons the group concept and is also not explicitly concerned with communication. Network theories such as the actor-network theory (Latour, 2005) bear a similar problematic. The inspiring studies on "communities of practice" (Lave and Wenger, 1991; Wenger, 1999, etc.) also abandon the group concept and focus primarily on learning, not on communication. To reduce complexity and for didactical purposes, these approaches, among others, could not be included in this section. To compensate this momentary blind spot, however, tribute to some of these approaches will be paid and constructive distinctions from the presented model will be drawn wherever appropriate in the subsequent sections.

Functional Theory

The functional theory of group communication is "a normative approach to describing and predicting group performance that focuses on the function of inputs and/or processes" (Wittenbaum et al., 2004). It is based on three premises. Firstly, groups are considered goal-oriented entities. Secondly, group performance can be evaluated. And, thirdly, group performance is influenced by internal and external parameters.

Hirokawa and Gouran (1989) relate group performance to decision-making and identify five tasks that a group has to accomplish to optimize its decisions: (1) an adequate comprehension of the problem to be solved, (2) identifying the minimal requirements of a solution, (3) identifying relevant and feasible alternatives, (4) examining the alternatives in view of the solution criteria, and (5) choosing the alternative that best fits the needs of a solution (Wittenbaum et al., 2004). An additional task consists in developing practices to overcome cognitive, affiliative, and ego-centered limitations (ibid.).

Empirical studies focus on problem-centered, decision-making groups in laboratory contexts without a history that exceeds these artificial contexts (Hirokawa and Gouran, 1989). The problems that emerge in the action process are considered describable according to fixed parameters that can be solved in a rational way (ibid).

The functional theory bears a number of limitations. It excludes all aspects of group realities that are not related to an assumed group task. Informal relations that transcend the group interaction cannot be taken into account. Groups appear as objective entities with clear boundaries. The variables that are isolated in laboratory simulations are not necessarily relevant in social reality. Categories are determined without assuring that they are faithful to the inside views of the group. Correspondingly, the subject area is reduced to goal-oriented groups that make decisions according to the principle of rational choice.

Communication is not even explicitly conceptualized but seems to be understood as a type of propositional information processing – not on a psychical but on a social level. In other words, communication appears as a socially extended nervous system. This view comes close to the information-theoretical depiction of communication and, thus, bears the same

epistemological pitfalls. This reductionist conception ignores the emergent characteristics of communicative processes.

Symbolic Convergence Theory

Bormann (1985, 1996) considers his theory of symbolic convergence a general theory of communication with a transhistorical and transcultural scope. In Bormann's (1985) own words, the theory addresses "the appearance of a group consciousness, with its implied shared emotions, motives, and meanings, not in terms of individual daydreams and scripts but rather in terms of socially shared narrations or fantasies."

The theory of symbolic convergence examines repetitive forms and patterns of communication that are considered the outcome of the constitution of a group consciousness. It describes the dynamics that contribute to the development, maintenance, decay, and disappearance of this consciousness. A focus lies on "fantasies" supposedly shared by communicators. To Bormann (1996), such fantasies start with dramatizing messages that stimulate an empathic involvement and can be identified when communicators show emotional consonance regarding particular events. "The result of sharing dramatizing messages is a group fantasy; the content of the dramatizing message that sparks the chain of reactions and feelings is called a fantasy theme" (Bormann, 1985).

Bormann calls fantasies with similar courses of action "fantasy types." Among these types, Bormann (1996) locates archetypical fantasies that group members easily recognize. "Rhetorical vision" refers to the more or less coherent integration of a group's fantasy types and themes. To Bormann (1996), the constitution of rhetorical visions increases the formal inclusion and integration of individuals into the group.

Bormann's theory surely provides the conceptual tools to describe and explain the reduction of contingency along thematic lines. Symbolic convergence is established when the same narratives, puns, rhetorical figures, etc., can be repeatedly observed in groups. Bormann (1985), however, goes a step further and confounds two logical levels, taking the effortlessness with which those patterns are reproduced as an indicator for the development of shared meanings. The coherence of social processes leads Bormann to believe that the underlying psychic processes are coherent, which serves as the foundation for postulating a shared consciousness, identity, emotions, etc. The theory of symbolic convergence turns out to be a theory of psychic convergence.

The Hegelian or social-ontological connotations this conception evokes are, however, misleading. Identity, consciousness, and emotion remain phenomena that are socially constituted but bound to individuals. Following Bales (1970), Bormann (1996) situates the initiation of fantasy themes in the psychodynamic concerns of individuals. This social-psychological limitation leaves no space to acknowledge the emergent character of communicative processes. Bormann's theory overlooks that collective action does not depend on a shared consciousness or shared emotions. Supraindividual processes are obscured by the empty formula of a group consciousness which, in the end, is situated in the "mind" of individuals. The problem of the constitution of an emergent

order is not addressed. As a result, Bormann falls behind his aspiration of offering a general theory of communication. His theory falls prey to the same epistemological aporiae as Gadamer's (2010) concept of a fusion of horizons. Beside the emergence of communicative processes, pre-reflective practices constitutive for groups are disregarded.

Structuration Theory

Giddens' (1984) structuration theory has been employed in research on small groups. The duality of structure that Giddens postulates to reconcile objectivistic and interpretative approaches is translated into the "distinction between *system*, the observable pattern of relations in a group, and *structure*, the rules and resources members use to generate and sustain the group system. Structuration theory construes the observable group system as a set of practices constituted by members' structuring behavior" (Arrow et al., 2004, see also Poole et al., 1996).

According to Poole (2013), research on groups inspired by structuration theory is characterized by a mix of quantitative and qualitative methods. That does not mean, however, that triangulations of methods are frequent. Giddens' structuration theory rather establishes an illusionary consensus that allows researchers to remain in their own paradigms after paying lip service to the importance of the paradigms on the respective other side of the duality of structure. A true integration is not achieved (see Kurilla, 2007).

The tension between change and tradition may be acknowledged, but this does neither help to explain how external structures can shape action within groups if not as practices. Nor can be explained how structures could have an existence that is independent of the practices that constitute the structures.

The conception of rules and resources not as fabrications co-constructed from raw materials in interactions but as individual assets sheds light on two problems of structuration theory. Firstly, rules seem to be the product of a Cartesian cogito, which results in a cognitivist bias, since rules seem to be bundles of propositions. Secondly, the emergence and inherent logic of social processes are disregarded, and social change seems to be reduced to cognitive interpretations and the ensuing actions of individuals.

The subject range of the structuration theory exceeds the scope of the symbolic convergence theory. Not only fantasy themes orientate the constitution, maintenance, and change of social order, but, more generally, a duality of structure. Both theories, however, bear cognitivist, and social-psychological limitations.

The most significant shortcoming of structuration theory is the lack of an explicit concept of communication. Not even Poole et al. (1996) supposedly foundation-theoretical treatise of group communication, let alone the connected empirical studies present a communication concept. Implicitly, however, communication is treated as a rule-based process of coding, transmitting, and decoding of messages, which suggests that an information-theoretical communication model is employed.

The Bona Fide Perspective

The bona fide perspective on group communication was first described by Putnam and Stohl (1990), Frey (2003). It offers an alternative to the container model of group communication research that depicts groups as hermitically sealed entities. Groups are characterized through two traits. Firstly, they have stable, yet permeable boundaries, and, secondly, they are interdependent with the multiple contexts they operate in (ibid., Putnam and Stohl, 1996).

Four factors are held responsible for the permeability of group boundaries: (1) memberships of individuals in different groups and resulting role conflicts, (2) members of a group that act as representatives of other groups, (3) influx and outflux of members and the resulting changes of internal group dynamics, and (4) the development of a so-called group identity (Putnam and Stohl, 1996; Frey, 2003). Putnam and Stohl (1996) also name four factors to explain the interdependence of groups and their contexts: "intergroup communication, coordinated actions among groups, negotiation of jurisdiction and autonomy, and interpretative frames for making sense of intergroup relations" (ibid., Stohl and Putnam, 1994; Frey, 2003).

The bona fide perspective has inspired a variety of studies with ethnographic aspects. Conquergood (1994), e.g., examines the organization of and relations among gangs from an emic perspective. He discovers organization structures and boundary practices that are surely faithful to the inside views of the individuals he studied. Conquergood misses, however, that the principles he describes do not necessarily translate directly in social practices. Moreover, communication is only depicted as a means to certain aims without determining the traits of communication processes. This might result from the theoretical abstinence of many bona fide studies and surely benefits ethnographic research. Unfortunately, this abstinence is not guided by a grand theory as a general frame of interpretation but rather undermined by *ad hoc* hypotheses from different approaches such as the structuration theory. Other studies framed as belonging to the bona fide perspective, e.g., Houston (2003), do not even try to apply ethnographic means but rely on second-hand accounts and tacit theoretical preconceptions.

In addition, the bona fide perspective bears the following limitations. Although Putnam and Stohl (1996) speak of "intergroup communication," they do not provide any definition of communication. How complexity is built in the course of social processes remains undetermined. Some expressions elicit the impression that the implicitly employed communication concept suffers from the same constraints as the information-theoretical model: "group members ignored external information" or "information processing across boundaries."

This conception might also stem from an implicit orientation on rational choice theory. The context included in the considerations is often the context of formal organizations as the bottleneck of the societal influence on groups. A closer examination of contexts on a general level is missing. A further, cognitivist limitation lies in the disregard of supraindividual processes. It might be acknowledged that groups interact with external contexts, but the boundaries to those contexts are depicted as being objectified. Pre-reflective, practical boundaries do not conceptually enter the perspective. There is also a social-psychological limitation with regard to the concept of identity. Group identities are treated as individuals' mental representations of their belonging to

groups (Oetzel and Robbins, 2003). Group identities are thus reduced to a consensual area in the minds of individuals, not as identities of social entities. Boundaries and identities are only communicatively triggered but established mentally as cognitive phenomena.

Intergroup Communication

Unlike the approaches discussed so far, the following research tradition is based on a rather broad group concept (like Simmel, 1908). The major influence on the paradigm of "intergroup communication," however, is the theory of social identity (Tajfel, 1974, 1982b; Tajfel and Turner, 1979; Turner, 1982). Counterintuitively, the subject of this tradition is "not communication that occurs between groups. Rather it occurs when the transmission or reception of messages is influenced by the group memberships of the individuals involved" (Gudykunst and Lim, 1986; Harwood et al., 2005).

Accordingly, intergroup communication takes place whenever people are addressed not as persons, but as exemplars of social categories, which is equated with being a member of a group. Whenever a man addresses a woman as a woman, whenever a black person addresses a white person as a white person, whenever a patient addresses a physician as a physician, we are faced with intergroup communication according to this definition. In turn, when people are not addressed as members of a group, i.e., when no social category or, to use Tajfel's term, social identity is ascribed to them, but they are addressed as persons, it is called "interpersonal communication."

There is no doubt that the ascription of social categories can orientate communication. It is, however, problematic to talk about these cases as if it would be communication between groups or members of different groups. Firstly, social categories can be used to form groups – a group of female employes of a company, a group of fathers, of mothers, etc. All men, all women, all fathers, all mothers, etc., however, do not form an interconnected unit, let alone a social entity capable of collective action. Social categories rather designate "imagined communities" (Anderson, 2006) than groups. Secondly, social categories are not regarded as being co-constructed through interaction. Thirdly, the way Tajfel et al. conceptualize social identities seems to be too objectivistic. It is not even clear that in the inside views of all collectives, a seemingly basic concept as the one of mother is conceived of in the same way. For the Walbiri and the Tiwi, e.g., childbirth is not related to sexual intercourse but to dreams that sometimes act as a means of reincarnation (Meggitt, 1965; Herrmann, 1967; Hart and Philling, 1979). As a result, the role of mothers is different, and fathers are interchangeable with relative ease (Hart and Philling, 1979).

The mere ascription of different social categories to interactants is *not* considered intergroup communication in this article. Some aspects of this research direction, however, seem relevant to group communication research, but rather as interpersonal or intragroup communication. Families, e.g., are considered an "intergroup domain" by Soliz (2010), which translates here into intragroup communication influenced by the ascription of social categories. Likewise, most phenomena described by this research direction (discrimination, racial bias, etc.) often occur on the level of interpersonal communication understood as communication among individuals, not among empirically detectable groups. When persons are addressed as persons and not concerning the ascription of social categories, it will be termed "personal communication" that can occur in and among groups as well as among individuals.

Systems Theory of Group Communication

Interestingly, personal communication becomes the defining criterium for groups in newer advances of Luhmann's systems theory. In order to depict this conception, some general remarks on Luhmann's theory are necessary.

Luhmann (1999) understands social systems as autopoietic systems. An autopoietic system produces and reproduces its elements only out of its own elements. In the case of social systems, the basic unit is communication. Only communication communicates, not persons. To Luhmann, the everyday life description of communication as actions performed by actors is a functional reduction of complexity that helps communication to proceed from one process to the next.

Contrary to communicative self-descriptions, the systems-theoretical viewpoint comprehends communication as an only recursively observable fusion of three selections: information, message, and understanding. Unlike in speech act theory (Austin, 1962; Searle, 1969), e.g., communication is not propelled by messaging intentions but by the ascription of messaging intentions. Alter sees that ego raises his hand, ascribes a messaging intention, and reacts by saying "hello." It does not matter if ego indeed wanted to greet alter or merely scratch his head. Once verbal speech is used, it is difficult not to ascribe a messaging intention. As a result, ego becomes involved in communication although he might only say, "do we know each other?"

The communicative response to an action or behavior is called "understanding." In our example, the word "hello" is the place of understanding that introduces the difference between message and information. The word "hello," however, is not communicative as long as nobody replies to it communicatively, that is, responds to it in an observable way, making it recognizable as the difference between message (how) and information (what). In our example, this response was the phrase "do we know each other?"

Understanding does not mean the psychical understanding of meaning. Even the utterance "I do not understand what you are saying" is understanding in a communicative sense, as it indicates that the listener has noticed that an information was messaged. To Luhmann, understanding is a purely social operation that renders a preceding behavior part of a communicative process.

In communication, at least two psychic systems contribute to the constitution of a suprasystem. Communication is, however, not the only form of contact that individuals entertain. They also observe each other without ascribing a messaging intention. In most cases, I would not infer that someone wants to tell me something when I observe stains of red wine on a person's shirt. This observation can, nevertheless, irritate communication.

Communication is reliant on perception and thus on psychic systems. Both system types, however, cannot directly interfere with each other's mode of autopoiesis. Social systems consist only of communication and psychic systems only of thoughts (Luhmann, 1985). Both system types have co-evolved and use sense, preferably coded by language, which enables them to create environments to orientate their processes on.

Luhmann (1999) differentiates between three different types of social systems, each consisting of communication: interaction, organization, and society. The latter comprises all communications on a global scale. To Luhmann (1998), society has evolved through four stages with an increasing level of complexity. Nowadays' functionally differentiated society consists of subsystems that are entrusted with one task that only they perform for society. Those functional subsystems comprise, among others, economy, politics, science, arts, education, and families.

Individuals are only partially included in the subsystems, particularly on the level or organizations. To Luhmann (1983), this ubiquitous partial inclusion leads to a novel need of a world of proximity. This need is satisfied with a new medium of communication: romantic love. Love is not considered an emotion but a symbolically generalized communication medium that serves to increase the probability of the acceptance of a communication offer like money in economics, power in politics, and truth in science. Love increases the chances that intimate communication is established. Love also serves as a code that prescribes that loved ones have to take each other into account in every decision they make – not regarding particular role expectations but as a whole person. In this sense, love creates the base for personal communication, communication that operates between persons, not their roles, in couples and families.

Families are not conceptualized as groups but as a subsystem of society. Luhmann (2000) himself is reluctant to use the term "group." According to Wimmer (2012), Luhmann considers expressions like "group" or "team" as the epitome of a discourse that aims at semantically weakening the impact of hierarchies by rhetorically cherishing values like participation, equality, and self-fulfillment. Accordingly, the group concept becomes the equivalent of Tönnies' (2005) notion of community as opposed to society. Luhmann's successors largely ignored the concept of groups or, like Kieserling (1999), dissolved it by considering group phenomena either as mere chains of interactions or, once a certain level of complexity such as expressed by formal memberships has been reached, as organizations (see Kühl, 2021a).

After Luhmanns's unpublished notes were made available, however, Kühl discovered another approach to groups in Luhmann's early thinking. Kühl (2021b) considers groups as social systems that, like couples and families, are based on personal communication. It is expected that group members interact as persons and not according to role expectations which govern interactions in organizations where personal interactions are reduced to a minimum. Unlike in families, however, memberships in groups are highly contingent. Unlike organizations, groups are not thought of as having formal memberships but rather dynamic boundaries. Once

memberships get formalized, a group ceases to be a group and becomes an organization. The paradigm par excellence for groups are friendships.

Luhmann's systems theory and its understanding of groups bear a number of limitations. Everyday life accounts cannot be considered faithful descriptions of social reality but are treated as functional constructs that reduce complexity to maintain autopoietic processes. The horizon of Husserl's phenomenology is reduced to a mere surplus of options for future operations. Sense becomes senseless, empty space. The trivialization of emic perspectives goes along with a disregard for cultural differences. Love can only be a global medium providing the universal foundations for romantic couples and families. Other forms of love are either considered residues of past societies or do not enter the considerations at all. Similarly, groups are based on personal relationships, no matter whether for individual group members the difference of formal organization and personal communication makes a difference. Luhmann's theory also leaves no space to describe pre-reflective processes in another way than by the blind transition from one side of a scheme to another.

GROUPS FROM A COMMUNICATION-ECOLOGICAL PERSPECTIVE

In order to tackle the shortcomings while conserving the insights of the approaches discussed above and to unite the phenomena they aim at describing and explaining in one overarching theoretical frame, a communication-ecological model of groups is presented next. The concept of groups will be introduced first (section "Groups"). This first section raises questions regarding some components of the group definition that will be answered in the subsequent sections: The section "Identities" presents a conception of individual, collective, and group identities. In the section "Social Processes and Group Communication," the social operations constitutive for groups will by described. The section "Environments of Group Communication" discusses the relations these processes entertain with their environments, which is the main focus of the communication-ecological model.

Groups

The term "group" looks back on a long career in different disciplines like social anthropology (see Fuhse, 2006), sociology (Cooley, 1929; Bales, 1951; Freeman, 1992; Homans, 2010, etc.), group dynamics (Lewin, 1947; Forsyth, 2014, etc.), economics (most notably Olson, 1965), social psychology (Tajfel, 1974, 1982a,b; Turner, 1982, 1988; Hogg and Abrams, 1998; Sherif, 2015, etc.), communication studies (Hirokawa and Gouran, 1989; Putnam and Stohl, 1996; Harwood et al., 2005; Giles and Giles, 2012; Poole, 2013, etc.), sociometrics (Moreno, 1934, 1937), and cooperative game theory (e.g., Branzei et al., 2005). It would be a hopeless endeavor to find a common conceptual denominator that all research directions could agree on. There is, however, a less complex way to assure the adaptability of a communication-theoretical group concept. This way starts, following Kamlah and Lorenzen (1996), with the everyday life use of the term "group."

As has been shown with Luhmann (2000), however, this starting point provokes skepticism. The group concept is often used to contrast society with community in the sense of Tönnies (2005), groups being identified with the latter. While Rousseau's (2001) community of the *amour de soi-même* and Engels's (1975) "ursprüngliche kommunistische Gesamthaushaltung" indeed evoke moralizing connotations, similar concepts such as Hegel's (2002) "natürliche Sittlichkeit" and Simmel's (1908) "kleine Kreise" do not carry moral implications. They are simply considered preliminary stages of societal development. Similarly, this article portrays the difference of society and community as a continuum where empirical groups can be located as more societal or more communal according to their degree of formalization. It thereby also avoids the other extreme of ethnocentrically reducing groups to societal entities that by definition have aims, norms, and/or values.

The common denominator of the everyday life use of the term "group" lies in the notion of "a number of persons that constitute an entity." To emphasize the partial inclusion of individuals in modern societies' social entities, the term "persons" will be replaced by the term "members." A numerical maximum of group members is not determined while the numerical minimum is two. Simmel (1908), in turn, considers three members as the minimum to speak of a group, arguing that a collective of two persons would cease to exist if one person left and does thus not have a supraindividual character. This conception faces two major problems. Firstly, Simmel cannot answer what is left of a group of three if one person actually leaves the group. By definition, the group would already cease to exist, that is, lose its supraindividual character. Secondly, Simmel himself shows with the example of marriage that groups constituted by two members can bear a third element that establishes a more permanent character. By legal regulations, the institution of marriage formally includes the group into its societal vicinity and thus objectifies it.

The main reason to consider social entities with only two members as groups, however, is the fact that they operate according to their inherent logic. In our working definition, this is expressed by the specification "that constitute an entity." Accordingly, "entity" does not mean that group members exist in atomistic isolation but that emergent social processes take place among them. Not the members, social processes form the basic units of groups. In the section "Social Processes and Group Communication," these processes are discussed in detail. Unlike in Luhmann's systems theory, however, these operations are not conceived of exclusively as communications but as social processes with communicative, pre-communicative, and non-communicative episodes.

Groups do not operate *in vacuo* but in a variety of environments that will be specified below (section "Environments of Group Communication"). Groups distil raw materials from these environments for the fabrication of their process components. Not only therefore, groups remain open entities despite their inherent logic. They are also open for interactions with other groups and external individuals and can orientate their operations on others. Otherwise, intergroup communication would be impossible and no group process could

exceed the boundaries of groups. Groups may remain closed, however, on the level of their objectified identities.

Groups are principally able to perform collective actions, as they are constituted by supraindividual processes and can be treated as addresses of responsibility ascriptions, i.e., can be held accountable for their actions. Not every group performs collective actions. The defining criterium is not the empirical realization but the capability. Collective action does not require an explicitly drafted plan of action, even though in some groups such plans may play an important part. Communicative, pre-communicative, and non-communicative processes can also occur as purely pre-reflective practice.

Time is an important determinant of groups. In the following, the term "process history" is used to refer to the historical conditioning of group practices. A process history may transcend the borders of the group. No minimum amount of time to constitute a group is determined, since the unity of groups can only be recursively identified as such and expectations can be formed instantly. Groups can be transitory as well as durable. Temporality and contingency reduction will be discussed in detail below (section "Environments of Group Communication").

Groups can be classified regarding potential contacts and actually realized contacts among members. The former will be called "degree of interconnectedness" and the latter "density of contacts." The maximum degree of interconnectedness is given when all members can principally establish contact with each other. The minimum consists of members forming horizontally or vertically connected chains of contact[1]. When the density of contacts is high, members of a group interact frequently with each other; when it is low, interactions are less frequent.

The fundamental characteristic of a group is, however, that the unity of the group is present in the unit, that is, a re-entry, to use a Luhmann (1999) expression, has taken place. In other words, *the identity of a group is the defining criterium*[2]. Consequently, phenomena such as the constitution of order, processes of inclusion and exclusion, differentiation, change, e.g., are described and explained in the light of group identities. Identities are not to be confused with a "we feeling" or a "group mind." The focus lies on communicative and pre-communicative processes that constitute the unit. Put in supposedly[3] Marxian terms, a class in itself could not form a group, only a class for itself could. Recursively, however, similarities in everyday practices, everyday interactions, and life conditions could be considered "pre-adaptive advances" (Luhmann, 1998, 2005) of group constitution.

The following paraphrase of the working definition "a number of persons that constitute an entity" seems suitable: A group is a social unit capable of collective action that constitutes

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[1] Groups of two members form a special case, as the maximum is already realized with the minimum degree of interconnectedness.

[2] In Plessner's (1975) philosophical anthropology, humans are distinguished from other animals by their capability of not only moving in a given medium but also seeing themselves from the outside as being situated in their medium. In Plessner's own words, humans are "excentrically positioned." From this point of view, the group as understood here can be considered the example *par excellence* of human social life.

[3] Marx (1977) himself uses the expressions a "Klasse gegenüber einer anderen Klasse" and a "Klasse gegenüber dem Kapital."

a unit for itself and insofar has an identity (see section "Identities"). As emergent phenomena the elementary operations of groups consist of social processes with communicative, pre-communicative, and non-communicative episodes (see section "Social Processes and Group Communication"). Groups can be transitory or durable. The numerical minimum group members is two, a maximum has not been specified. The degrees of interconnectedness and contact density vary among groups. Groups can be formalized to different degrees between the ideal-typical ends of the continuum of community and society. Groups operate in a variety of environments out of which they generate their process components (see section "Environments of Group Communication").

Identities

Due to their centrality in the definition of groups, identities have to be addressed next. George Herbert Mead who locates the constitution of identities in social processes delivers the blueprint for the concept[4]. Mead's distinction of I and Me as two aspects of identity is generally interpreted through the lens of symbolic interactionism and the book "Mind, Self, Society" that was published by his former students. From this viewpoint, the I is identified with the biological, spontaneous, or uncontrollable articulation of the self. Goffman (1956) identifies the I with the person and the Me with her or his roles. There is, however, another reading of Mead's distinction between I and Me that is derived from his own publications and rather epistemological than role-theoretical.

From Mead's (1910) pragmatist-behavioristic perspective, the meaning of objects is determined by the reactions of the living beings that use those objects. Exploiting the double meaning of attitude as a body posture and a mental stance, Mead argues that the meaning of an object is acquired by taking on the attitude that others show toward the object. Generalization of meaning is achieved when an individual not only takes on the attitude of other individuals toward the object but the attitude that all others would show which Mead (1922) refers to as the "generalized attitude." In this manner, not only the meaning of objects is obtained but also the meaning of the self as an object. The individual becomes aware of how others see it. The abstraction from individual differences is fostered by contexts of collective action, particularly competitive games such as football or baseball.

The Me is the self as an object, either from the perspective of single individuals or on a generalized level. The I, in turn, disappears in the blind spot of observation such as in Husserl's (1976) phenomenology *noesis* or the process of experience can never be, simultaneously, the *noema* or the object of experience[5]. *Via* reflection, the I can only be grasped retrospectively as an object. In Mead's (1913) own words, the translucence of the I is expressed as follows: "The, I' of introspection is the self which enters into social relations with other selves. It is not the, I' that is

implied in the fact that one presents himself as a ,me'. And the ,me' of introspection is the same ,me' that is the object of the social conduct of others. One presents himself as acting toward others – in this presentation he is presented in indirect discourse as the subject of the action and is still an object – and the subject of this presentation can never appear immediately in conscious experience[6]."

Unlike Mead who only schematically differentiates between play and game, Vygotsky (1979) pays more attention to different empirical types of social action. This focus helps to develop a more practical-relational notion of the I. In this regard, Vygotsky paves the way for a conception of the pre-reflective side of self as rooted in social practice. Mead does not draw those conclusions, but his conception of the pre-reflective I could nevertheless be understood as governed by social practices. To conclude: On the level of individual identities, that is, identities of individuals, we distinguish between practical identities (I) and objectified identities (Me).

Now we address group identities that many authors reduce to aspects of individual identities. Building on his comparative studies of non-human primates (Tomasello, 2000; Tomasello et al., 2005), Tomasello (2009) presents a concept of group identities as products of cooperative action. Tomasello's conception, however, bears two problems. Firstly, he follows social ontology (Tuomela and Miller, 1988; Gilbert, 1990, 1992, 2009; Searle, 1990; Tuomela, 1991), attributing we-intentions or shared intentions not as social ascriptions but as ontological facts to social entities. Secondly, despite the postulate of a group mind, the term "group identity" does not refer to the identity of a group but to the part of the individuals' identities that is shaped by their group memberships, to social identities in the sense of Tajfel et al. (Tajfel, 1974, 1982a; Tajfel and Turner, 1979, etc.).

Differing from such conceptions, this article comprehends group identities as identities of groups that are not anchored in individual cognitions but carried by social processes (see section "Social Processes and Group Communication"). Group identities are "positive" facts. The continuity of group identities is not established by cognitive derivates but derived from the history of social processes, to which we will come back in more detail in the section "Environments of Group Communication." Like the conception of individual identities, the conception of group identities follows Mead's model. The Me of group identities is formed when the group sees itself from the perspective of outsiders or other groups. It is assumed that if there is no outsider or other group, there is no need to form a concept of oneself as a group.

History delivers a plethora of examples of how the identity of social units is introduced from the outside, e.g., in contexts of trade or war. The case of the Basque is very revealing. Coin finds from the first and second century BC lead Tovar (1987) to the assumption that the Spanish term "vasco" is not inspired by an autochthonous Basque word but has Celtiberian roots whose meaning is "highlanders" or "mountain people." Similarly, the Basque term "euskaldun" seems to be rooted among the Auscer.

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[4]See Kurilla (2020a) for comparisons to and differentiations from other authors such as James (1890), Sartre (1947, 1983), Marx (1977), Luhmann (1985), Lacan (1991, 2006a,b), and Hegel (2005).

[5]Unlike in the Husserlian phenomenology, however, social life has a deciding influence on the constitution of phenomena in Meads thought.

[6]Like the ego in Sartre's (1997) view, the I is only accessible as a delayed construct, as it can only enter reflective thought retrospectively as an objectification.

FIGURE 1 | Relations among collective identities, group identities, and individual identities.
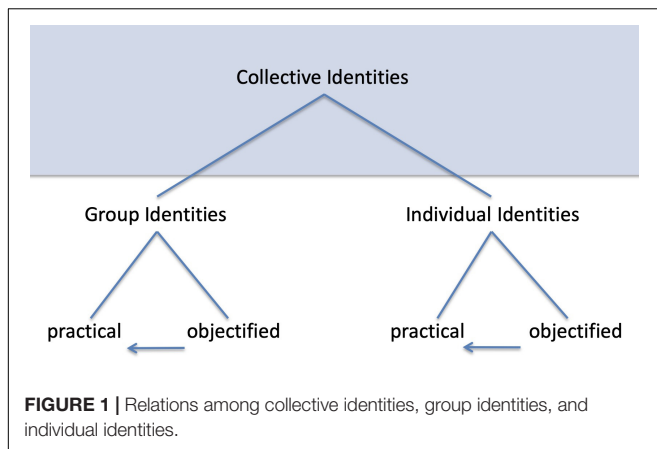
Humboldt (2010) affirms that the Basque have "lost" the terms to designate their unity. Until the father of the Basque nationalism Sabino Arana delivers the needed neologisms at the end of the 19th century (Pagola Hernández, 2005), the Basque remain without their own words to refer to themselves as an entity.

Arana forges these symbolic materials to fabricate group identities not *ab ovo* but builds on already existing institutions such as the prefix "eusk." Such materials will be termed "collective identities." Collective identities turn into "group identities" when they are actually used by groups to fabricate their identities. These materials may, however, also be used by individuals to create their "individual identities." The term "euskaldun" can be used by interacting individuals to designate the unity of their group as well as a person who individually identifies as Basque[7].

Collective identities are based on differences. These differences include cultural, political, national, age differences, etc. The genus "collective identity" bears the species of "cultural identity," "national identity," "corporate identity," "gender identity," etc. As raw materials, collective identities can be converted into the Me of a group, its objectified identity. **Figure 1** shows the relations among collective identities, group identities, and individual identities[8]. Since collective identities belong to another logical type, they are depicted in front of a colored background. The arrows indicate that practical identities are only accessible as such after the fabrication of objectified group or individual identities. An example shall indicate the range and arbitrariness of objectified group identities.

Unlike Marx who divides the world into bourgeoisie and proletariat, the toilet paper brand Charmin makes a distinction between folders and scrunchers according to the way in which people conduct the cleaning process (Schramm, 2005). It is assumed on the basis of market research that people in the United States tend to be srcunchers whereas in Europe most people fold their toilet paper, which is relevant for product design.

It is unlikely that people from the United States and Europe include toilet paper use in their self-descriptions or even in the depiction of cultural differences. This rather random distinction, however, is actually used to fabricate group identities as a look at internet forums reveals where people identify either as folders or as scrunchers and attribute character traits to both sides of the distinction[9].

Even this example of individually performed practices shows that any practice can be objectified to serve as collective and group identities. Yet, particularly shared practices like laughing are prone to be employed in the fabrication of objectified identities. Even antagonistic practices like quarreling or fighting can provide the involved individuals with a foundation to identify as a unit. Simmel (1908) observes that a common enemy can unite individuals and groups even though their relations have been conflictive before. When a fight is interrupted by others, e.g., the people involved may well form a group of "fighters" against the external interruption. Since this is not very common, it is evident that practices can only be retrospectively, when objectified identities have been established, considered as practical identities. Otherwise, every shared practice would necessarily lead to the constitution of a group.

"Practical identities" are comparable to the I in Mead's model. In relation to the fabrication of objectified identities, practical identities are pre-reflective. This does not mean, however, that they do not have any sense or meaning. Following Vygotsky and Tomasello, it is assumed that pre-reflective practices obtain their meaning from the action contexts there are situated in. Both aspects, pre-reflectivity and situatedness in action contexts, come together in Heidegger's (1967) notion of *readiness-to-hand* on which the concept of practical identities is based. To Heidegger, being is not characterized by thinking but founded on a pre-reflective practice that is not objectified but *ready-to-hand*. The Cartesian and Kantian distinction of an observing subject and observed objects comes secondary in Heidegger's thought. The reflective mind divides the world into subjects and objects primarily when practical problems arise. In Heideggerian terms, this Cartesian sphere of objectifications is the "presence-at-hand." Objectified identities are situated here.

Social Processes and Group Communication

This section addresses the social processes that are constitutive for groups. We will focus on the communicative and pre-communicative episodes of these processes and develop paradigms of intergroup and intragroup communication.

Notwithstanding its manifold shortcomings, the mathematical model of communication by Shannon and Weaver (1964) has been highly influential in everyday life as well as academia and still persists in some currents of communication research[10].

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[7]Should a constituting group of face-to-face interacting individuals that identifies as *euskaldun*, however, imagine itself as being part of the bigger entity of "the Basque," this equals an identification of the group with an "imagined community" (Anderson, 2006). This is a "fictional extension" of groups as long as the minimal conditions are not met to consider others who are not present as group members.

[8]The fact that also group identities can be used to form individual identities is disregarded here for the purpose of simplifying illustration.

[9]The following quote illustrates that collective identities do not only unite but also divide: "Scruncher. When I take over the world, I plan to exterminate all folders" (The Escapist Portal, 2012).

[10]The value of this model for the engineering problem of transferring a physical signal through a channel with a given capacity and a noise source from a sender to a receiver are undeniable. This is, however, only a small part of communication processes. The reductionist depiction of communication as the transference of

FIGURE 2 | System of mutual guidance (Steuerung) between contact partners **(A,B)**, Bühler (1978).
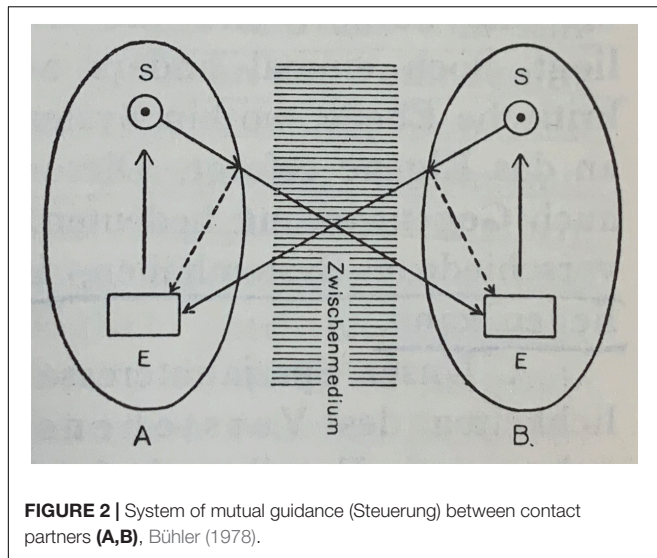
A nowadays less popular alternative model with roots in Ancient Greece (Ungeheuer, 1987) that depicts communication as mutual guidance entered 20th century discourses through behaviorists concerned with language and communication such as Skinner (2014) and Bloomfield (1973). This model does not portray communication as a one-way street but as an interactive process based on feedback loops. Signals may be sent and received, but they are not coded and decoded according to a fixed set of probabilities but processed by the participants according to their own inner logic and might result in behavior, emotion, cognition, etc. Bühler (1978) presents such a cybernetic model of mutual guidance in 1927 already (see **Figure 2**)[11].

The advantage of this model is that it emphasizes that communication follows its own logic that cannot be apprehended by considering either the speaker or the listener alone. Through Bateson, cybernetic models influenced the celebrated monograph "Pragmatics of Human Communication" by Watzlawick et al. (2011). Unlike Bateson or Bühler, however, these authors equate communication with behavior in interpersonal contexts, which is best expressed in their axiom "you cannot not communicate." Accordingly, their model does not make a difference between, e.g., the observation of red wine stains on a shirt and a willingly communicated message such as "I have had a glass of red wine[12]." In everyday life this difference makes a difference. Watzlawick et al. (2011), however, are only consequent when they do not refer to the speaker's messaging intentions to distinguish between behavior and communicative acts. This step would have obscured the fact that communication processes produce their own supraindividual order that cannot be described and explained with reference to speaker intentions alone[13].

There is, however, another method to include everyday life complexity into communication theory without undermining the inner logic of communication processes. This method turns to the listener (Schmitz, 1994, 1998) and, following Luhmann (1999), does not consider real messaging intentions of speakers as the propulsion of communication but messaging intentions attributed to speakers by listeners. This move helps to explain, why a person can be subjected to communication processes without having any intention to do so. Someone might scratch his head while another person thinks that it was a gesture of greeting and reply by saying "hi." Quarrels that all participants want to solve but remain trapped in are another example of the emergent logic of communication processes that cannot be controlled by individual intentions.

These considerations result in the following communication concept: Communication is an emergent process of mutual guidance employing semiotic-medial devices that follows its own inherent logic between at least two personal or social entities and is propelled by the reciprocal ascription of messaging intentions. Communication serves the orientation and/or coordination in communicative and non-communicative action contexts. Individual communication episodes aim at listeners' understanding. As correlates of its processing, communication produces a number of environments that, together with its process history, reduce the contingency of future processes (see section "Environments of Group Communication"). Simultaneously, these environments deliver the raw materials out of which communication synthesizes its process components and thus lay the foundations for its operations (see section "Environments of Group Communication"). Due to its emergent mode of operation, communication is conceived of as a unit that cannot be sufficiently described and explained by technological, cultural, semiotic, anthropological, etc., parameters alone.

We come now to the *pre-communicative episodes of social processes*. Communication is not the only form of interpersonal contact (Luhmann, 1985, 1995). There is also observation which will be defined simply as the perception or thematization of the conduct or actions of others without attributing a messaging intention. As Goffman (1966) shows, mutual observation and mutual reciprocal observation may create the basis of interactions under the condition of co-presence. There are many additional ways in which observation can influence communication. Observing the traces that tears have left on

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signals has been criticized by countless authors such as Juchem (1985), Ungeheuer (1987, 2004), Schmitz (1994, 1998, 2018), Luhmann (1998, 1999), Loenhoff (2002, 2010a,b), Seel (2010).

[11]Bühler's "Steuerungsmodell" consists of two subsystems (A and B) with one sending device (S) and one reception device (E) each. Between the subsystems is a medium such as air. Various feedback loops are possible within the system as a whole and within the subsystems (such as proprioceptive feedback that is indicated with the dashed arrow from the periphery to the receiver E). The arrows between E and S do not indicate a mechanical relation between the reception and the sending device. Bühler rather describes contact phenomena as guidance over a synaptic cleft to emphasize the relative autonomy of the subsystems A and B. Considering the level of abstraction Bühler's cybernetic model is situated on, it can be applied to organizations, institutions, states, etc., although it was originally developed to describe and explain interpersonal interaction.

[12]Communication does not have to be based on verbal language, but verbal language is, according to Luhmann (1999), such an improbable arrangement that it is unlikely that no messaging intention is attributed when language is observed by others.

[13]The speech act theory (Austin, 1962; Searle, 1969), e.g., suffers from the shortsightedness of reducing communication to processes governed by speaker intentions.

Address/Address	Group 2	Member (Group 2)
Group 1	Group 1-Group 2	Group 1-Member (Group 2)
Member (Group 1)	Member (Group 1)-Group 2	Member (Group 1)-Member (Group 2)

FIGURE 3 | Paradigms of intergroup communication.

Address/Address	Group	Member
Group	Group-Group	Group-Member
Member	Member-Group	Member-Member

FIGURE 4 | Paradigms of intragroup communication.

someone's face, I might not tell the sad story I was originally going to. Whenever observation influences communication, it is a pre-communicative process. Other pre-communicative processes are, e.g., processes of study or practice to prepare communication offers.

We have now all the conceptual means to define group communication. Like communication in general, group communication is propelled by the mutual ascription of messaging intentions. Logically, there are four paradigms of intergroup communication between two groups (see **Figure 3**). Firstly, groups might communicate as entities. This does not mean that groups actually have intentions such as messaging intentions like social ontology (Tuomela and Miller, 1988; Gilbert, 1990, 1992, 2009; Searle, 1990; Tuomela, 1991) would suggest[14]. The problems connected to this approach are avoided by focusing on the ascription of messaging intentions. Groups can act as addresses of communication and responsibility ascriptions, which in some cases even leads to legal consequences. Communication offers might be created by representatives of the group or by deliberating group members. The ascription of messaging intentions, however, can concern the group as a whole.

Secondly, a group as an entity might communicate with individual members of another group that in a given situation do not represent the group as a whole. The condition to designate this as intergroup communication is that individuals are actually addressed as members of the group. In turn, thirdly, members of the group might communicate with the other group as a whole. This is the exact opposite of the previous case. Fourthly, members of one group might communicate with members of another group. It is decisive that individuals involved in such communication are addressed as members of the involved groups. Messaging intentions are ascribed to individuals as members of the groups in this case.

The latter case may seem to belong to the phenomena of intergroup communication research as depicted above. This is, however, not the case, as it does not suffice to speak of "intergroup communication," e.g., when a man addresses a

woman as a woman or a black person addresses a white person as a white person[15]. Intergroup communication as depicted here only takes places when those social categories are actually used to fabricate groups that are constituted by social processes. From our perspective, most cases that are commonly referred to as intergroup communication are considered interpersonal communication or intragroup communication. It is likely, e.g., that conversations among a mother and a father of the same family are classified as intragroup communication rather than intergroup communication by the interactants themselves.

There are only three paradigms of intragroup communication (see **Figure 4**). The group can, firstly, communicate with individual members. This case resembles the intergroup communication between a group as a whole and members of another group with the decisive difference that the members of the own group and, respectively, the own group as a whole is addressed. This does, however, not create two paradigms of group communication, as communication is understood here as an at least two-sided process. For that reason, the two options of this case are colored in gray in **Figure 4**. Secondly, the members of a group might entertain intragroup communication. It is vital for this case that the members address each other as members of the group and not, e.g., as members of the board of two different organizations when the common base for intragroup communication would be the shared membership in a tennis club. And, thirdly, the group as a whole can communicate with itself as a whole. This might appear like a boundary case such as soliloquy. The difference to soliloquy, however, consists in the fact that actual communication processes can be observed with the factor time (see section "Environments of Group Communication") being an important component. A political party, e.g., might announce its aims and subsequently announce a change of its aims[16].

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[14]The "phenomenal intentionality research program" doubts that collectives are have a "phenomenal consciousness and underived intentionality" (Baddorf, 2017) characteristic for minds.

[15]These categories may not be purely cognitive devices but tied to contexts and act as instruments of conversation (Edwards, 1991). Similarly, empirical studies show that identity categories are not purely objective societal products but emerge in conversation (Antaki and Widdicombe, 1998). This does, however, not affect the conception that the mutual ascription of different identities among two individuals does not suffice to describe their interaction as "intergroup communication."

[16]This example of for the third type intragroup communication does not undermine the micro-analytical research conducted on the interactive and

Environments of Group Communication

Communicative and pre-communicative processes distil their components out of their environments that, at the same time, are correlates of their operations. This conception is so central to the approach presented here that it is termed a "communication-ecological account."

To Uexküll (1909), animals are not simply more or less successfully adapted to their environments. They are rather perfectly adapted because they themselves create their environments through their genetic blueprint. Similar to Uexküll, environments are considered correlative phenomena here. They are correlates, however, not of the interaction of a genetic blueprint with the surroundings of organisms but of communicative and pre-communicative social processes. Unlike in cybernetics with its conception of closed systems but similar to Bertalanffy's (1950) theory of living systems, the relation of processes and their environments is depicted as an open one. Unlike in Bertalanffy's account, this openness does not concern matter and energy in order to facilitate metabolism but raw materials situated in environments that are employed in the constitution of the components of social processes.

Like in Luhmann's (1999) conception, environments are considered products of processes based on sense. Yet differing from Luhmann, sense is not only conceived of as objectified sense that is apprehended with two-sided schemes. To Luhmann, pre-reflective processes can only enter the consideration as blind changes from one side of a scheme to the other. In turn, the conception developed here depicts the relation to environments as meaningful in a double way. Environments can be accessed through objectifications, which is indeed comparable to Luhmann's conception. In addition, environments are also accessed practically or pre-reflectively in the sense of Heidegger's notion of the *readiness-to-hand* (see section "Identities").

As correlates of past and current processes, environments are no material or ontic entities but epistemic tools of an observer. The model of environments as sources of raw materials for the production of process components helps to comprehend the constitution of order over time. The contingency of social processes is reduced on two levels. On the *practical level*, the process history that may result in habits or bodily dispositions (see Plessner, 1975; Bourdieu, 1995, 1996; Merleau-Ponty, 1995, etc.) renders more likely that practices that were performed in the past will be repeated in future processes. On the *level of objectifications*, logical or narrative coherence works against arbitrary changes of social processes. The latter, however, bears more room for "revolutions" than practical dispositions even though it remains unclear how the practice adapts to abrupt

changes on the level of objectifications. The past is present in a twofold way in current processes, practically and thematically, as *dispositions generated by a process history* and as *its narrative objectification characterized by propositional coherence*[17].

There is, however, a third factor that reduces the contingency of social processes. Social processes can and in many cases must transcend the boundaries of a group, unless a completely isolated tribe, e.g., is under consideration. As a result, the processes and their components have to be compatible with external processes. This external conditioning of social processes is the reason why in most instances group environments can be considered societal environments. Although the environments of social processes in groups are products of their own processes, they cannot be fabricated *ab ovo*. The socialization of members facilitates the adaptability of social processes in groups to external processes. For this reason, social realities of groups must be to a certain degree synchronized with their societal surroundings. As a result, the model presented here claims to be compatible with Garfinkel (1967, 1988, 1996, 2002) ethnomethodology that does not consider social reality a purely situational product but recognizes societal building blocks and thus societal order as the ingredients out of which practices are produced that create and maintain social reality. The strong data focus of some micro-analytical studies is prone to disregard the importance of broader contexts that exceed the here and now for an emic understanding of the phenomena under study, to which we will come back in the section "Methodological Implications."

Having established that environments are not ontic facts but epistemic tools of an observer does not imply that they are foreign to the inside views of a group. On the contrary, since the environments are conceived of as correlates of the social processes that group members are involved in, the description of a particular group environment has to pay tribute to their emic perspectives. As self-descriptions of groups might not literally include an ecological model, the environments have to be conceptualized on an abstract level that allows for specifications in different cultural and historical contexts. The ecological model has the advantage of offering both descriptions of social reality as it appears to groups and comparability by organizing these descriptions around environmental parameters broad enough to be applied to different lifeworlds.

There is no finite number of environments of social processes. For the purpose of examining processes of group identity fabrication, the author conceptualized eight environments: psychic-personal, semiotic-medial, technical, institutional, emotional, spatial, discursive, and groupal environments. There is no space here to discuss all environments (see Kurilla, 2020a). Instead, institutional environments will be addressed briefly as an example[18].

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material coordination of action (see, e.g., Engeström and Middleton, 1996; Hutchins and Palen, 1997; Suchman, 1997; Hindmarsh and Pilnick, 2002). These empirical studies concern, however, the second type of intragroup communication where members communicate with each other. The third type of intragroup communication is concerned with the case when the group as a whole communicates with the group as a whole. The shift from the second to the third type requires a change of perspective. This change has been made possible by a focus not on messaging intentions but on the ascription of messaging intentions to individuals as well as social entities. The group as a whole may not have messaging intentions but they can be ascribed to the group as a whole, which is why it can act as an address of communication.

[17]This conception bears similarities to Wenger's (1999) concept of a "dual constitution of histories." Wenger's distinction of participation and reification, however, is not to be confounded with the distinction of process histories and narrative objectifications, as the latter is directly derived from Heidegger's (1967) distinction of *ready-to-hand* and *present-at-hand*.

[18]Institutional environments have been chosen as an example, as they shed light on social and cultural differences in the constitution of groups in view of available emic models, which concerns the main interest of this article. A look at technical,

In social sciences, institutions are often described as either sources (Gehlen, 1977, 2004; Hobbes, 1998) or limitations (Adorno, 1967; Dahrendorf, 2006) of human freedom. Institutions indeed have a double aspect. They constitute the riverbed that both lays the foundations for and limits social practice. As a result, both Gehlen's credo that institutions "relieve" us and Adorno's critique that they work against human freedom can be affirmed. The concept of institutions is neither bound to society nor to other collectives and can thus be employed in the study of groups. The institutional configuration of a group can be considered its culture, which echoes Gehlen's (1977) conception of culture as nature modified by action.

Institutions can be relevant as frames of group interaction. It makes a difference whether a group acts as a limited company, club, or matrimony. Institutions are not always legally binding. Relevant for group processes may be the etiquette, customs, rituals, communicative genres, or, generally, interaction models. Some interaction models become characteristic for groups and enable or limit the communication with other groups. Helmolt (1997) shows that French teams often operate with the help of the fraternizing form of "complicité," which can lead to problems in the cooperation with German teams to whom this interaction form is unknown. Forms may be entirely unknown to other groups or hard to put into practice if a certain relevance pattern does not fit the participant such as in the case of "secretarial bitching" that Sotirin and Gottfried (1999) describe.

Environments and the raw materials obtained from them are emic fabrications of the group. The societal character of institutions such as love or marriage stems from the fact that groups entertain relationships to the exterior, as a result of which their fabrications cannot be entirely arbitrary. This becomes particularly evident in the case of intergroup conflicts. A group's models of antagonism (see Kurilla, 2013) have to be adaptable in order to entertain conflictive relationships with other groups. It makes a difference whether we quarrel, fight, or just discuss a matter, which of course varies according to, e.g., regional parameters. Unlike in Luhmann's view, love is not regarded a generalized medium of communication that, on a global scale, serves to construct intimate relationships through personal communication. Love is rather an institution of groups with parallels to similar institutions in other groups. Cultural differences of love are well documented (e.g., Averill, 1985; Mees and Rohde-Höft, 2000; Schröder, 2004; Scheff, 2011). The same is true for friendship, unlike Kühl's (2021b) narrow concept of groups might suggest. The concept varies locally and historically. A friendship ethos may belong to the past in Central Europe (Luhmann, 1983), in other regions such as the Spanish Basque Country it still governs everyday relations, is conceptually nuanced, carries highly binding expectations comparable to formal organization, and leads to spatial institutions such as gastronomic "sociedades."

During the constitutive stages of a group, its institutional components are not always present as objectifications. When an objectified identity is eventually formed, practices retrospectively turn into practical identities. Being lovers or "doing love" can be a pre-reflective practice that not even for the lovers is objectified as such. The constituting group may ask itself, "are we dating," or "are we still dating," which evidently can also be brought up by others. The communicative treatment of those questions highlights the options of objectifications the partners share. Not all groups form environments where "dating," "polyamory," "polygamous" or "monogamous marriages" are options for group constitution. Like all group environments, pre-reflective and objectified institutional environments and their histories of being transformed into process components are constituted during group constitution and cannot be reduced to residues of individual socializations. They are genuine fabrications of emergent social processes in groups.

METHODOLOGICAL IMPLICATIONS

The communication-ecological approach establishes an abstract foundation-theoretical position that is to be concretized during empirical studies. It helps to depict everyday life phenomena faithfully, as they are not forced into a narrow conceptual corset. Simultaneously, heterogeneous phenomena from different lifeworlds are rendered comparable, as they are captured with a homogeneous theoretical base. The methodological departure point lies in the ethnographic comprehension of everyday realities without prematurely classifying their elements with categories derived *ex ante*.

The analytical differentiation of group realities into environments of social processes can serve as the grounds for thick descriptions (Geertz, 1987). The model of analytically differentiated environments helps to organize and thus to render comparable everyday practices and provinces of meaning. The communication-ecological model is able to depict everyday life in a way that is faithful to the inside views of groups and individuals and at the same time makes it accessible to scholarly discourses, which are the two main ingredients of thick descriptions.

As in Kelle's (1997) notion of an "empirisch begründete Theoriebildung" that builds on Strauss and Corbin (1998) and Glaser and Strauss (2009), categories and hypotheses are not developed *ex ante* but also not simply extracted from the data material. They rather result during research from an abductive (Peirce, 1978, 1979) operation that mediates between empirical data and an open theoretical frame and thus contributes to the "quasi-inductive evolution of science" in the sense of Popper (2002). As has been shown above (section "Environments of Group Communication"), the notion of institutional environments sensitizes for institutional components of groups without forcing the phenomena into too narrow or, from an emic viewpoint, inappropriate categories. Additional insights can be generated by examining other environments such as semiotic-medial, discursive, spatial, emotional, psychic-personal, technical, and groupal environments. Focusing on individual environments does not inadequately obscure the role of other environments, as environments are only analytically distinguishable and their interrelatedness in empirical phenomena can be traced in orientation on the

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emotional, spatial, and particularly semiotic-medial environments would have placed more emphasis on the material, multimodal, and embodied aspects of social processes in and among groups (see, e.g., Orr, 1996; Loenhoff, 2001; Goodwin, 2007; Streeck et al., 2011). A thorough consideration of these aspects, however, would have exceeded the scope of this article.

communication-ecological model as a whole. The option of examining the environments individually provides researchers with the opportunity to focus on their particular research interest without losing sight for the bigger picture and/or *a priori* neglecting social and cultural differences.

In view of the double aspect of environments as correlates of pre-reflective practices and as objectifications, there are some methodological particularities. Beside participant observation, narrations provide a way of accessing foreign lifeworlds. No matter what their semiotic-medial manifestations and interactive fabrications might be, however, narrations objectify the practice they portray to a certain degree. Narrations can nevertheless entail pre-reflective relations. To synthesize these relations, not the figure of the narrations but their backgrounds have to be examined (Kurilla, 2013, 2020b). Under this condition, narrative interviews deliver a research-pragmatic substitute for participant observation. The *readiness-to-hand* (Heidegger, 1967) becomes tangible in narrations as silent relations within practical contexts.

Practical meaning is constituted in relation to action contexts and is thus not present in an objectified way. These contexts have to be taken into account when fabricating audio-visual recordings, transcriptions, and, even more so, during data analysis. Micro-analytical studies in the tradition of the ethnomethodological conversation analysis trade this focus on action contexts for a strong focus on empirical data obtained through technological recording devices. Like in positivism, extensive data collections are built up in a presumably unbiased way, without supposedly misleading preconceptions of everyday life to extract general regularities that are seemingly immanent in the data material (Flader and Trotha, 1988; Ehlich, 2007). Interpretation processes that guide the transcription of recorded documents often remain disregarded and are thus not systematically taken into account to improve the process of analysis and its conceptual depiction. Closer examination even reveals that conversation analysis does not only suffer from a "secret positivism" (Flader and Trotha, 1988) but sometimes even comes close to a sensualist epistemology because, unlike in positivism, it is not assumed that the general can be inferred from individual cases. The underlying assumption rather seems to be that the general is identical with the factual (ibid.). The researchers' own interpretation performances disappear in the blind spot of their observations, which leads to an epistemological self-misconception, as the theoretical premises necessarily employed in the process of knowledge generation are not taken into account, let alone reflexively explicated.

The communication-ecological model helps to prevent such epistemological derailments by methodically transcending the here and now of situational data. Orienting on analytically separated environments on an abstract level that have to be concretized during empirical studies, researchers become sensitized for their own preconceptions that inevitably influence the production and analysis of data and, at the same time, for cultural and social differences among the subjects they study. With these premises, micro-analytical studies offer a promising way to shed light on process histories, i.e., the pre-reflective aspects of social processes in and among groups.

As pre-reflective social processes constitutive for groups are only recursively observable as such,[19] it seems that research on these processes has to begin with retrospective narrative objectifications. The constitution of pre-reflective sense, however, can still be observed *in actu*. This requires a specific stratagem that Bühler (1978) employs in distinction from purely behaviorist approaches. The observation of practices operates in a hypothetical *as-if*-mode. This way, premature commitments to an interpretation are avoided. The orientation on an *as if* also helps to prevent neo-positivist self-misconceptions, since assumptions are inevitably explicated. Even the categories developed by Bales (1951) could be employed in the *as-if*-mode as long as they are considered hypothetical constructs that can be modified or completely abolished during research in view of individual group realities.

Be it zero-history or focus groups, all groups can serve as a research paradigm in the frame of the presented theory. Decisive is, however, that they are ethnographically observed. Should, e.g., focus groups be employed, attention has to be paid to the constitution of their environments to examine the emerging emic views. Counterintuitively, not despite their relative artificiality but because of it, focus groups even literally invite research on the constitution of environments of social processes in groups.

DISCUSSION

The conceptual devices to describe and explain group communication have been introduced in a conceptually coherent theoretical framework. This framework is transparent regarding its epistemological and conceptual premises and thus open to scrutiny. Communication has been described as an emergent process that is propelled by the ascription of messaging intentions. It has been differentiated from other social processes that are not communicative but influence communication. Different paradigms of communication in and among groups have been presented. The communication-ecological model has been implemented in an overarching theoretical framework that allows phenomena of group communication addressed by different approaches to be unified with the help of a coherent conceptual base. The theory is situated on such an abstract level that it can be concretised in view of empirical data across social and cultural differences.

The communication-ecological model is not only utterly coherent but also able to describe and explain the phenomena of group communication that the approaches discussed above focus on. The deliberating groups of functional theory that aim at rational decision making do exist in everyday life and can be described with the analytical tools presented here. These rather societal groups, however, do not limit of the understanding of groups, neither does the reduction of groups to communal groups such as friendships in the tradition of Luhmann. Unlike functional theory and Luhmann's systems theory, the presented model does not *a priori* limit the range of phenomena and thus avoids ethnocentric biases.

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[19] See the discussion of practical group identities in the section "Identities."

It has been shown that symbolic convergence theory confounds two logical levels that in the presented theoretical frame are treated separately. Phenomena of order are not only explained as coherent chains of symbols that over time become more predictable but concern all process components. The reduction of contingency of future processes has been explained with the concept of process history and its recursive narrative objectification, avoiding the term "structure" to emphasize the distinction from Giddens' structuration theory among others.

The attention the bona fide perspective pays to context relations has been systemized through an abstract model of different environments. Group boundaries have been considered epiphenomena of fabrication processes of objectified and practical identities. The communication-ecological model conserves the openness of this perspective without permitting an *anything goes* regarding the concept of communication and other conceptual devices.

It has also been shown that the presented model is able to unify research on intergroup communication with research on small groups in one framework. Sufficient distinctions between groups, their actual components, and possible fictional extensions have been drawn to clearly describe the phenomena under consideration. Alternative concepts of interpersonal and personal communication have been offered that are more adaptable to the common distinctions in communication research.

Efforts have been undertaken to establish theoretical coherence and terminological precision regarding identity concepts. Group identities have been depicted as carried by social processes and not as psychical residues. A clear distinction of different identity types has been offered. Individual and group identities have been divided into objectified and practical aspects, the latter of which can only be identified retrospectively. Collective identities were considered the materials individual and group identities are fabricated of and thus placed on another level of analysis.

The communication-ecological model allows for faithful depictions of the emic views of groups and, simultaneously, for comparisons of different lifeworlds. Environments are situated on an abstract level that allows for concretizations across social and cultural differences. The emphasis that the empirical description of environments has to match the inside views of groups prevents researchers from a positivist self-misconception. The model is based on a broad understanding of groups, which contributes to its openness for social and cultural differences. Unlike in Luhmann's view, environments are not bifurcative correlates or an empty surplus of processes that enable future operations. They bear sense in a double meaning – objectified and pre-reflective sense.

The whole theory avoids the Cartesian reductionism by consequently taking into account the difference between objectified and pre-reflective processes. This does not only render its descriptions of everyday life where reflective thought is everything but the norm more faithful. It also helps to integrate the theoretical insights of authors like Merleau-Ponty (1995), Bourdieu (1996), Brandom (1998), Wittgenstein (2003), Polanyi (2009), etc., regarding phenomena of embodied practices, habitus, tacit knowledge, etc., that have not yet obtained a systematic place in social theory. The inclusion of pre-reflective processes undoubtedly increases the complexity of the theory. This increase, however, is required in order to be faithful to everyday life.

The difference between practice and objectification also governs the distinction of two different ways in which the contingency of social processes is reduced. On the one hand, inertia of social processes is established practically. This is called the *process history*. On the other hand, objectifications of past processes are fabricated that outline the space of propositional potentiality. This is termed the *narrative objectification* of process histories. Like in Walter Benjamin's (1974) understanding of history, past and future are products of the here and now, as a result of which contingency reduction is the work of current processes. Process history and narrative objectifications occupy the space that, in social theory, is usually filled with concepts of structure. The distinction emphasizes that contingency is reduced on two levels, which is not even captured by Giddens' "duality of structure."

It is the author's hope that the ecological model may contribute novel impulses to the paradigm discussion in the field of social theory. To take on this endeavor, the presented environments can be taken as a starting point. Studies may focus on how space, discourses, emotions, etc., are fabricated by social processes that take place in and among groups. Further environments may have to be added. The theory has to be concretized in view of research questions and empirical fields and can be expanded this way. In research on group communication, the advantage of combining different approaches in one overarching theoretical framework while avoiding conceptual difficulties surely outweighs the increase of complexity and facilitates novel cooperation and understanding among adherents of seemingly unconnected or incommensurable approaches.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

AUTHOR CONTRIBUTIONS

RK drafted the manuscript and participated in the review and revision of the manuscript, and has approved the final manuscript to be published.

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How to Get a Grip on Processes of Communalization and Distinction in Group Interactions—An Analytical Framework

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This article proposes an analytical framework that combines Conversation Analysis, Positioning Theory, and Stance Analysis to study communalization and distinction as basic interactive mechanisms within group interactions. The framework is based on the premise that participants in multi-party interactions constantly manage the local demands of the ongoing conversation and turn-by-turn talk as well as implicitly or explicitly evoked references to global discourses, which in turn are closely related to the topic currently discussed. By considering both micro- and macro-contextual features in the analysis of group interactions, it is possible to reach a deeper understanding of dynamic group activities. The framework has been empirically developed based on data from a study on epistemic positioning practices in adolescents' group interactions about popular TV series in Germany. The data comprises ten videotaped focus group discussions that have been elicited in a school context. By applying the framework to the analysis of a single case from the corpus, insights can be gained, both on how group members' finely adjust their epistemic and evaluative stances as well as on how the participants themselves interactively link their stances to broader discourses.

Keywords: framework, Conversation Analysis, Positioning Theory, group interaction, qualitative research methods

INTRODUCTION

In this paper I present my methodological framework for analyzing communalization and distinction in group discussions. When studying groups, it is essential to account for the characteristic features of multi-party interactions as opposed to dyadic interactions. When more than two people engage in talk, taking, maintaining, and relinquishing the floor for turns at talk becomes more complex than in dyadic conversation (see Stivers, 2021). Addressing several interlocutors with different knowledge, relationships as well as roles, rights, and obligations requires a speaker to employ diverse communicative actions and practices to participate in the ongoing interaction. In addition, participants might form and change alliances to achieve communicative actions. There are some suggestions for applying Conversation Analysis as a useful tool for studying group discussions on the micro-level of interaction, e.g., in order to analyze how group members organize turn taking activities (e.g., Gavora, 2015). Furthermore, Positioning Theory and its roots in discourse analysis is also used as a method to analyze multiparty interaction (e.g., Hirvonen, 2016). By approaching data with Positioning Theory, researchers seek to identify common orientations to

what Bamberg (1997, p. 337) calls "level 3 positioning," i.e., broader discourses shared by a social group (de Fina, 2013). But as Wetherell (1998) argues, these orientations are usually made relevant by the participants according to current situation and context. Thus, micro- and macro-scaled positionings are closely interlinked. However, little is known about how to analytically reveal how participants establish, change and negotiate intragroup similarities and differences by positioning practices on both the micro- as well as the macro-level of interaction. Conclusively, one method appears to be insufficient to describe the complexity of multi-party interactions.

As a solution, I propose a framework to capture this complexity by combining ethnomethodological Conversation Analysis (Sacks et al., 1974; Sidnell, 2013), Positioning Theory (Harré and van Langenhove, 1999; Harré et al., 2009), and Stance Analysis (Du Bois, 2007) and systematically relating the findings to each other. I have developed the framework empirically from a corpus of video recordings I took of adolescent focus groups in Germany discussing TV series. I instructed the group members to converse about whatever they chose, as long as it was related to the topic of *popular TV series*, e.g., which series they enjoyed watching, why or why not etc. Using Conversation Analysis, I analyzed how the participants orient to this instruction, managing topic-related participation in the ongoing interaction on the one hand while avoiding excluding other group members on the other hand. I used Positioning Theory and Stance Analysis to describe how they position themselves and others by taking epistemic and/or evaluative stances toward TV series. Considering these conditions, my videotaped multi-party interactions can be characterized as highly dynamic, driven by emerging and changing communalization and distinction processes within a (sub-)group. My framework helps to analytically describe these processes of how participants manage similarities and differences on various levels.

With the terms *communalization* and *distinction*, I refer to the verbal and non-verbal displays interlocutors use to signal the degree of how close, similar and/or agreeable they perceive their relationship to the other participants. It is an analytical notion to describe how group members manage similarities and differences on different layers (see also Weiser-Zurmühlen, 2021). On the one hand, this pairing refers to group dynamics for forming alliances alongside the distribution of knowledge as well as diverse assessments concerning series. On the other hand, this pairing is related to Bucholtz and Hall (2005, p. 599) differentiation between "adequation and distinction" within their framework for analyzing identity in interaction, in which it is part of several relational axes along which interlocutors might construct their identities.

Although I do not explicitly examine identity constructions in this paper, communalization and distinction cannot be separated from identity issues. Especially when interlocutors talk about their taste in aesthetic works like TV series, they tell each other which series they (do not) know and (dis)like, thereby continuously displaying a certain facet of their self. However, taste is not merely a question of individual preference but is also embedded in broader conceptions of "good" and "bad" taste shared by a community (see Bendix et al., 2012, p. 313). Individuals' aesthetic preferences are usually constructed relationally to other people's tastes. Interlocutors position themselves and others by comparing and adjusting to each other's evaluations of media products, establishing their mutual orientations to normativity, and considering moral ascriptions of certain products and their consumers. These positions are implicitly related to politically relevant phenomena like the social distinction in the sense of Bourdieu (1984). The participants contribute to these underlying requirements on the micro-level of the interactional situation and the macro-level of societal discourses by establishing different degrees of communalization and distinction.

In this paper, I introduce my framework in the following way: In section "Methodological Approaches for Studying Dynamics in Group Interactions: Conversation Analysis, Positioning Theory and Stance Analysis," I first discuss the concepts and their interconnectedness alongside how each analytic approach understands the three key concepts context, identity, and morality. I explain how to use these concepts for connecting communalization and distinction on different levels before I present and summarize the analytical framework in section "Proposal of a Framework: Positioning Practices for Establishing Communalization and Distinction." I then apply the framework to a single case from the data set on the TV series *Game of Thrones* (section "Applying the Framework to a Single Case"), analyzing in detail communalization and distinction processes on the micro- and macro-level of interaction. With the analysis, I aim to demonstrate that linking global aspects of the currently discussed topic to the local level of interactive practices is important for understanding group formation dynamics.

METHODOLOGICAL APPROACHES FOR STUDYING DYNAMICS IN GROUP INTERACTIONS: CONVERSATION ANALYSIS, POSITIONING THEORY AND STANCE ANALYSIS

In this section, I introduce each methodological approach briefly before I discuss their contributions to analytical features of context, identity construction and morality, and normativity in group interactions.

Conversation Analysis has its roots in ethnomethodology. Its core view of interaction is that it is continuously brought into being by the interlocutors in their turn-by-turn talk. This proposition follows ethnomethodologists in assuming that social structures are not objectively (pre-)determined, but that interlocutors actively produce and reciprocally confirm them. Garfinkel (1967) refers to this process as an "ongoing accomplishment," meaning that the members of a society construct their social reality by means of everyday and routinized practices. According to Garfinkel (1967, p. 118), these practices are "seen, but unnoticed" as they are mostly performed habitually and grounded in processes of social and cultural socialization. As a result, ethnomethodological researchers seek to reconstruct

these practices by asking how interactants establish sense and order through them. Based on these principles, Harvey Sacks et al. (1974) developed Conversation Analysis to study the sequential structure of everyday conversations. Following the premise that "[there is] order at all points" (Sacks, 1984, p. 22), Sacks et al. (1974) demonstrate that interactants systematically manage turn taking-related rights and obligations. Its microanalytic focus is the most characteristic feature of ethnomethodological Conversation Analysis, i.e., to "look at conversations as if through a 'microscope'" (Heller, 2014, p. 224). Since then, Conversation Analysis has further developed and, in addition to analyses of local phenomena, has also been used to describe larger and more global structures such as communicative genres (Günthner and Knoblauch, 1997) or discourse units such as narrations (Hausendorf and Quasthoff, 2005), explanations (Morek, 2012), and arguments (Heller, 2012). I draw on the conversation analytic constructivist perspective view on interaction as well as its micro-analytical focus as key thoughts for the framework.

Positioning Theory was first introduced by Hollway (1984) with reference to Foucault (1972) notion of *subject position* as an analytical tool for capturing the interactive constitution of gender. Hollway (1984) posits that social discourses provide a selection of certain positions for men and for women: "Discourses make available positions for subjects to take up. These positions are in relation to other people. Like the subject and object of a sentence [.] women and men are placed in relation to each other through the meanings which a particular discourse makes available" (p. 236). She thus argues that while social discourse might pre-structure certain positions for individuals, they can actively choose or reject these positions in social encounters. Continuing Hollway's argumentation, Davies and Harré (1990, p. 48) understand positioning as local references to social discourses, which they call "story lines". Since then, the Positioning Theory has been systematized along different dimensions and forms of positioning (Harré and van Langenhove, 2007; Harré et al., 2009), e.g., positioning analysts distinguish between self- and other-positionings as well as their sequential placement. For the framework, I consider the ability of Positioning Theory to capture references to macro-societal structures as a fruitful approach.

Stance Analysis has been mainly shaped by Du Bois (2007). He draws on the Positioning Theory of Harré and colleagues and suggests focusing on stance as a small unit that interlocutors might use to establish positions. He defines stance as "a public act by a social actor, achieved dialogically through overt communicative means, of simultaneously evaluating objects, positioning subjects (self and others), and aligning with other subjects, with respect to any salient dimension of the sociocultural field" (Du Bois, 2007, p. 165). According to him, stance taking can be modeled as a triangular framework, working by the following mechanism: Subject 1 assesses a certain object whereby the individual positions themselves, followed by subject 2's evaluative positioning, thereby aligning with the first person's stance. The concept of stance taking has been adopted for several purposes (see e.g., Spitzmüller, 2013 on language ideologies; see also contributions in Englebretson (2007) and in Jaffe, 2009, as well as Chindamo et al., 2012). The stance triangle is embedded

in the *theory of stance*, presuming that speakers align themselves to the linguistic units of other speakers (morphosyntax, lexis, and prosody). By syntactically paralleling the utterances, their paradigmatic relationship can be analytically explored, and researchers can work out nuanced meanings between the two forms. Du Bois calls this process "dialogic syntax" (Du Bois, 2007, p. 160). However, this part of the theory of stance will not be considered for this paper. Instead, I use Du Bois' modeling of interlocutors positioning via evaluative stance taking toward an object of conversation appears to link Conversation Analysis and Positioning Theory in the framework.

Analysis of Contextual Relations in Group Interactions: The Role of Micro- and Macro-Context

The three methods highlight analytical concepts for identifying the sequential order of communicative actions, such as the next-turn-proof-procedure (Sacks et al., 1974, p. 728),[1] distinguishing between first, second, and third order positions[2] (Harré and van Langenhove, 2007, p. 396) or between stance lead and stance follow[3] (Du Bois, 2007, p. 165). Moreover, all approaches share the assumption that, to study interaction, the analyst needs to consider the interactive context in order to interpret an individual's utterances. However, conversation analysts do not understand context as a kind of pre-determined "bucket" in which actions can be poured. They assume that individuals act context-sensitively and interpret preceding actions according to their everyday knowledge, ascribing it to be socially and culturally shared, thus carefully adjusting their subsequent utterances to precisely this context. From this perspective, context cannot be viewed as something predominantly given, but as a reflexive and social entity actively produced by the participants (Bergmann, 1994, p. 8). Interlocutors use contextualization cues (Cook-Gumperz, 1978; Gumperz, 1992) and draw on different communicative resources (e.g., prosody, lexical choices, or gestures) to signal to each other their current understanding of the interactional situation (see also Du Bois, 2007, p. 146 for the status of contextualization cues in his framework). Speakers reciprocally orient toward each other and design their utterances for other participants to understand them. Hence, when analyzing social interaction from an ethnomethodological perspective, researchers use the same analytic means to which speakers themselves have access, namely closely observing and interpreting co-participants' actions.

In contrast to Conversation Analysis, especially early positioning analysts viewed contextual structures as to some degree pre-determined (see also Deppermann, 2015, pp. 370–372), grounded in Foucault's structuralist notion of *subject position* which regards discourses as accountable for distributions

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[1] A programmatic view on turns, questioning: "Why that now?" and "What comes next?"

[2] A second order positioning is established when the first positioning is rejected, while a third order positioning refers to the subsequent thematization of a positioning.

[3] Stance lead refers to the first individuals' positioning, offering orientation to the other individual. Stance follow refers to the second individual, who positions themselves, aligning with the first speaker.

of knowledge and power. Gee (1996) called these discourses D-discourses, defining them as "a socially accepted association among ways of using language, other symbolic expressions, and artifacts [.] that can be used to identify oneself as a member of a socially meaningful group or 'social network'" (Gee, 1996, p. 131). Davies and Harré elaborated on this idea of positioning as interactional references to broader discourses. They illustrated it by using examples of constructed dialogues between fictional characters representing social categories ("Sano" and "Enfermada,", see Davies and Harré, 1990, pp. 55–58) as well as possibilities of gender-related readings of a fictional narrative (see Davies and Harré, 1990, pp. 60–61). However, other researchers—especially researchers working with Conversation Analysis—reject such an essentialist view and assume discursive positions to be a matter of the participants' construction and interpretation (Wortham, 2000; Lucius-Hoene and Deppermann, 2004; Bamberg and Georgakopoulou, 2008).

Conversation analytic research on group interaction has also shed light on micro-scaled features affecting the group's interactional process. For example, Gibson (2003) introduced the concept of *participation shift*, which encompasses the turn-by-turn transformation of the participation framework in multi-party interactions. Gavora (2015) identified two interaction patterns—*Catalogue* and *Domino*[4]—in moderated focus groups, and Gatica-Perez et al. (2012) studied dynamic processes in small groups from a multimodal perspective, taking into consideration contextual features like conversational attention, turn taking and conversational floor as well as practices for addressing or interrupting other participants. Further research for describing these complex relationships has been conducted by Onwuegbuzie et al. (2009) who suggested the so-called "micro-interlocutor analysis" (p. 7) as a qualitative framework, using Conversation Analysis as a key method. Their framework allows collecting information about the participants' order of responding to questions, the response characteristics as well as non-verbal communication aspects.

In my framework, I suggest that analysts can use contextualization cues, such as e.g., the responses to questions as suggested by Onwuegbuzie et al. (2009), in order to identify processes of micro-level communalization and distinction processes through closely examining the turn-by-turn-talk with regard to turn allocation, repair as well as communicative actions and practices. However, researchers who aim to identify interlocutors' references to broader social discourses by using only Conversation Analysis face methodological limitations. For instance, some conversation analysts demand that certain social constructs such as gender ought to be considered only if analysts can show that participants display a local orientation to the existence of these social constructs (Schegloff, 1997, p. 180).[5] This appears to be a methodological limitation, as

participants can also orient to categories or attributes that are merely "invoked" (Wilkinson and Kitzinger, 2003, p. 174).

Analysis of Identity Construction in Group Interactions

As speakers orient toward each other, they design their utterances based on their assumptions of who the co-interactants are and what they know to achieve mutual understanding and intersubjectivity (see also Du Bois, 2007, p. 140). Conversation analysts describe this process as *recipient design* (Schegloff et al., 1977). With recipient design, interlocutors show how they understand the other participants as well as how they themselves seek to be understood—or in terms of positioning, how they position themselves and others (Harré and van Langenhove, 2007, p. 398), thus constructing social identities.

Concerning the issue of identity construction, another methodological difference between Conversation Analysis and Positioning Theory can be pinpointed. Some positioning theorists such as Harré and van Langenhove (2007, pp. 399–404) assume that positioning can be performed intentionally or strategically. This idea appears to be hardly compatible with the antimentalist perspective taken by Conversation Analysis. Instead, from an ethnomethodological point of view, identity is regarded as a social construction (Berger and Luckmann, 1969; Antaki and Widdicombe, 1998) based on individual as well as mutual engagement in ascriptions and affiliations (Berger, 2010). For instance, Antaki et al. (1996, p. 489) show how a person's identity may take a variety of different forms depending on the conversational context in which it is invoked. However, further developments of Positioning Theory claim that "a positioning view on self and identity is [neither] opposed to a static and essentialist view of identity [nor] does [it] locate identities in some abstract, integrated structure 'behind' discursive practice, but in what people observably do" (Deppermann, 2015, p. 370).

Linguistic researchers like Bamberg (1997), in their adoption of the positioning concept for analyzing narrative identities, distinguish between three levels of positioning: level 1 includes positionings of individuals within the narrated world; level 2 positionings are located on the interactional surface between interlocutors while level 3 positionings refer to "master narratives," comparable to D-discourses (Bamberg, 2004, p. 225; see also: Bamberg, 1997; Lucius-Hoene and Deppermann, 2004; Bamberg and Georgakopoulou, 2008; de Fina, 2013). Another way to analyze identity displays is Membership Categorization Analysis (Schegloff, 2007). Applying this method, analysts can describe how participants position themselves and others in relation to more or less conventionalized social categories by invoking, emphasizing or rejecting certain category-related attributes (Wilkinson and Kitzinger, 2003; Stokoe, 2005; Liebscher and Dailey-O'Cain, 2007; Tirado and Galvez, 2008; Deppermann, 2013).

Another methodological discussion concerns the question of which kind of knowledge researchers can include for interpreting identity displays. Conversation analysts argue that researchers should draw almost exclusively on ethnographic knowledge in the sense of long-term observation of participants, thus gaining

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[4]The pattern *Catalogue* refers to a sequence of turns of participants who respond to a request of the moderator, providing their answers one by one, without necessarily reacting to the content of the previous partners' talk. The pattern Gavora calls the *Domino* encompasses the participants responding to each other.

[5]See the dispute between Schegloff (1997, 1999); Wetherell, 1998, and Billig, 1999; as summarized by Korobov (2001).

familiarity with the field (see Bamberg and Georgakopoulou, 2008, p. 379, Georgakopoulou, 2013, p. 106; Deppermann, 2013, p. 106). However, Bamberg and Georgakopoulou (2008) show that further knowledge concerning societal discourses is also necessary to interpret identity-constructive utterances in group interaction. In one of their group interviews, a male participant jokingly starts to sing the song *It wasn't me* by Shaggy. The authors draw the analytical conclusion from "the meanings [.] this borrowing [from Shaggy] indexically evoke" that "both [the participant and Shaggy] engaged in women in largely hegemonic male ways and in (contradictory) denial of this engagement" (Bamberg and Georgakopoulou, 2008, p. 391). Hence, the authors consider the sequential context as well as the entire song text as a resource for their interpretation (see Bamberg and Georgakopoulou, 2008, p. 394, footnote 5). Since analysts are members of the same social community as the group participants, they are able to draw on shared knowledge (see also Garfinkel and Sacks, 1970); in this case about Shaggy as a public character as well as his performative display as a musician and as a heterosexual man.

For my framework, I follow an ethnomethodological perspective and do not consider identity-positionings as intentional or strategic. I assume that researchers can analytically reconstruct how individuals might use social categories in order to establish communalization or distinction with other participants, establishing ideas of sameness and distance e.g., by labeling social types or categories as *others* they distance themselves from Liebscher and Dailey-O'Cain (2014); Günthner and Zhu (2016). Furthermore, I suggest that analyses need to systematically include socially shared knowledge amongst members outside of the interaction about the media product and the social and popular cultural discourse in which it is embedded.

Analysis of Morality and Normativity in Group Interactions

There is a large body of research on the construction of norms and morality in interaction. Interlocutors might take what Rakoczy and Schmidt (2013) call a *normative stance.*, i.e., they constantly balance what they themselves and other interlocutors can, should, must or may (not) do or say. From an ethnomethodological perspective, participants produce, confirm, and negotiate these stances that refer to morality and normativity discursively and contextually in interaction (see Bergmann, 2013; Günthner, 2013). However, analysts typically do not have access to normative orientations, as interactants rarely explicate them. Instead, interactants use strategies of indirect moralization. They merely allude to shared moral knowledge without making this explicit or morally load certain utterances (Bergmann, 2013, p. 45).

When interlocutors talk about media, such as TV series, they display their taste by comparing what they know and (dis)like about it. Both negotiating assessments and knowledge can have moral dimensions (Raymond and Heritage, 2006; Stivers et al., 2011; Sidnell, 2012) which group members might interactively address by treating something as (not) normal. To reconstruct normative references, researchers analyze the

evaluative stances participants take toward an object of talk. However, since the stance triangle as suggested by Du Bois (2007) only encompasses the analysis of assessments (see section "Methodological Approaches for Studying Dynamics in Group Interactions: Conversation Analysis, Positioning Theory and Stance Analysis"), it has been further differentiated by means of analyzing claims, ascriptions, and rejections concerning a stance's epistemic dimension (see Heritage and Raymond, 2005; Stivers et al., 2011; Kiesling, 2016).[6] For example, from a conversation analytical perspective, Heritage (2012, p. 4) stated that interlocutors position themselves via epistemic stance-taking. By aligning their epistemic stances, participants locate themselves on an epistemic gradient of being more or less knowledgeable (K+ or K-) than their co-interlocutors concerning a certain territory of knowledge (Kamio, 1997). Assessments and epistemics are closely intertwined: How interlocutors distribute epistemic rights and obligations to assess something depends on the degree of displayed and/or assigned knowledge and strength of the evaluation (Raymond and Heritage, 2006), thus interactively orienting to epistemic authority (Mondada, 2013).

There is some research on references to moral discourses in group interactions. For instance, Hirvonen (2016) shows how groups establish and negotiate both institutional and conversational moral orders. Smithson (2000) argues that by applying Positioning Theory to focus group data, interactive features such as individuals dominating within a group can be related to tendencies toward normative discourses as well as managing conflicts and arguments. Similarly, Halkier (2010) analyses Danish women's cooking practices and demonstrates how an analytical focus on self- and other positioning as well as on establishing alliances within a group can contribute to an understanding of group dynamics in interaction in terms of the negotiation of norms and their moral implications. Grønkjær et al. (2011) discuss how the degree of a group's heterogeneity or homogeneity can influence the interactive construction of normality.

I integrate the analysis of the participants' epistemic and evaluative stances in my framework, identifying how the participants display, negotiate, or reject their mutual understanding of socially and/or culturally shared (moral) assumptions and what they treat as normal or deviant. I argue that they display communalization and distinction with regard to how they position themselves and others to these morally loaded discourses.

PROPOSAL OF A FRAMEWORK: POSITIONING PRACTICES FOR ESTABLISHING COMMUNALIZATION AND DISTINCTION

My framework is based on the proposition that participants in multi-party interactions constantly have to manage the local demands of the ongoing conversation and the turn-by-turn talk

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[6] Although Du Bois draws on the stance concept as suggested by Ochs (1996) who acknowledges both, epistemic and affective stance taking as essential.

as well as the implicitly or explicitly evoked references to global discourses, which in turn are closely related to the topic currently under discussion. As group members might position themselves and others with respect to this topic through epistemic and/or evaluative stance-taking activities, I use Stance Analysis identify a stance's target, which I call the *positioning object*.

For a detailed analytical access to the relationship between epistemic and evaluative positionings in terms of a specific positioning object, I suggest analyzing how participants, turn by turn, position themselves and others as more or less knowledgeable ($K+$ and $K-$ in Heritage's terminology) and communicate a more positive or rather negative assessment of a series. Depending on the interlocutors' positioning along these two dimensions of epistemic and evaluative stance as, e.g., more knowledgeable and critical or less knowledgeable yet appreciative toward a series they use different practices for claiming, assigning, and denying epistemic knowledge and authority. Interlocutors functionalize these practices for establishing finely granulated communalization and distinction activities according to how the other participants position themselves and others, thus constructing identity facets (see section "Analysis of Identity Construction in Group Interactions"). These practices and actions in turn can be analyzed on the micro-level of interaction (see section "Analysis of Contextual Relations in Group Interactions: The Role of Micro- and Macro-Context") by applying the sequential and context-sensitive methodology of Conversation Analysis.

However, the degree of specificity of the positioning object has consequences for the interlocutor's stance-taking activities. Participants may not only position themselves with relation to a specific topic (e.g., a specific TV series like *Game of Thrones*), but may also establish an abstract positioning object which can be morally loaded or embedded within normative discourses (see section "Analysis of Morality and Normativity in Group Interactions"), e.g., concerning the depiction of series characters. This changes the scope of positioning: not only does specific knowledge or specific assessments of a series a play role, but participants may also bring higher-level knowledge elements and discourses into the interaction for negotiation. As most conversation analysts do not systematically include topic-related features in the analysis, I suggest that Positioning Theory enables researchers to take into account references to D-discourses.

My proposed framework for studying group processes and dynamics of communalization and distinction can be summarized as the following (see **Figure 1**): I assume a triadic relationship between interlocutors and their discussed thematic issues, similar to the stance triangle by Du Bois (2007). However, unlike Du Bois, my model also includes two or more participants, with one person displaying a primary position and other participants aligning themselves with this position. I assume that the participants initiate a positioning object by expressing their evaluative and/or epistemic stance toward the object implicitly or explicitly, by assigning it to others or asking others about it. In this way, they position themselves with local scope, i.e., in the context of the ongoing interaction situation. Applying Positioning Theory, researchers can also identify positions with

global scope, i.e., related to discourses concerning the topic. I argue that researchers can integrate and reflect upon socially shared knowledge about these discourses in the analysis.

For practical analytical purposes, I suggest two steps: First, a micro-level analysis of communalization and distinction, and then a macro-level analysis. I analyze communalization and distinction on the micro-level by studying how alliances within the group are established and processed. Therefore, using Conversation Analysis, I examine and describe the group interaction's sequential structure to identify communicative actions that participants deal with (e.g., finding consensus, disagreeing, remembering). Via Stance Analysis, I analyze the epistemic and evaluative stances the participants take toward the positioning object and set the stances in relation to contextual features. Thus, I can reconstruct which positioning practices the participants use depending on their epistemic status and (d)evaluation of a positioning object as well as how they display and negotiate identity facets via self- and other-positionings.

Second, I detect communalization and distinction on the macro-level by applying Positioning Theory and interpreting how the participants position themselves and/or others in (dis-)alignment with discourses and narratives organized around the positioning object. I study how they refer to underlying norms and moral understandings by addressing the positioning object. In the following, I will apply the framework to a single case of my data as an example.

APPLYING THE FRAMEWORK TO A SINGLE CASE

My data comprise a corpus of ten video recordings I took of adolescent focus groups in Germany discussing TV series. Most recordings took place in rooms provided by the students' schools, such as empty classrooms or faculty rooms. The groups ranged from three to seven participants. All students voluntarily participated in the study and were required to give written consent for data collection, storage, and sharing. After instructing them to converse about the topic, I left the room and the participants organized their discussion by themselves, with the explicit request that they discuss the topic as a whole group and avoid schisming.

In the data extract selected for the analysis (**Extract 1**), the participants were in grade 11 at a German *Gymnasium* (secondary school). The group consisted of six members aged 17–18 years, of which three were male (Johann, Ole, and Robert) and three were female (Sonja, Sevcan, and Verena). The participants were arranged in a semi-circle in front of the camera (see **Figure 2**). Their teacher allowed the students approximately 60 min to participate in the study, as the study took place during a German lesson. The extract chosen from the group discussion deals with the series *Game of Thrones*, which proved to be a controversial series in the group as there was fierce disagreement regarding its quality.

The following transcript includes enumerated utterances from all of the group participants Sonja (SON), Ole (OLE),
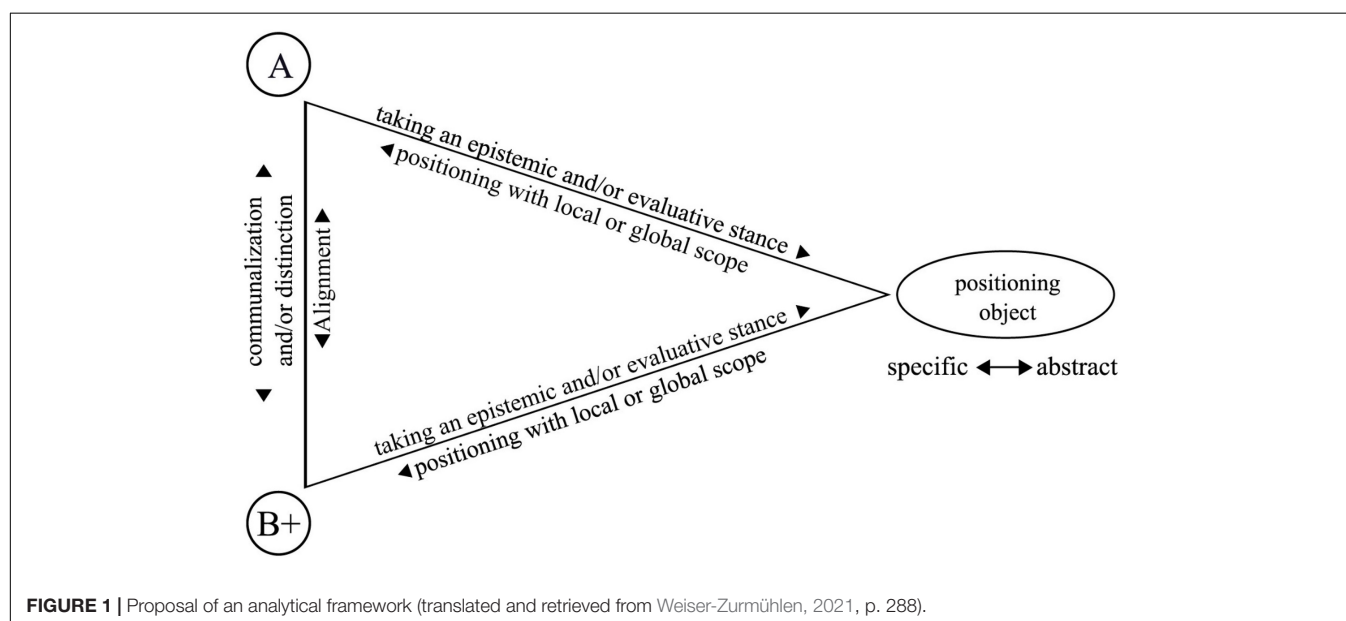
Verena (VER), Sevcan (SEV), Johann (JOH), and Robert (ROB). For a visual impression of the participants, see **Figure 2**. The extract was transcribed according to the conventions of *Gesprächsanalytisches Transkriptionssystem 2* (GAT 2; see Selting et al., 2011). This method captures not merely the verbal content but also non-verbal and prosodic features and their alignment with the verbal utterances. The German transcription conventions include capital letters to index emphasis of syllables, punctuation to show rising or falling intonation at a turn's end and square brackets to visualize overlaps and parallel speaking. With the English translation below each line, I try to capture the content and tone of the utterances but do not copy prosodical features.

The sequence starts with Ole asking who has watched the series *Game of Thrones*, followed by the others responding with different evaluations of the series (lines 422–434). Johann justifies his negative evaluation by referring to the frequent depiction of sex in the series; the depiction of sex then becomes the object of interactive negotiation (lines 435–449). As Johann announces that he has not watched a single episode of the series (lines 450–454), Verena challenges his assessment with regard to his epistemic status (lines 453, 454), followed by a repair sequence on the correct term to be used for an episode (lines 455–466). While Johann and Robert continue assessing the series negatively, Ole and Verena discuss the series in terms of content (lines 469–472; this part is left out of the transcript with considerations of space). The sequence ends with the group searching for a new topic to talk about (*Empire*) (lines 482–486), leading to a mocking sequence about Johann's general taste in series (lines 487–495).

I organize the analysis alongside the steps as suggested in section "Proposal of a Framework: Positioning Practices for Establishing Communalization and Distinction": First, I focus on the communalization and distinction on the micro-level, analyzing the sequential organization of turns,

FIGURE 2 | Arrangement of the group participants and the camera.
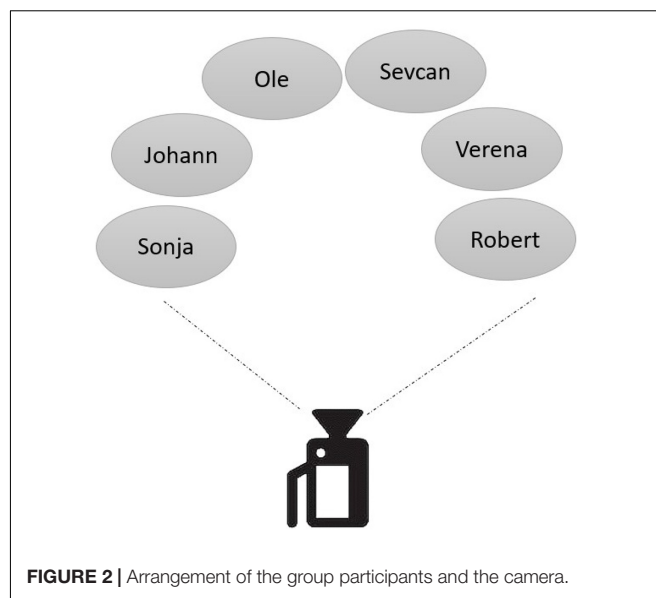
stance taking activities and positioning practices (section "Communalization and Distinction With Local Scope: Forming Interactive Alliances"). Second, I describe communalization and distinction on the macro-level by analyzing how the participants position themselves and others to discourses and narratives around series (section "Communalization and Distinction With Global Scope: Referring to Broader Discourses"). With the analysis, I aim to demonstrate two issues: On the one hand, I show how the participants establish communalization and distinction by forming two alliances. I reconstruct how they use a positioning practice I refer to as *challenging the epistemic authority for evaluation*. On the other hand, I show how communalization and distinction are also driven by identity

FIGURE 1 | Proposal of an analytical framework (translated and retrieved from Weiser-Zurmühlen, 2021, p. 288).

```
421    SON:    ja dann sag mal die NÄCHste serie;
               well then go ahead, tell us the next series
422    OLE:    wer hat game of THRONES gesehen;
               who has watched Game of Thrones
423    VER:    <<p>ich> ((meldet sich))
               me ((raises her hand))
424    SON:    ((meldet sich))
               ((raises her hand))
425    SEV:    ich [hab die erste FOLge [gesehen;            ]]
               I have watched the first episode
426    ROB:        [oKE ((unverständlich))                  ]
               okay ((incomprehensible))
427    JOH:        [game of THRONES is scheiße;             ]
               Game of Thrones sucks
428    SON:                              [ich die ersten FÜNF;]
               I (watched) the first five (episodes)
429    VER:    nein gAme of thrones is SUper; ((zieht den Ärmel ihres
               Oberteils nach unten))
                              no, Game of Thrones is super ((pulls down her sweater's
               sleeves))
430    JOH:    [ja das sieht man          ] nIch an deinem PULli?
               yeah, with the sweater you're wearing -  it's not obvious at all
431    SEV:    [ich hab die erste FOLge,]
               I have (watched) the first episode
432    VER:    ((lacht leise, 2.0)) ja,
               ((chuckles)) yeah
433            und?
               so what?
434    JOH:    [game of thrones is SCHEIße]
               Game of Thrones sucks
435    SON:    [ja aber die KARnevalskostüme] sind [überteuert;]
               yeah, but the carnival costumes are way too expensive
436    JOH:                                        [ey ohne    ] WITZ,
               ey, no kidding
437            die dürf-
               they must
438            die müssen da alles nur PORnodarsteller haben;
               there must be only porn actors (in this series)
439            =es !IST! so;
               that's a fact
440            =weil,
               because
441    VER:    äh:: SHAE ist ne PORnodarsteller[in;]
               uhm Shae is actually a porn actress
442    JOH:                                    [ja ] das WEISS ich,
               yeah I know
443            das hast du mir heute erKLÄRT?
               you explained to me today
444            (.) [äh:m-     ]
               uhm
445    ROB:        [((lacht))]
               ((laughs))
446    JOH:    das is doch richtig KRASS,
               that's really gross
447            ich mein da vögelt doch jeder die ganze zeit mit JEdem;
               I mean, (it's evident that) everyone's fucking everyone the whole time
448    VER:    [am ende nich mehr so KRASS;        ]
               in the end, (it's) not that bad anymore
```

EXTRACT 1 | (Continued)

```
449   SON:   [ja deswegen macht das doch SPASS] [das anzugucken; ]
             yeah, that's why it's fun to watch it
450   VER:                                      [wie viel hast du]
             geGUCKT,
             how much have you watched?
451   JOH:   das ein,
             that a-
452          (.) ich hab !GAR! [nichts    ] gegUckt man;
             I haven't watched anything at all, man
453   VER:                     [GUCK mal,]
             see?
454   JOH:   [nichts;]
             anything
455   VER:   [ja     ] SIEHST du?
             yeah, see?
456          dann WEISST du_s nich;
             then you don't know
457   JOH:   JUNge,
             dude,
458          (-) doch !EI!ne sendung hab ich geguckt,
             well, I've watched one show
459   VER:   SEri[e; ]
             series
460   JOH:       [und] da DACHT ich,
             and I was thinking,
461   VER:   FOLge;
             episode
462   OLE:   FOLGE ja;
             episode, yeah
463   (2.0)
464   JOH:   LECK mich;
             fuck off
465          (--) [ähm,      ]
             uhm
466   ROB:        [((lacht))] [STAFFeln;]
             seasons
467   JOH:                     [scheiße; ]
             it sucks
468          [SCHEIße,               ]
             it sucks
[...]
473   ROB:   [das is so ne DRECKserie oder,]
             it's such a bad series isn't it?
474          game of thrones;
             Game of Thrones
475   SON:   [nei(h)in;]
             no(h)o
476   ROB:   [das is,  ]
             it is
477          SO wie_s is kannst_e direkt den MOnitor reinklappen;
             it's so shitty you can just turn off your monitor
478   (1.0)
479   JOH:   das IS,
             it is
480          (.) [EHRlich;]
             honestly
481   VER:       [oh MANN;]
             oh dear
```

EXTRACT 1 | (Continued)

```
483              wo SEID ihr gerade,
                 where are you at the moment?
484     JOH:     fallen mir noch irgendwelche TOLlen sendungen ein?
                 can I think of any other good shows?
485              IMmer noch [bei game of thrones;]
                 (we're) still (talking about) Game of Thrones
486     ROB:                [hat jemand EMpire  ] geguckt,
                 has anyone watched Empire?
487     JOH:     hä,
                 huh?
488     ROB:     EMpire;
                 Empire
489     JOH:     [nein;]
                 no
490     OLE:     [find ] ich AUCH scheiße;
                 I think that sucks, too
491     (2.0)
492     VER:     du hast [dir gerad n FEIND <<lachend>gemacht;>]
                 you just created an enemy ((laughs))
493     OLE:             [du hast ECHT n,                       ]
                 you really have
494              du hast ECHT n schlechten;
                 you really have a bad
495              (.) SEriengeschmack;
                 taste in series.
```

EXTRACT 1 | Group OST11, 25'46"–26':39". Reproduced with permission from Kristin Weiser-Zurmühlen, available at https://www.degruyter.com/document/isbn/9783110727845/html.

work, morality, shared norms, and narratives around the conversational topic of the series.

Communalization and Distinction With Local Scope: Forming Interactive Alliances

At first sight, there are two subgroups who display different opinions about the series' quality, with one group in agreement about its brilliance (Ole, Verena, and Sonja) and the other about its dissatisfactory quality (Johann and Robin). In this extract, Sevcan explains to have watched the first episode, but she does not share her evaluation. Applying now a conversation analytical perspective on the extract, I describe how the participants design their utterances and produce a shared understanding of the current situation. I show how they mutually shift from displaying epistemic stances to evaluative stances which contributes to the emergence intergroup distinction.

Taking a look at the start of the sequence, Ole suggests talking about *Game of Thrones*. Although he designs his turn as an open question about the other group members' reception of the series, the participants start managing dissensus about their appreciation of the series during the course of the sequence. However, Ole's turn construction in terms of recipient design reveals that he assigns the other participants general knowledge about the existence of the series, probably due to its popularity. Other initial sequences in my data corpus usually start with formulations like "do you know series X?"; Ole, however, formulates the question as "have you watched series X?". Besides merely answering the question, e.g., by raising his hand (like Sonja and Verena), or by stating how many episodes he has

watched (like Sevcan and Sonja) (lines 425, 428), Johann treats Ole's first turn as an invitation for evaluation by producing a negative assessment: "Game of Thrones sucks" (line 427). This negative assessment provokes a contradiction by Verena (line 429). Despite his utterance overlapping with Sonja and Sevcan sharing how many episodes they have watched, the other participants pick up Johann's turn for further reaction. Thus, the group renews the context and shifts from (potential) exchange about the series' content to rating its quality. They open the interactional floor for managing communalization and distinction through the (dis)agreeing assessments. Consequently, the participants treat *Game of Thrones* as a positioning object, i.e., an object toward which one can take an epistemic and evaluative stance, thereby positioning oneself and others.

I analyzed how the group's participants throughout my data organize their stances in a typical way around the positioning object, using recurrent positioning practices. Verena uses a positioning practice I call *challenging one's epistemic authority for evaluation*, which unfolds as the following interactive pattern: After a group member evaluates a series negatively and provides their utterance with high epistemic certainty, yet apparently not grounded in sufficient epistemic status, other group members might deny the participant their epistemic authority for assessment. In what follows, I reconstruct the sequential unfolding of the positioning practice and describe how it is related to contextual features and identity work:

Initially, Johann rates the series in a very negative way (line 427), whereupon Verena seeks eye contact with him, contrasting his statement with an explicitly positive evaluation (line 429). Almost at the same time, she pulls down the sleeve of her sweater (line 429). Johann also refers to the garment by ironically

commenting on her evaluation: "yeah, with the sweater you're wearing—it's not obvious at all" (line 430). Using the video as an interpretational resource (see **Figure 3**), Verena's sweater is apparently part of the *Game of Thrones* merchandise. This is where I suggest applying a conversation analytical view of context (section " Analysis of Contextual Relations in Group Interactions: The Role of Micro- and Macro-Context") since Verena's clothes as an object of joint attention are actively brought in the interaction and reflexively confirmed as the current context, shaping the next context. Against the background of identity work and social categorizations (see section "Analysis of Identity Construction in Group Interactions"), the sequence can be understood as follows: Johann positions Verena (and she positions herself) implicitly as a "fan" of the series, which makes her positive assessment of the series expectable. Additionally, she—as an assigned member of the social category *fan*—claims the right to criticize and doubt his expertise for judging the series, positioning him in turn as less knowledgeable (K-). However, the interpretation that people wearing merchandise are likely to be a fan of this series and displaying this identity facet for others on their bodies is not only grounded in the groups' treatment of the garment but also in the researcher's background knowledge about media industries (see section "Analysis of Identity Construction in Group Interactions").

Johann argues against this positioning several times during the course of the sequence by justifying his negative assessment regarding the "fact" that all actors in the series were "porn actors" (line 438). He underlines his statement with a very strong emphasis on the verb "IS," signaling a high epistemic certainty (line 439). Verena interrupts his justification (line 440), ignoring his negative evaluation and instead of agreeing with him by confirming that the actress portraying Shae[7] was a pornographic actress (line 441). Here, it can be concluded that Verena attempts to establish a small degree of communalization with him by acknowledging the content of his utterance, but not the underlying evaluation. But Johann does not ratify this attempt, since he rejects the K- status implicitly attributed to him with reference to a former joint conversation (lines 442–444). Instead, he keeps on demonstrating to possess the epistemic authority to judge the actors' activities and the apparent focus on sex in the series (lines 446–447) via his evaluative stance, thus maintaining the distinction between Verena and himself.

Finally, in two steps, Verena challenges Johann's claimed epistemic authority for assessing the series' quality. First, she asks him how much of the series he has watched (line 450). As he has apparently not watched a single episode (lines 452, 454), thus violating the preference for displaying an evaluation grounded in sufficient epistemic access (see Enfield, 2011, p. 202), she challenges him using the formulation: "yeah see? you don't know;" (lines 455–456). Johann in turn modifies his epistemic status to the extent that he has watched one "broadcast" (line 458), but he does not change his judgement[8] (lines 467, 468). Verena, followed by Ole and Robin, initiates repair of his lexical

choice (lines 461, 462, 466). However, there is no repair uptake [following the preference structure for self- over other-initiated repair, see Schegloff et al. (1977), p. 374]: Johann continues to use the now-corrected term "broadcast".[9] His answer ("fuck off", line 464) is not designed in a face-saving way—albeit framed jokingly. He does not downgrade his evaluation after Verena's challenge, but merely modifies his epistemic stance (lines 452, 458). Some other group members attempt to reframe Johann's negative assessment as well as to build him "bridges" for downgrading his extreme evaluation. For example, Verena and Sonja ratify his assertion that the series includes pornographic elements (rather than contradicting him). However, they interactively deal with it differently: While Verena declares it to be no longer applicable to current episodes (line 448), Sonja reinterprets Johann's negative reason for evaluation positively, strengthening that she enjoys the display of sexuality in the series (line 449).

Both subgroups achieve intragroup communalization by agreeing and strengthening each other's positionings while at the same time maintaining intergroup distinction for instance as Robin fosters Johann's evaluation: "it's such a bad series, isn't it?" (line 473) while Sonja contradicts fiercely (line 475) which then finally culminates in jokingly questioning Johann's general taste (lines 493–495). The distinction cannot be easily resolved due to different epistemic positionings: The participants who like the series ground their expertise in displaying their knowledgeability of the *Game of Thrones* universe. In this extract, this can be seen by the group members implicitly referring to background knowledge about the actors (line 441) and merchandise (line 435). In contrast, Johann and Robin who position themselves as critics by drawing on second-hand information admit to having watched only one or a few episodes.

Communalization and Distinction With Global Scope: Referring to Broader Discourses

Johann grounds his negative evaluation of the series' overt displays of sexuality in morality, i.e., he frames it as something inappropriate for the media production. This is where my framework allows for including broader discourses in the analysis (see section "Analysis of Contextual Relations in Group Interactions: The Role of Micro- and Macro-Context"): Aesthetic products can be regarded as embedded in normative discourses, as Bourdieu (1984) studies about social distinction and class demonstrate. Series, like other media products, can be divided into "high" and "popular culture," with aesthetic artifacts associated with high culture commonly being socially deemed more appreciable and acceptable as leisure activities (see e.g., Buhmann et al., 2015, p. 7). In turn, consuming products identified as "popular" coincides with moral implications on both the products and the recipients (Fiske, 2011, p. 102). However, several academic fields, such as Cultural Studies, emphasize the recipients' active and productive participation in popular culture by using it for their own identity work and appropriation (Jenkins, 1992; Johnson, 2006). Furthermore, the

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[7]Shae is the name of a character played by Sibel Kekilli.

[8]Nor does he in the following sequences about *Game of Thrones* in the course of the group discussion.

[9]He continues referring to episodes, seasons and series titles all as "broadcast" throughout the discussion.

FIGURE 3 | Verena pulls down the sleeves from her sweater, revealing it as part of the *Game of Thrones* merchandise.

view on formats traditionally devalued as "popular" changes: As for TV series, for instance, certain kinds of shows have been categorized as Quality TV (see Thompson, 1996; Blanchet, 2011), thus attempting to upgrade the image of television shows.[10] However, Cultural Studies understand popular culture as an opportunity for recipients to deal with media affordances (Gibson, 1979) independently and creatively. Starting with Stuart Hall (1980) encoding-decoding model, it has become commonly accepted that encoded media meanings do not necessarily have to be adopted by users for them to negotiate these meanings in context. Researchers stress that media recipients choose which features to treat as relevant for their identities (see Hepp et al., 2015).

Including these considerations in the analysis, Johann's moral positioning and his refusal to relativize it, even after having been challenged on the surface (he has not sufficient epistemic access), become explicable: He distances himself not only from the other group members and their taste in this series, but also from a certain associated D-discourse (section "Analysis of Contextual Relations in Group Interactions: The Role of Micro- and Macro-Context"): displays of sexuality can be included in the perception of something being popular, mainstream, and not of high (cultural) value. Thus, he also positions himself as not *that* kind of series recipient in the sense of a "category-based denial" (Stokoe, 2010, p. 69), which can be seen in his distancing himself from Verena as a fan. Yet, morality is actively brought into being by the participants (see section "Analysis of Morality and Normativity in Group Interactions"), negotiated interactively and even appropriated against hegemonical readings, as Sonja uses the depiction of pornography—as something not ascribed to high culture—as a means of entertainment and as a reason for watching the series. To interpret this positioning, researchers need to explicitly include knowledge that is not grounded in

the ethnography of the group interaction, but in socially shared knowledge about media discourses and norms (see also the "Shaggy"-example in section "Analysis of Identity Construction in Group Interactions").

In sum, the participants establish the intergroup distinction and communalization among the subgroups' members at the beginning of the sequence and they constantly uphold and reinforce it. However, not only do the different epistemic positionings contribute to their maintenance but two different layers of morality addressed by the interlocutors also seem to interact here: On the one hand, Johann does not follow the moral duty to ground his epistemic authority in sufficient epistemic access, which is interactively sanctioned by challenging his positioning. On the other hand, Johann grounds his positioning in moral assumptions about pornography as inappropriate for a TV series. He treats this assumption as shared with the other participants, but is contradicted once again by Sonja who enjoys the series' display of pornography.

DISCUSSION

I propose to include communization and distinction as relevant phenomena in the analysis of group interactions, as they are phenomena to which participants regularly orient. My framework helps to understand how interlocutors negotiate intragroup similarities and differences at different levels. As my analysis demonstrates, communalization and distinction can be located at the micro-level of interactional organization as well as at the macro-level of societal and ideological discourses. Both the micro- and macro contexts are intertwined. For instance, on the one hand, interlocutors use positionings to accomplish communicative actions, namely dealing with dissent and face work; on the other hand, the students also position themselves beyond the interaction situation and implicitly refer to media-related norms and ideologies. Both forms of positionings relate to issues of identity and morality:

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[10]However, from a critical discourse analytic perspective, this is also meant to be seen critical, since series labeled as "quality TV" typically refer to US-American high budget productions for an educated audience (see Staiger, 2019, p. 174).

Johann constructs his identity in terms of expertise, as someone with the epistemic authority to judge the quality of the series. Through the positioning practice of *challenging one's epistemic authority*, Verena questions not only his right to assess but also his identity construction as an expert, positioning him as less competent than he claims to be. In contrast, he implicitly positions Verena as a fan of the series and, at the same time, as distanced from the social category "fan." Moreover, Johann positions himself as someone with a "good" taste who rejects inappropriately designed and narrated media products and their reception—and thus also implicitly their recipients. Researchers can study this identity-related distinction between the group members by tracing the sequential course of the interaction as well as considering socially shared knowledge about connotations of "being a fan" and ideological media-related discourses.

By relating micro- and macro-contexts, morality appears to be essential for positioning dynamics in group interactions. However, the participants make morality relevant on different levels. Displaying epistemic authority to assess something without sufficient access is a moral problem at the level of interaction (see Heritage and Raymond, 2005; Enfield, 2011), as assessments tend to be no longer ratified by other participants when they are obviously not grounded in sufficient epistemic access. Thereby, Verena positions Johann implicitly morally inferior because he violated interactional moral orders. On the other hand, Johann positions himself as morally superior by assessing the series and its apparent pornographic content, grounding his position in ideological discourses. The analytical finding that the participants make morality relevant on different levels helps to understand why both intergroup distinction as well as intragroup communalization are upheld and fostered during the course of the interaction: The subgroups apply different standards and justifications for their expressions and moral judgments and accordingly construct different identities, which in turn are interactively addressed and treated differently.

In this case study it becomes clear that in multi-party interactions participants face complex positioning possibilities. The more—diverging—positionings there are, the more the interlocutors have to take into account with whom they commune or from whom they distinguish themselves when they take an evaluative stance toward the topic. Their positioning can be grounded in communicative actions such as face work or managing humorous dissent, but it can also refer to broader discourses. In this way, participants have a complex range of possibilities to form, consolidate, or change alliances with other group members. They can orient themselves in a finely granulated way to a large selection of positions and can thus position themselves or others.

This complexity can be grasped analytically by examining group data with the presented three methods and then relating the results to each other. In the following, I discuss which method is suitable for considering which aspect and how to deal with possible incompatibilities between them. Combining Conversation Analysis and Positioning Theory could lead to what Deppermann (2015, p. 381) calls the "micro-macro problem" (see

also Habscheid, 2000; Day and Kjaerbeck, 2013). Conversation Analysis focuses on predominantly local practices on the micro-level of the interactional situation. Epistemic positionings such as the one between Verena and Johann, grounded in the sequential course of the conversation and functionalized to distinguish between the two, can thus be reconstructed in detail. References to ideologies in the sense of D-discourses, on the other hand, are only to be included if the participants orient to them (see section "Analysis of Contextual Relations in Group Interactions: The Role of Micro- and Macro-Context"). Hence, Positioning Theory offers a fruitful view of individuals' orientation to higher-level structures. Additionally, although some conversation analysts take topics into account, there is little work on the sequential unfolding of topics (cf., Maynard and Zimmerman, 1984), including narratives and discourses. This sequential analysis of interlocutors highlighting certain aspects of topics in interaction is precisely what Stance Analysis offers: studying the relationship between participants and a somehow shaped "topic of conversation" interlocutors orient to as conceptualized in Du Bois' stance triangle.

I include both the concepts of stances and positionings into my framework because they offer a finer distinction in terms of their reference point. Positionings refer to more abstract entities than social discourses while stances refer to relationships between "speakers and speakers and conversations" (Kiesling, 2011, p. 2). In contrast, merely analyzing positionings and stances does not follow the constructivist view on context as Conversation Analysis does. Du Bois in particular only considers a few previous and next turns for his analyses and focuses mainly on syntactical alignment. Indeed, some researchers argue that Stance Theory and Conversation Analysis cannot be combined. However, Haddington shows how to understand stance taking as an "activity" in a conversation analytic sense. When stance can be understood as "the speakers' subjective attitudes toward something," stance *taking* "can be understood as a dialogical and intersubjective activity" (Haddington, 2004, p. 101). Moreover, Conversation Analysis helps to describe positionings and how they are conveyed multimodally. The rich conversation analytic research on interactional phenomena, such as recipient design, repair, etc., provides useful descriptive tools for the variable interactive resources conversational partners use to shape their stances and positionings. For example, prosody in the form of very strong stresses plays a central role in Johann's epistemic positioning while Verena's clothes become object of negotiating positions.

That identity and morality play such a central role is a finding I inductively grounded using Conversation Analysis as an approach to the data. I have reconstructed sequentially and systematically which orientations and topics are relevant for the participants. Thus, I described how they achieve communalization and distinction in a nuanced way by referring to different contexts and shared knowledge about discourses, identity facets and moral implications. While not all topics are as morally loaded as the topic presented here, it can still be assumed that these three aspects are important in other group contexts from the participants' perspective. Especially since both identity and

morality are rarely foregrounded interactionally and explicated communicatively (see Antaki et al., 1996 on identity; Bergmann, 2013 on morality).

With my approach, I aim to shed light on the way group processes are interactionally brought into being and to get an analytical grip on them. In combination with Positioning Theory and treating the target of the displayed stances as the positioning object, it is not only possible to trace how these practices are situated in the sequential unfolding of the interaction, but also to describe implicit references to topic-related discourses. Hence, by systematically relating micro- and macro-analytical findings to each other dynamic communalization and distinction activities can be described and interpreted. This procedure might be transferred to other pre-determined topics discussed by focus groups. The framework been proven especially fruitful for studying focus group interactions where all members usually participate in conversation about one topic. However, the framework might also serve as a useful description tool in further research projects for studying dynamics in more naturalistic group interaction settings.

DATA AVAILABILITY STATEMENT

The datasets are not completely available because the participants did not give written consent to share the videos. However, all of the transcripts of the data analyzed for this study (in German language) can be found on the following website: https://www.degruyter.com/document/isbn/9783110727845/html, licensed as CC BY NC ND.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent to participate in this study was provided by the participants' legal guardian/next of kin.

AUTHOR CONTRIBUTIONS

KW-Z agrees to be accountable for the content of the work.

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Accomplishing Intergroup Relations in Group Homes: A Discursive Analysis of Professionals Talking About External and Internal Stakeholders

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Focusing on one of the most studied dimensions of Social Psychology, i.e., intergroup relations, this study analyzes its discursive accomplishment in a specific group-based intervention, i.e., the talk and work of an Italian group home, i.e., a small alternative care facility hosting a group of out-of-home children. Particularly, we focused on the fictionally called "Nuns' Home," a group home previously investigated for its ethnocentric bias, and its intergroup relations with "inside" and "outside" groups, such as schools, biological families, and social services. By combining a qualitative and quantitative approach in analyzing one audio-recorded ethnographic interview with the whole team of professionals, we aimed at accounting for the multitude of internal and external stakeholders that participants refer to, analyzing the discursive accomplishment of ingroup and outgroup in talk-in-interaction and investigating ingroup bias and group qualification. To do so, we detected social categorization markers and qualifying devices that participants rely on when referring to groups. Results show that, among the numerous groups recognized, participants co-construct intergroup relations and ingroup bias implying negative assessment over external groups. Being different from traditional laboratory studies illustrating substantial contraposition between ingroup and outgroup, our qualitative analysis reveals the multitude of groups by which the ingroup is formed and their internal fragmentation. To conclude, we discussed the implications of qualitatively studying intergroup relations in group homes and indicated future lines of research.

Keywords: intergroup relations, group homes, ethnographic interview, communities of practices, discourse analysis, ingroup bias

INTRODUCTION

One of the most prominent theories in Social Psychology is the social identity theory (SIT, Tajfel and Turner, 1985), a framework for investigating group processes and intergroup relations (Haslam et al., 2010). It is defined as "that part of an individual's self-concept which derives from his knowledge of his membership of a social group (or groups) together with the emotional

significance attached to that membership" (Tajfel, 1974), SIT has been studied with reference to the *ingroup bias* (Turner, 1975; Hogg and Terry, 2000), i.e., the preference for one's own group (ingroup) in opposition to a group that one does not belong to (outgroup), and the social categorization theory (SCT, Turner et al., 1987), i.e., the cognitive representation of oneself with reference to group belonging. This theoretical framework has been studied by a series of experiments known as "minimal group studies," in which laboratory participants casually assigned to experimental groups were asked to make the decision based on group belonging. Experimental results show that we positively judged the ingroup by referring to positive internal causes and prototypes – producing normative behaviors, cohesion, cooperation, and altruism (Hogg and Terry, 2000), and conversely, we negatively judged the outgroup, due to our cognitive ethnocentric bias, known as "fundamental attribution error" (Heider, 1958; Ross, 1977), partially explaining the development of prejudices and stereotypes.

However, this laboratory body of research privileged the study of social categories and large groups involving individuals who were not usually in interaction, failing to address social investigations with "natural" groups, i.e., non-artificial and historically based individuals connected by ordinary relationships (Zucchermaglio and Talamo, 2000). Bridging this gap, the qualitative line of group research (Edwards, 1995; Engeström and Middleton, 1996; Alby and Zucchermaglio, 2008) contributes by focusing on social and discursive interaction of "real-life" communities of practices (Lave and Wenger, 1991 p. 98): "a set of relations among persons, activity, and world, over time." Therefore, intergroup relationships appear to be more complex than the sole ingroup-outgroup opposition, defining social identity as a "complex rhetorical-argumentative manipulation of one own's (and others') social positioning in a group, depending on variables such as the participants' role and the topic of discursive interaction" (Zucchermaglio and Talamo, 2000, p. 524; on this topic, also refer to Wilson and Zeitlyn, 1995; Zucchermaglio and Talamo, 2000; Zucchermaglio, 2005; Alby and Zucchermaglio, 2008; Zucchermaglio and Alby, 2011; Brito Rivera et al., 2021; Fantasia et al., 2021. Membership categorization studies of Conversational Analysis (Sacks, 1972, 1992; Stokoe, 2012) contribute to the implementation of this body of research, showing that during the conversation, we frequently ascribed people to certain identity categories "by reference of either an explicit mentioning of the category term *(labeling)*, or a *description* of actions or 'predicates' *bounded* to that category" (Fantasia et al., 2021, p. 452; also refer to Fasulo and Zucchermaglio, 2002; Benwell and Stokoe, 2011; Stokoe, 2012).

Particularly, interesting for this body of "*in vivo*" investigation of natural communities of practices can be group homes, i.e., alternative care settings temporarily recovering children who have experienced severe hardships (Rutter, 2000; Sellers et al., 2020). As group-based care intervention (Lee and Barth, 2011), group homes *host groups* of children, are, in fact, *organized in groups*, *managed by groups* (either residents or coordinated in shifts), and they deliver their intervention in *forms of a group care milieu* (Whittaker et al., 2016). Unfortunately, this intensive group-based work has been very little investigated so far, and even less (theoretical and empirical) emphasis has been given to their intergroup relations with "outside" groups, such as schools, biological families, social services, representing crucial interlocutors for children's wellbeing. Bridging this gap and drawing on emergent literature focused on the discursive accomplishment of intergroup relations, we drew on a single-case study of an Italian group home. Our aims were as follows:

- accounting the multitude of internal and external stakeholders that participants refer to;
- analyzing the discursive accomplishment of ingroup and outgroup;
- investigating ingroup bias and group qualification.

Belonging to a broader dataset focusing on many discursive maneuvers this group relies on (Saglietti and Marino, forthcoming), this study corroborates the qualitative literature on group research by enlarging the empirical and analytical body of research on the discursive accomplishment of intergroup relations of "natural" communities of practices.

MATERIALS AND METHODS

The Research Project

This study is part of a larger Ph.D. ethnographic project aimed at analyzing the everyday talk and work of three Italian group homes based in Rome (Saglietti, 2012; Saglietti and Zucchermaglio, 2021). The researcher's access was negotiated with the local Social Services manager as well as with the professionals working in the selected settings (i.e., managers, social educators, psychologists, supervisors, and volunteers) and children hosted at the time of research. This study received approval from the University Ethics Committee, from the local Social Services of the Municipality of Rome (IT), and from the deputy public prosecutor of the local Juvenile Court. Professionals and tutors of children signed a written informed consent prior to data collection, according to the Italian Law concerning data protection and privacy. For the purpose of this study, we focused on a single facility, fictionally called "Nuns' Home." In previous comparative analyses based on organizational and conversational data (Saglietti, 2010, 2012; Saglietti and Zucchermaglio, 2021), it has proven to be based on ethnocentric biases and closeness to external stakeholders.

Context and Participants

"Nuns' Home" belongs to a Catholic female congregation. Previously hosting an orphanage, it is located in a building that, after the 149/2001 Italian Law, has been divided into two separate units. "Nuns' Home" is one of them. At the moment of the research, this group home-hosted 7 children (4 boys and 3 girls, from 4 to 13 years old). Thereby, the professionals involved were three resident nuns (within them, the general manager), one non-resident educator (working on

weekday afternoons), and one psychologist (offering in-house child psychological support).

Data Collection, Selection, and Analysis

The research gathering conducted by the first author of this study took place from May 2007 to May 2009. The author collected ethnographic pen-to-paper participant observations of daily activities, shadowing of social educators and managers, audio-recordings of the staff's weekly meetings, video-recorded dinnertime interactions, and two audio-recorded ethnographic interviews: one with resident nuns, and one with all team members. For this study, we focused on the latter. As a means to give voice to participants without fixing an *a priori* ideal interview structure and numbers of encounters (Serranò and Fasulo, 2011), the ethnographic interview built up discussion around specific issues that emerged during ethnographic observations, and particularly: (1) "Nuns' Home" historical paths and challenges; (2) aims of the group home; (3) organizational management and everyday interaction; (4) relationships with external groups; and (5) views of professionals on strengths and limits about their interventions.

The ethnographic interview lasted 1 h and 51 min, and it was fully transcribed *verbatim*. In the first step of our analytical procedure, we listened multiple times to the original audio recordings and reread the transcripts, adjusting and finalizing the transcription process. In this phase, we also underlined the references that professionals made to intergroup relations, keeping in mind that "they are not preexisting outside discourse, but are 'talked into being,' that is, produced by the members to the interaction and can therefore be analyzed" (Maheux-Pelletier and Golato, 2008, p. 690). To investigate intergroup relation discursive accomplishment, for the purpose of this study, we focused exclusively on two discursive devices that we detected during this analytical phase, namely, social categorization markers and qualifying devices.

In line with previous research, we identified "social categorization markers" as any *group-referring expression* (GRE), i.e., collective nominal that refers to "a set of people, whether it be the addressee[s], (. . .) other participant[s], or absent part[ies]" (Wilson and Zeitlyn, 1995, p. 70) and pronominal markers (Zucchermaglio and Talamo, 2000; Zucchermaglio, 2005) that "are likely to be especially powerful influences in social cognition and perception. When these terms are used in reference to people, they are linked to one of the most basic decisions in person perception: the cognitive categorization of people into one's ingroup or outgroup" (Perdue et al., 1990, p. 475). To investigate group qualification, with the term "qualifying devices," we intended any adjective that describes the qualities of a group of people, usually located next to nouns, pronouns, or locutions referring to groups, implying assessment.

Taking into account the many implications and limits of coding a conversation (Schegloff, 2010; Steensig and Heinemann, 2015; Stivers, 2015) and considering the consequential nature and ambiguous delimitation of any coding definition, we nevertheless agreed on a codify and counting strategy. It has, therefore, been based on the following operations: (1) items were counted as phenomena (and not by means of their turn occupation);

(2) each item was counted independently from its sequential location (i.e., we counted the exact number of items, even if they co-occurred in the same turn); (3) internal stakeholders were assigned to the "ingroup" category, i.e., groups that are physically operating within "Nuns' Home", in the present, past, or (potential) future, and external stakeholders were assigned to the "outgroup," i.e., groups that operate outside "Nuns' Home"; (4) each item was assigned to either ingroup or outgroup, based on the reference that participants used during the interview. We excluded from our dataset professionals' implicit references (i.e., implicit pronominal references[1]) and singular expressions. Independently from their pragmatic function, we considered – and consequently counted – GREs, with reference to (a) *pronouns* used for referring to groups[2] and (b) *common nouns*, i.e., generic names for groups of people. Within this last category and with reference to the family-like context of study, we also detected the use of *kin terms*, i.e., kinship nouns, such as nicknames, endearments, and effective references. With reference to the counting procedure of qualifying devices, we labeled each marker either as "positive" or "negative." We coded a positive qualifying device if it was one (or more) of the following cases: (a) an augmentative adjective/locution/phrasal expression, with positive evaluation; (b) positive assessment of an adjective/locution/phrasal expression; and (c) comparative or superlative adjective with a positive evaluation. Conversely, we coded a negative qualifying device if there was: (a) a negation particle before an adjective, conveying global negative evaluation; (b) pejorative adjective/locution/phrasal expression; (c) diminutive adjective/locution/phrasal expression without positive affective tones; and (d) comparative or superlative adjective with negative evaluation. Furthermore, we coded as "residual," each qualifying device that was not evaluated nor negative or positive. For any of the abovementioned coding and counting actions, we double-checked the operations and jointly discussed ambiguous cases.

RESULTS

In this section, we illustrated our results by focusing on emergent groups that professionals refer to and by displaying social categorization markers and qualifying devices used for internal and external stakeholders.

Internal and External Stakeholders

Our analysis first shows that participants refer to numerous stakeholders, either internal or external, and with reference to past, present, and future. During the ethnographic interview, participants mentioned internal stakeholders (either groups, organizations, or couples) 668 times (refer to **Supplementary Figure 1**). In contrast, participants mentioned external

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[1] Nevertheless, following the study by Schegloff (1993), we are well aware "that one can avoid using a person reference 'filler' and yet still achieve reference" (Wilson and Zeitlyn, 1995, p. 66).

[2] In Italian, they are as follows: noi (we/us), voi (you), essi, loro (they), ci, ce (us), si, se (them), ve, vi (you), and li (them). We excluded from the dataset when these devices were part of reflexive verbs and locutions.

stakeholders 254 times (refer to **Supplementary Figure 2**). At the first glance, we can see that professionals refer to internal stakeholders around three times more than external ones. Conversely, they mentioned a greater number of external stakeholders (15 external ones vs. 11 internal ones). When referring to external groups, professionals mentioned three different types of family, namely, the extended biological families of children in care, the adoptive and foster families where children in care can be hosted, and the families of schoolmates, and two generalized categories, namely, "external context" (e.g., "the world out there") and "external people" (e.g., "the common sense people"), using a different granularity with respect to internal stakeholders. In fact, when talking about internal stakeholders, professionals made reference to subgroups of either past ones, present, or future ones.

Internal Stakeholders (Ingroup)

Taking into consideration internal stakeholders, participants referred to eight groups, two couples (i.e., educator and in-house psychologist and general manager and in-house psychologist), and one organization (i.e., the congregation).

Table 1 illustrates the frequency distribution of the use of professionals of social categorization markers when talking about internal stakeholders. During the ethnographic interview, the most frequent reference has been made to children in care, to staff and children, and to the whole staff (i.e., nuns, educator, and in-house psychologist). On the contrary, the less frequent references have been made to in-house psychologists and children, auxiliary staff, and volunteers.

In detail (**Table 1**), we observed that for what is concerning the use of common nouns, the most mentioned internal stakeholders were the children in care (168), the group of children and staff included (126), and nuns (20). Furthermore, kin terms were mainly used for nuns (4) (refer to **Supplementary Material**). For what is concerning the use of pronouns, the most mentioned internal stakeholders were the entire team (102), followed by the nuns (62) and children (55) (**Table 1**). **Table 2** illustrates in detail the qualifying devices used by professionals when referring to internal stakeholders, i.e., ingroup.

Table 2 displays that internal stakeholders have been frequently qualified. The most defined ones were as follows: children (47 qualifiers); nuns, educator, and in-house psychologist (29); and nuns (7). The less defined subgroups were as follows: volunteers and future staff members (1 for both categories). There are several groups with no use of qualifying devices. In general, internal stakeholders were positively assessed in 45% of cases and negatively assessed in 28% of cases, and the residually qualified were 27%. In percentage terms, the most positively evaluated were volunteers (100%, e.g., "free"), nuns (86%, e.g., "stable"), and staff (79%, e.g., "strong"). Conversely, the most negatively qualified were the group of children (45%, e.g., "blocked," "detached," and "too distressed"), followed by the entire staff that has been qualified with negative terms in the 14% of cases (e.g., "not structured").

External Stakeholders (Outgroup)

For what is concerning external stakeholders, participants referred mainly to organizations (8) and groups (6); residually,

they refer to a couple (1), i.e., a single mother and child (refer to **Table 3**).

Table 3 illustrates the frequency distribution of the use of participants of social categorization markers when talking about external stakeholders. The most frequent references have been made to schools (58), children not in care at "Nuns' Home" (44), extended biological families of children (44), and to social services (20). On the contrary, the less frequent references have been made to public administration (2), adoptive and foster families (2), university (2), police (1), and mother and child dyad (1). In detail (**Table 3**), we observed that for what is concerning GREs, almost all external groups were mentioned through common nouns (250 on 254), while kin terms (refer to **Supplementary Material**) and pronouns were used only residually (**Table 3**). Pronouns were used only for social services (2), children not in care (1), and mother and child dyad (1).

For what is concerning the frequency and use of qualifying devices, **Table 4** displays that external stakeholders have been frequently qualified. The most "defined" organizations were schools (11) and healthcare services (5), while the most qualified groups were children not in care (6), extended biological families of children (7), and adoptive and foster families (3). The less defined organizations were as follows: other residential care facilities, external context, judicial services, and police (1 for both categories).

In general, external stakeholders were negatively assessed in 58% of cases, positively in 17% of cases (while residually qualified in 25% of cases). In percentage terms, the most negatively evaluated were extended biological families of children (e.g., "very disintegrated" and "destructive"), other residential care facilities ("not protective"), judicial services, police (100% for both categories), and schools (91%, e.g., "invasive"). Conversely, the most positively qualified were the adoptive and foster families (67%, e.g., "long-lasting"), followed by healthcare services that have been qualified with positive terms in the 20% of cases (e.g., "well prepared").

DISCUSSION

Differently from a traditional laboratory study on intergroup relations, our investigation has been based on a real-life community of practice of professionals that rely on – and at the same time delivers – intensive group care work. Our results illustrate that intergroup relations are locally tied and categorically permeable. First, by accounting for the multitude of discourses of ingroups and outgroups that professionals refer to, our results illustrate the complexity of different internal and external groups (mentioned as past groups, present ones, and hypothetical ones in the future). Rather than being established *a priori*, these categories appear to be permeable: interestingly, in fact, each professional include herself and other members (children included) in different ingroups at the same time, involving subgroups, couples, and organizational roles. To do so, participants explicitly rely on collective nouns, kin terms, and positive qualifications. In contrast, external stakeholders were less frequently enumerated and more negatively qualified. Very few

TABLE 1 | Frequency and percentage of internal stakeholder (ingroup) social categorization markers.

Social categorization markers	GRE – Common nouns		GRE – Pronouns		Total for each category	Total on 668
	f	*%*	*f*	*%*	*f*	*%*
Children in care	168	*75*	55	*25*	223	*33*
Staff and children in care	126	*100*	0	*0*	126	*19*
Nuns, educator, and in-house psychologist	15	*13*	102	*87*	117	*18*
Nuns	20	*24*	62	*76*	82	*12*
Educator and psychologist	14	*23*	46	*77*	60	*9*
Future staff members	19	*100*	0	*0*	19	*3*
Congregation	11	*92*	1	*8*	12	*2*
General manager and in-house psychologist	0	*0*	10	*100*	10	*1*
Auxiliary staff	9	*100*	0	*0*	9	*1*
Volunteers	9	*100*	0	*0*	9	*1*
In-house psychologist and children	0	*0*	1	*100*	1	*0,1*
Total	391	*59*	277	*41*	668	*100*

Italic indicates difference between frequencies and percentage values.

TABLE 2 | Frequency and percentage of internal stakeholder (ingroup) qualifying devices.

Internal stakeholders	Total		Positive		Negative		Residual	
	f	*%*	*f*	*%*	*f*	*%*	*f*	*%*
Children in care	47	*53*	10	*21*	21	*45*	16	*34*
Nuns	7	*8*	6	*86*	0	*0*	1	*14*
General manager and in-house psychologist	0	*0*	0	*0*	0	*0*	0	*0*
Nuns, educator and in-house psychologist	29	*33*	23	*79*	4	*14*	2	*7*
Educator and psychologist	0	*0*	0	*0*	0	*0*	0	*0*
Staff and children in care	0	*0*	0	*0*	0	*0*	0	*0*
In-house psychologist and children	0	*0*	0	*0*	0	*0*	0	*0*
Volunteers	1	*1*	1	*100*	0	*0*	0	*0*
Future staff members	1	*1*	0	*0*	0	*0*	1	*100*
Auxiliary staff	2	*2*	0	*0*	0	*0*	2	*100*
Congregation	2	*2*	0	*0*	0	*0*	2	*100*
Total *f*	89		40		25		24	
Total%	*100*		*45*		*28*		*27*	

Italic indicates difference between frequencies and percentage values.

external groups were "talked into being" by using kinship terms, and only a residual number of them were invoked with pronouns, marking their relevant social identities as distant and uniformed, as in any "othering" process, i.e., when building homogenous external groups (Lalander and Herz, 2018).

By the analysis of group qualifications, our discursive study substantially confirms the ingroup bias, promoting an internal valorization of the ingroup over the outgroup. This is particularly evident when professionals compare their work with the other residential care facilities, and when they qualify children in care and their biological families, echoing the use of "contrastive rhetoric," frequently used in the social work field "when establish[ing] a deviant case for discredited character" (Hall et al., 2006, p. 56). Conversely, "external" substitute families, such as adoptive and foster families, appear to be more positively judged.

However, the discursive accomplishment of the ingroup bias appears to be not for free in terms of interactive work: participants use around three times more social categorization markers to refer to internal stakeholders. If on the one hand, this can be related to the institutional format of the interview, explicitly asking to make sense out of their work, on the other hand, it appears as though they need a greater amount of interactive work to justify, compare, and make distinctions over itself, opening up for internal fragmentation.

Unquestionably, however, an internal group appears to be constructed as more "familial" (see the use of kinship terms) and more positively qualified over the rest: the group of resident nuns. According to SIT, this can be explained by referring to internal prototyping (Hogg and Terry, 2000), implying a clear theory of governance, organizational and moral leadership of nuns over the rest of the team.

Additionally, by frequently relying on comparison between internal and external groups, between "good and evil," this discursive accomplishment echoes the activity of stereotyping,

TABLE 3 | Frequency and percentage of external stakeholder (outgroup) social categorization markers.

Social categorization markers	GRE – Common nouns		GRE – Pronouns		Total for each category	Total on 254
	f	%	f	%	f	%
Schools	58	100	0	0	58	23
Children not in care at "Nun's Home"	43	98	1	2	44	17
Children's extended biological families	44	100	0	0	44	17
Social Services	18	90	2	10	20	8
Other residential care facilities	19	100	0	0	19	7
Health care services	18	100	0	0	18	7
External context	18	100	0	0	18	7
External people	13	100	0	0	13	5
Other families	8	100	0	0	8	3
Judicial services	4	100	0	0	4	2
Public Administration	2	100	0	0	2	0,8
Adoptive and foster families	2	100	0	0	2	1
University	2	100	0	0	2	1
Police	1	100	0	0	1	0,4
Mum and child dyad	0	0	1	100	1	0,4
Total	250	98	4	2	254	100

Italic indicates difference between frequencies and percentage values.

TABLE 4 | Frequency and percentage of external stakeholder (outgroup) qualifying devices.

External stakeholders	Total		Positive		Negative		Residual	
	f	%	f	%	f	%	f	%
Schools	11	31	0	0	10	91	1	9
Children not in care at "Nun's Home"	6	17	3	50	0	0	3	50
Children's extended biological families	7	19	0	0	7	100	0	0
Social Services	0	0	0	0	0	0	0	0
Other residential care facilities	1	3	0	0	1	100	0	0
Health care services	5	14	1	20	0	0	4	80
External context	1	3	0	0	0	0	1	100
External people	0	0	0	0	0	0	0	0
Other families	0	0	0	0	0	0	0	0
Judicial services	1	3	0	0	1	100	0	0
Public Administration	0	0	0	0	0	0	0	0
Adoptive and foster families	3	8	2	67	1	33	0	0
University	0	0	0	0	0	0	0	0
Police	1	3	0	0	1	100	0	0
Mum and child dyad	0	0	0	0	0	0	0	0
Total f	36		6		21		9	
Total%	100		17		58		25	

Italic indicates difference between frequencies and percentage values.

usually implied when there is neither direct nor frequent interaction with the (negatively qualified) external groups. In this case, this hypothesis is not coherent with our –ethnographic observations (Saglietti, 2010, 2012, 2019) and with perspectives of participants, both documenting that "Nuns' Home" maintains frequent and detailed interaction with most of the above-mentioned external groups. How this can be explained? Drawing on our previous research, this can be matched with their specific interactive pattern, which is centered on global interactive control and self-reference of nuns, with less possibility for anyone else to contribute (other than with resistance or

unnegotiated compliance) (Saglietti and Zucchermaglio, 2021), opening for interesting research on the isomorphism on talk and (interactive) work.

CONCLUSION

As many scholars "have called for research that provides a link between micro and macro issues of language use" (Maheux-Pelletier and Golato, 2008, p. 689), in this study, we attempted to illustrate many implications that a discursive investigation of

the local organization of a microcosm of talk (i.e., the use of social categorization markers and qualifying devices of groups during an ethnographical interview) has to illuminate a larger social issue, such as intergroup relations. We did so by originally focusing on an intensive group-care context, i.e., group homes for out-of-home children, which has been rarely investigated by group research. Particularly, by the in-depth analysis applied to an-already-revealed-as-particularly-closed community of practices (Saglietti, 2012; Saglietti and Zuccermaglio, 2021), we illustrated that the discursive devices, "no matter how minute and apparently 'linguistic' in character, must be investigated as forms of social action and not simply manifestations of underlying grammatical machinery" (Goodwin and Goodwin, 1990, p. 4). In this light, this study can be considered relevant as it confirms that the discursive investigations of both social categorization markers and qualifying devices can reveal ingroup bias, intergroup relations, group qualification, and can render the multitude of groups that come into play in the work of a single organization, revealing its closeness/openness over the rest of its social world. This qualitative approach can be applied to any group-care interventions, such as schools and clinical interventions, not only for doing group research but also for training professionals working in these fields.

Limitations of this study, however, address the sampling, the limited number of the investigated discursive devices, and the analyzed discursive genre. First, drawing on a single ethnographical interview from a single community of practice, our results cannot be generalized. This study must therefore be read with keeping in mind the multiple variables depending on the interview format and on the personal features of the interviewer (i.e., genre, age, and role, to cite a few) which necessarily impact the interaction at hand. As our results come from a peculiar field, i.e., the alternative care for out-of-home children, they need to be compared with different communities of practices and other organizational sectors. Addressing these issues and by better embracing the complex discursive accomplishment of intergroup relations, our future research will then include a comparison between the different group homes belonging to our dataset (Saglietti, 2012) and an in-depth investigation of other discursive features (such as alignment and affiliation, repair, turn orchestration, speaker selection, and quotations) and participatory framework devices (such as the discursive roles of each participant) (Saglietti and Marino, in preparation[3]).

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[3] Saglietti, M., and Marino, F. (in preparation). *Intergroup Relations, Participation, Alignment and Affiliation in Group Care. An In-depth Discursive Study.*

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author/s.

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by University Ethics Committee; Local Social Services of the Municipality of Rome (IT); deputy public prosecutor of the local Juvenile Court. Written informed consent to participate in this study was provided by professionals themselves. For children's involvement, written informed consent was provided by their legal guardians. Once provided, children themselves granted their verbal assent to their research involvement.

AUTHOR CONTRIBUTIONS

Both authors contributed to the conception and design of the study. They worked on the analysis, wrote the manuscript, contributed to the manuscript revision, read and approved the submitted version.

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SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2022.784345/full#supplementary-material

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Tutor's Role in WhatsApp Learning Groups: A Quali-Quantitative Methodological Approach

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In recent years, digital tools, such as WhatsApp, have been increasingly deployed to support group interaction and collaboration in higher education contexts. To understand contemporary, digitally-mediated collaborative dynamics – including the role played by tutors and the situated nature of group development – robust and innovative methodologies are needed. In this paper, we illustrate how integrating qualitative methods with quantitative tools used in qualitative ways makes it possible to trace how tutors adapt their style to support group development, which in turn triggers student development in a circular and responsive process. To make visible this contemporary phenomenon, we combine thematic content analysis – a qualitative tool – with a quantitative method: Social Network Analysis. Drawing on data generated by two WhatsApp learning groups (six students and four academic tutors) in research exploring the collaborative construction of boundary objects in a master's level "E-learning Psychology" course, we suggest that our methodological approach has the potential to support interrogation of complex and dynamic digitally-mediated group interactions. Our results show the situational nature of an effective tutorship style through its complex adaptation to learners' maturity, digital tools, and learning goals.

Keywords: higher education, WhatsApp groups, tutoring, quali-quantitative method, thematic content analysis, social network analysis

INTRODUCTION

Studying group dynamics is challenging because of the intrinsic complexity associated with human interaction that involves constantly negotiating and renegotiating aims in situational context (Forsyth, 2018). Many methods attempt to analyze group dynamics, seeking to deploy theory and method in ways that are robust and account for the situated nature of groups. For instance, studying communication dynamics within an ecological context calls for an emic research perspective that directly involves social actors (Harris, 1976; Morey and Luthans, 1984). The emic perspective is also used to overcome the unhelpful dichotomy between qualitative and quantitative analysis. To this end, integrated approaches tend to be used; that is, qualitative methods are supplemented by quantitative tools used in a qualitative way. In this paper, we propose a method that combines, in a distinctive way, thematic content analysis – which is qualitative tool – with a quantitative method: Social Network Analysis.

Content analysis is one of the most frequently adopted approaches to interrogating group dynamics and is often used by social scientists to explore communication processes (Holsti, 1968). While the term "content analysis" covers a great variety of techniques, Krippendorff (1980) defines content analysis as, "a research technique for making replicable and valid inference from data to their context". Traditional quantitative and qualitative approaches to content analysis differ in their interpretative procedures (Mayring, 2000, p. 21). The qualitative approach is also defined as "thematic content analysis" (Boyatzis, 1998) because qualitative data are encoded through specific thematic categories generated from and integrated with theory while scrutinizing the data, on the basis of what emerges.

One commonly used quantitative approach is Social Network Analysis (SNA), traditionally employed to explore the relational framework within groups (Wasserman and Faust, 1994; Scott, 1997) and to investigate both wide (Snyder and Kick, 1979) and restricted groups (Krackhardt, 1987; Galaskiewicz and Wasserman, 1989). SNA has also been used to investigate the relational framework of technology-mediated groups. For instance, Freeman and Freeman (1979) observed the interactions in a network of email exchanges among researchers, while Garton and his colleagues (Garton et al., 1997) used SNA to analyze collaborative online contexts. More recently, Martinez et al. (2003) had the idea to employ SNA in combination with content analysis to observe virtual groups engaged in collaborative learning settings.

But groups are living entities that change according to the affordances of the cultural and social context. Further, the tools used by groups to meet influence the nature of group dynamics. Nowadays, emails are no longer the optimal way to engage in group activities, and tools, such as WhatsApp, are becoming more popular. At the same time, research has become increasingly interested in more complex groups – those with more challenging goals and more specialized participation. Therefore, a more nuanced and complex methodology is needed; one that can account for the features of such groups as well as the digital context of group interaction.

To propose such a methodology, we first explain the nature of the groups we are interested in, then illustrate our methodological proposal. Finally, we demonstrate how to use the method by analyzing university groups that use WhatsApp to meet and to accomplish a complex professional task where two different types of tutors are involved.

INSIDE THE GROUPS: THE ROLE OF TUTORS

Our research interest is in collaborative group work within formal learning contexts. Educational institutions are increasingly recognizing the value of group work, not only as a way of supporting collaboration (McCotter, 2001) but also as a means to blend different communities (Amenduni et al., 2021). Creating an intersection between different contexts implies the opening up of a "third" space that allows negotiation of meaning and the hybridity that makes available new cultural forms of dialogue

(Akkerman and Bakker, 2011). In the present paper, we explore the intersection between universities and workplaces. We consider this intersection as crucial for students to engage in the transition to professional life by blending both theoretical and practical aspects, two components traditionally kept separate. Research indicates that to blend academic and professional experience and knowledge, a crucial role is played by both tutors and the digital tools deployed to support group processes (Bonk et al., 2005; Smith et al., 2009).

Some studies offer valuable insights into the impact of tutors' roles and styles in blended approaches to higher education. For instance, Hytönen et al. (2016), in the context of an academic Apprenticeship Education Program in the field of energy efficiency, studied the extent to which interconnection between academic and workplace settings was considered as part of the tutoring process. They found that even with high-quality guidance from tutors in both contexts – university and workplace – the two settings remained separate. Tutors reported a few reasons why the interconnection did not happen; for instance, poor information about the practices or the general content of the training, and lack of joint meetings in which the course of action could have been collaboratively agreed upon. Participants also mentioned that they would have benefited from the academic and the workplace tutors engaging in more reciprocal interaction. This study indicates that stronger efforts from the organizing institutions are needed to support the interconnection between the tutors involved. This is particularly true when tutors belong to different contexts, such as academic and professional, which is the focus here.

Other studies show the functioning of the tutor in supporting small groups. Tutors engage students by identifying individual trajectories, monitoring each participant, and driving the whole group to participate in the collective activity (Chi, 1996; De Grave et al., 1999; Schmidt and Moust, 2000). Tutors answer students' questions, improve their conceptual understanding (Graesser et al., 1995), enhance deep comprehension of the domain, and cultivate collaborative knowledge (Chi et al., 2001). This is possible because tutors help students compensate for their lack of knowledge through the expertise offered by tutors (Schmidt et al., 1993). Even groups with a low rate of productivity can take advantage of the presence of a tutor (Dolmans and Wolfhagen, 2005).

Several studies made clear that tutors' style influences group dynamics and learning processes. For instance, Gerhardt-Szep et al. (2016), in the context of medical education, tested two different styles of tutorship: facilitative and non-facilitative. These styles produced different effects on the groups' functioning and on knowledge construction. To identify and explore the effects, mixed methods were used, being an interesting example of mixed methodological approach for this research area. In fact, tutor effectiveness was assessed quantitatively by students' questionnaires about knowledge before and after tutor intervention and an external observer's rating of tutor performance. Qualitative analysis was based on a semi-structured interviews with tutors and focus group discussions with students. Quantitative findings showed significantly higher motivation and effectiveness with facilitative tutorship, while the

non-facilitative style indicated a slightly greater improvement in students' knowledge and understanding. Furthermore, external observers reported that the facilitative style implied significantly higher tutor involvement. Qualitative findings, however, revealed that a facilitative style was easier to take up for tutors but raised some concerns about students' autonomy. During the focus group discussions, students regarded both styles as effective. However, they perceived the non-facilitative style as allowing greater independence in learning, whereas the facilitative style requires less learning "labor." This research is particularly interesting because it shows how different methods can be combined to lead to complementary results.

Budé et al. (2009) compared – in the context of statistics education – tutors' directive guidance with traditional guidance. The first approach involves a very active tutor who offers strategies to cope with problems and influences individual and group processes. The second approach involves tutors who limit their approach to providing general information about the course. The findings indicated that directive guidance was more positively received by students and also supported better learning outcomes.

These studies made clear how tutors should act when immersed in an academic context. However, more research is needed into how tutors should approach their role when supporting learning that crosses boundaries between two contexts, such as university and workplace. Situational Leadership Theory (Hersey and Blanchard, 1977) contends that the approach taken to leading style differs depending on the maturity levels of groups. In reviewing this theory, Hersey et al. (2008) better defined the group's maturity levels by considering the developmental stage and performance readiness. However, the central assumption is that the task-relevant maturity level of the group is the main situational determinant of leading style. In fact, there is no best approach to leading style – both directive and supportive styles can be effective, depending on the involvement and expertise of the group.

Furthermore, Hersey et al. (2008) found at least four leading styles: telling, selling, participating, delegating. Telling is a directive style with some support and is appropriate for low maturity groups. Selling is a directive and supportive style, ideal for medium-low maturity groups. Participating is a supportive style with some directivity, recommended for medium-high maturity groups. Finally, delegating is a style without directivity or supportiveness, suitable for high maturity groups capable of independent operation.

Akkoyunlu and Soylu (2008) applied situational theory to blended learning contexts and conceptualized these four styles not merely as leading styles, but rather as learning styles or, more specifically, as guiding styles in learning dynamics. Meier (2016) maintained that leading roles in learning dynamics are nearly always situational because they fit students' needs. He stated that situational guidance is a distinctive form of guidance that adjusts learning goals and digital tools to learners' maturity level. So, the four guiding styles become four distinctive learning scenarios: if the learner is dependent, the guidance will be informative (telling) aimed at knowledge acquisition and the methodological tool could be instructions or tutorial.

If the learner is engaged, guidance will be integrative (selling), aimed at supporting knowledge development, and the methods would deploy tools with moderate interactivity. If the learner is involved, guidance should be active (participating) to support knowledge practice, and tools can be fully interactive. If the learner is independent, guidance will be outsourced to students themselves (delegating) for autonomous knowledge construction, and methods will involve highly collaborative tools.

In our research, we build on these suggestions in understanding tutor action. Our focus is on academic tutors, examining how they guide learning groups through a blended context, within a digital environment created by WhatsApp.

WHY USE WHATSAPP?

One of the crucial functions of technology is supporting users from different contexts to meet online and form new communities through hybridization and boundary crossing (Skeels and Grudin, 2009; Brooks, 2010). Various technologies have been interrogated from this perspective; among them, mobile technology has received substantial scholarly attention (Pimmer, 2016; Jiang and Edirisingha, 2019) because of its capacity to enable fluid movement between academic and professional contexts (Flynn et al., 2016).

Instant messaging – such as WhatsApp – is very popular among users of any age. WhatsApp has a great potential to enhance learning as it promotes participation, active study (Scornavacca et al., 2009; Cifuentes and Lents, 2010) and motivation to take part in academic assignments (Bere, 2013). It also removes social barriers between teachers and students by cultivating a sense of belonging to a community (Doering et al., 2008). Unlike forums, instant messaging makes students' identity visible, allowing for personalized support (Hrastinski et al., 2014).

In educational contexts, WhatsApp provides flexibility as it can be used without time and space constraints, it is portable and accessible and makes it easy to share multimedia material (i.e., photos and videos). Furthermore, there is evidence that WhatsApp can enhance student learning outcomes, and that students perceive WhatsApp as valuable for learning and would like to use it more often (Cetinkaya, 2017).

Bouhnik and Deshen (2014) suggest that WhatsApp offers four key affordances: fast and easy communication; a pleasant environment; promotion of dialogue and sharing; and a simple platform. In addition, students recognized many educational advantages, such as learning materials' availability, lessons beyond timetable hours, the opportunity to work in depth with fellow students, and teachers' almost unlimited availability.

Looking more specifically at how WhatsApp is used when tutors are involved, Raiman et al. (2017) investigated six groups of medical students on clinical deployment monitored by tutors. The six instant messaging chats were examined through a thematic analysis whereas individual students were interviewed. The results of chats' analyses highlighted the presence of three different types of processes: organizational, educational, and social. These processes allowed students to constantly arrange their work because they could always clarify learning goals or task details with their tutors. In the interviews with students,

support for learning, ease of use, and availability of recorded discussions emerged as relevant features of the digital tool. In fact, interaction between students and tutors continuously occurred and most chat was produced by the students, who felt involved and at ease within the groups and with their tutors due to the hierarchical flattening. Furthermore, the availability of recorded discussions – as it happens in other asynchronous communication environments, such as web forums – allowed tutors to reflect on student participation and on the effectiveness of their own tutoring style.

Hrastinski et al. (2014) described informal coaching through WhatsApp groups with tutors (university students) training secondary education students in mathematics. Students stated that to learn effectively, tutors needed to know students' competence level so coaching could be adjusted in response. This statement makes evident the situational determinant of tutorship style (as previously explained) and the focus on tutor's instrumental activities that guide students to perform the task. Moreover, to accomplish learning goals, tutors had to establish personal relationships with each student as well as collaborative relationships among the group. This highlights the importance of tutors' relational activities matched with the instrumental activities – the two functions of tutorship – and the tools' affordances.

The positive evidence for using WhatsApp (So, 2016; Klein et al., 2018; Guo et al., 2020) can be extended also to boundary crossing practices (Coleman and O'Connor, 2019; Pimmer et al., 2019). The potentialities of instant messaging are clear; however, online group dynamics activated by tutors are still underexplored. In our research, we attempt to develop a method that can explore which group dynamics are activated when tutors support students in crossing boundaries between academic and professional contexts. To explore this phenomenon, we suggest that a purposely developed quali-quantitative method is needed. To test the method, we investigated two small group interactions within the WhatsApp environment.

THE METHOD

When blending different contexts – such as university and workplace – specific social interaction patterns may occur. This requires suitable methodological tools. In previous research (Ligorio et al., 2008; Annese et al., 2010; Annese and Traetta, 2011), we developed a distinctive approach using a quantitative method in a qualitative way. This integration produced a blended methodology, a quantified qualitative approach where qualitative content analysis was combined with SNA in different ways according to different research aims.

The method we propose integrates qualitative content analysis and SNA in three different combinations. In the first combination, we used SNA in traditional way: nodes signified participants and links signified interactions. Participants were identified, even for the problematic detection of the receivers in the group messages of digital contexts (Manca et al., 2009), by qualitative content analysis and represented by SNA as participation networks of blended learning communities (Annese and Traetta,

2012a). In the second combination we used SNA in a different way: nodes represented identity positionings of single participants and links were dialogical relationships among these identity positions. Positionings were identified through thematic content analysis and represented as positioning networks by an original version of SNA called PNA, Positioning Network Analysis (Annese and Traetta, 2012b). In the present paper, we propose a third and distinctive combination, that we employed for the first time in the research we report here. SNA is used in a similar but characteristic way, compared to Network Text Analysis where networks' nodes are entities connected by the distribution of words or concepts (Popping and Roberts, 1997; Hunter and Sing, 2015; Mazzoni et al., 2015; Ravaglia et al., 2016; Celardo and Everett, 2020). In our research, networks' nodes are co-occurrent categories resulting from thematic content analysis, and their links correspond to the connections among different co-occurrences, represented by SNA as category networks helpful to systematize internal and external links of co-occurrences in an inclusive graph. This enables exploration of social interactions and communication dynamics. We learned from Situational Leadership Theory (Hersey and Blanchard, 1977) that tutors adapt their interactional style according to the group's needs and to environmental affordances. Our methodology supports the understanding of how this adaptation occurs by combining a qualitative tool – thematic content analysis – with a quantitative method: Social Network Analysis.

To demonstrate the robustness of this method, we tested it on small groups comprised of university students tutored by both academic tutors and tutors appointed by companies, but our research attention was for the peculiar interaction between academic tutors and university students. These groups communicated in a WhatsApp environment with the aim of building objects meant to cross-boundaries between two contexts – university and workplaces. The next paragraph will give details about the research context.

THE RESEARCH CONTEXT

The context under consideration is a blended course in "E-learning Psychology" at the University of Bari (Italy), where e-learning companies were invited to offer students the possibility to be engaged with professional activities. The theoretical framework supporting this aim is the Trialogical approach (Paavola et al., 2011), which suggests that collaboratively building shared boundary objects can support participants to transition from academic to professional contexts.

The course structure involves two modules: the first module covers the curricular content, while the second is focused on activities designed and performed in collaboration with companies. Here our focus is on the second module.

Academic tutors comprised volunteer students from previous course editions, who were interested in extending their e-learning expertise. They fulfilled this role as part of their internship or to collect data for their master's thesis. The academic tutors were purposely trained, and their task was to act as intermediators between students, teacher, and company tutors. Academic tutors

were expected to provide three kinds of monitoring: organizational (e.g., helping to meet deadlines), educational (e.g., supporting deeper reflection on the educational materials or eliciting connections among concepts), and technological (e.g., providing suggestions for specific demands about technology tools). Company tutors were employees or senior company representatives, and their task was to provide a business-oriented perspective and to guide the students in building the assigned boundary object. Beyond these general instructions, tutors were free to adopt the leading style they felt was most appropriate for the group.

The two companies involved were GruppoPragma (G) and Lattanzio (L), both active in the field of e-learning and interested in contributing to the course aim of supporting transition to professional contexts. In terms of the boundary objects produced, the first company asked students to produce ideas for the interface to be implemented in a MOOC[1] training course for human resources managers. Students proposed the idea of "Personas" that prototyped the ideal manager of a big company. They described a few typical situations that such a manager could be involved in, and outlined some possible reactions. The second company proposed that students first become familiar with the concept of "microlearning" – an innovative learning approach particularly devoted to professionals and strongly based on portable technology – and subsequently, to develop a questionnaire to assess customer satisfaction.

Interactions between students and tutors occurred *via* WhatsApp and each group participated in two chats: one guided only by academic tutors and one guided by both academic and company tutors. Here, we focus on the chats guided only by academic tutors because they have more opportunity to interact with the students and therefore produce richer data.

The specific research questions guiding our analysis are:

1. Is our method suitable to identify and describe the adaptive dynamics of the academic tutor committed in guiding students in building cross-boundary objects?
2. How do the adaptative dynamics change the guiding style of academic tutors?

PARTICIPANTS AND DATA

Twelve participants were involved: six students (average age 24), four academic tutors (average age 27), and two company tutors (average age 35) belonging to two different companies – Gruppopragma (G) and Lattanzio (L). For each company, two

TABLE 1 | Corpus of data.

Chat Logs	Posts	Units of analysis
G1 – only academic tutor	617	40
L1 – only academic tutor	123	15

[1]Massive Open Online Course, in Italian: these are courses designed for distance learning involving a large number of users.

WhatsApp chats were available: one with the academic tutor only and another with both company and academic tutor.

As our aim was to investigate chats guided only by the academic tutor, our corpus of data comprises two chat logs including 740 posts (see **Table 1**). Chat-log transcriptions were divided into units of analysis corresponding to an argument chain which starts from a new discussion topic and ends when another topic is introduced (Strijbos et al., 2004, 2006). The criterion for segmentation of data in units of analysis is ecological, as it follows the natural organization of the collected dataset.

The limited corpus of data is connected to the methodological approach, which requires an in-depth exploration through a quali-quantitative technique. In fact, as chat logs were spontaneously produced by groups in WhatsApp chats, they were systematically investigated through qualitative content analysis performed by the software *Atlas.ti*, combined with Social Network Analysis (SNA), applied with the software *Netminer*.

DATA ANALYSIS

The data analysis required an iterative approach and involved three coders in total. At the beginning, two independent coders worked on 25% of data, later comparing divergent cases with a third coder until resolved. The following steps consisted of rounds of reading and coding, during which – at each round – the percentage of the data analyzed constantly increased until the whole corpus was coded and a final grid was produced (see **Table 2**). This is a non-mutually exclusive set of 15 hierarchically organized categories so that a unit could be coded with as many categories as were appropriate. The inter-coder reliability, calculated by *Atlas.ti*,

TABLE 2 | Analysis' grid.

Macro-Categories	Categories and Description
Decision-making	*Goal influence*: References to the goals when a decision has to be made
	Task-structure influence: References to the task structure when a decision has to be made
Role organization	*Students' role*: References to the students' role in the group organization; for instance, students may be in charge of finding more information or synthesizing the work
	Relation with academic tutor: References to the relationship with academic tutor
	Relation with company tutor: References to the relationship with company tutor
Interdependence	*Conflict:* Conflicts within or among groups
	Collaboration: Supportive and collaborative interactions with other students, whether in same group or not
	Organization: Interventions aimed at defining how to organize the work; for instance, establishing deadlines
	Strengths/opportunities: Comments about strengths and opportunities of the learning context
	Challenges/weaknesses: Comments about challenges and weaknesses of the learning context
Blended	References to the relationship between online and face-to-face dimensions
Psychosocial dynamics	Any other individual or collective process not included into the previous categories

was sufficient (Holsti index 88%) to consider the grid effective and replicable.

Once the grid was stabilized, *Atlas.ti* first calculated the occurrences of categories (how often a category appears) and, later, the co-occurrences of categories (how often two categories occur together). Finally, SNA was used to schematically represent the links between co-occurrences.

RESULTS

To answer our research questions, we first report the results of occurrences and co-occurrences for thematic content analysis. Second, we treat co-occurrences through two SNA indices, and finally we explore in depth the network of the links within and between co-occurrences. Each step will be explained by quantitative and qualitative data in order to demonstrate the quali-quantitative nature of our methodological approach.

Thematic Content Analysis

Analysis of occurrences in the chats involving only academic tutors reveals that there are three macro-categories: Interdependence, Role organization, and Decision-making (see **Figure 1**). When considering the two different chats

together (L1-G1), a specific composition of the three main macro-categories becomes clear: Interdependence centered on Organization; Role organization focused on the most recurring category Relation with academic tutor; and, finally, Decision-making activated by both Goal influence and Task-structure influence.

Interaction within these groups features strong Relation with the academic tutor, who manages Organization by orienting it toward both Goal Influence and Task Influence. In fact, students turn to the academic tutor for a range of requests, even questions that would be more appropriate to be addressed to the company tutor (see "Excerpt 1 – L1").

Excerpt 1 – L1
Student 1: *Hi Academic tutor[2] I have to ask you a clarification … When the company tutor spoke about three weeks' time, was he referring to the work of the two sub-groups, right? Not to the whole work… Or am I wrong?*

The academic tutor also takes care of the whole organization of the interaction, which is strongly dependent on the goal to be achieved – building objects with companies. The tutor

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[2]To protect tutor's identity and still make clear to whom students are talking, we adopted this expression.

FIGURE 1 | Occurrences in the two chats with only academic tutors (L1-G1).
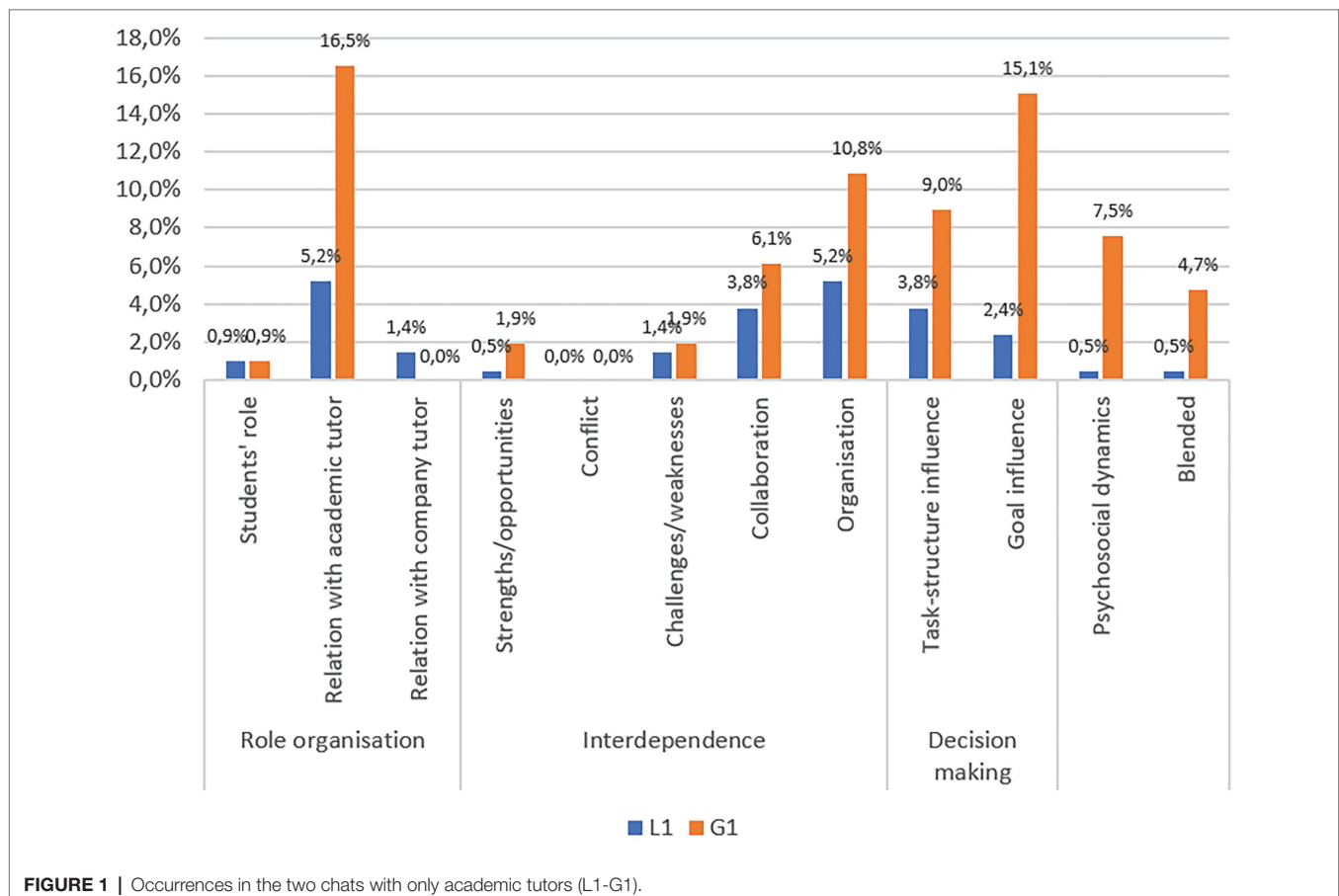
seems to be fully aware that this goal can be achieved only through the tasks students perform, urging them not to lose focus (see "Excerpt 2 – G1").

Excerpt 2 – G1

Academic tutor: *Hi girls, I invite you, as soon as you can, to write on the forum what you are doing and fix intermediate deadlines of the various phases for designing and realizing the product.*

Student 1: *Hey Academic tutor, you are right, I am taking too long with this micro-design.*

In this case, the academic tutor brings the group's attention to the need to make visible the micro-design method, previously agreed with the company tutor. The goal – the product to be delivered – does not only impact the group's organizational dynamics but also the academic tutor's role, who guides organizational strategies and the structure of micro-tasks. In general, analysis of occurrences indicates that Relation with the academic tutor is the driving force of the group.

This occurrence's description requires further exploration through the analysis of co-occurrences. *Atlas.ti* performs this investigation through specific analysis operations that the researcher chooses according to the research aims. *Atlas.ti* reports the results of co-occurrence analysis through a c-coefficient calculated as follow: $c = n12/(n1 + n2 – n12)$. This is a coefficient that indicates the strength of the relation between two categories, similar to a correlation coefficient (Armborst, 2017).

Co-occurrences in the chats managed by only academic tutors are numerous, with high frequencies and a large variety of categories (see **Table 3**). The most dominant is between Goal influence and Relation with academic tutor, but those between Goal influence and Organization, and Organization and Relation with academic tutor are also essential to feature the relationships within the group. We suggest that the boundary crossing object is the catalyst for these three specific co-occurrences.

The co-occurrence between Students' role and Strengths/opportunities is also interesting because it shows the improvement of these two features of group interaction through a mutual relationship.

Other relevant co-occurrences are between Relation with academic tutor and Task-structure influence; Relation with academic tutor and Collaboration; and Relation with company tutor and Students' role. These co-occurrences are interesting because the role of the academic tutor is now related not only to the task's structure but also to the collaborative dynamics. The co-occurrence between the role of the company tutor and that of the students highlights an enhancement of the reciprocal relationship.

Last, co-occurrences that can be underlined are those between Task-structure influence and Organization; Task-structure influence and Goal influence; and Organization and Collaboration. Far from being the last in terms of quantitative relevance, these co-occurrences show once again the centrality

TABLE 3 | Co-occurrences in the two chats with only academic tutors (L1-G1).

	BL	COLL	CONF	ORG	PSYCHOS	TASK	GOAL	OPP	COMP_TUT	ACAD_TUT	STUD	CHAL
BL	0.00											
COLL	0.23	0.00										
CONF	0.00	0.00	0.00									
ORG	0.25	0.38	0.00	0.00								
PSYCHOS	0.17	0.12	0.00	0.16	0.00							
TASK	0.27	0.33	0.00	0.39	0.16	0.00						
GOAL	0.26	0.35	0.00	0.61	0.23	0.39	0.00					
OPP	0.07	0.13	0.00	0.08	0.05	0.14	0.11	0.00				
COMP_TUT	0.00	0.04	0.00	0.06	0.00	0.07	0.03	0.14	0.00			
ACAD_TUT	0.24	0.40	0.00	0.57	0.26	0.43	0.66	0.09	0.04	0.00		
STUD	0.00	0.09	0.00	0.03	0.00	0.11	0.05	0.50	0.40	0.06	0.00	
CHAL	0.06	0.22	0.00	0.14	0.04	0.06	0.10	0.09	0.00	0.13	0.10	0.00

BL, blended; COLL, collaboration; CONF, conflict; ORG, organization; PSYCHOS, psychosocial dynamics; TASK, task-structure influence; GOAL, goal influence; OPP, strengths/opportunities; COMP_TUT, relation with company tutor; ACAD_TUT, relation with academic tutor; STUD, Students' role; CHAL, challenges/weaknesses.

0,15 < C < 0,20,   ; 0,21 < C < 0,25,   ; 0,26 < C < 0,35,   ; 0,36 < C < 0,45,   ; 0,46 < C < 0,55,   ; C > 0,55,

of the task and of the organization, connected to the collaborative dynamic.

These co-occurrences indicate the tutor's focus on both practical (goal, task, and organization) and socioemotional (students' role, their relationship with company tutors, collaboration) features of the group. The collective goal – building a boundary object – also impacts the tutor's dual function: instrumental, meant to manage the organizational dimension; and relational, concerning the socioemotional dimension.

Social Network Analysis

The academic tutor plays a very distinctive role and triggers specific group dynamics, clearly emerging when co-occurrence analysis is combined with the SNA and particularly with two indices: neighbor analysis and centrality analysis. To better understand this network of categories, we imported the co-occurrence matrix into *Netminer*, to generate an overall representation of both internal links (within each co-occurrence) and external links (among the various co-occurrences). Neighbor analysis shows the density of links, whereas centrality analysis shows central co-occurrences in the overall representation.

In neighbor analysis, the final graph of the links between categories (see **Figure 2**) makes visible two factors: (i) the centrality of the academic tutor and (ii) group endeavor to accomplish the goal and perform the task. The whole interaction profile of the chat, from the organization to the collaborative relationships, is based upon these two factors.

In the neighbor analysis, a cohesive representation of the internal and external links of co-occurrences emerges with one exception: the Conflict category, which is an isolated node with no link to any of the other categories. This category was never assigned to any interaction.

Crucial occurrences for the cohesion of the category network are, from largest to smallest: (i) Relation with academic tutor, the driving force for the whole network; (ii) Goal influence and Organization, central nodes for the network; (iii) Task-structure influence, important category for the network; and (iv) Collaboration, the last of central nodes. The neighbor analysis also makes it possible to track down the strength of co-occurrences in the category network through the links between nodes: the more the co-occurrence is quantitatively significant, the more the link is thick in the graphical representation (see **Figure 2**).

The density of links in graphical representation effectively illustrates the configuration of co-occurrences that emerged during the thematic content analysis. The densest link (33.0) refers to the co-occurrence between Relation with academic tutor and Goal influence, which means that the collective goal shapes the strategies and activities of the academic tutor. Other essential links for the cohesion of the category network are those between Goal influence and Organization (29.0), where the goal affects the organizational dynamics, and between Organization and Relation with academic tutor (29.0), indicating that the academic tutor monitors the whole group organization. Excerpt 3 is a good example of how the academic tutor takes charge of organizing the activities.

FIGURE 2 | Neighbour analysis of co-occurrences in the chats with only academic tutors (L1-G1).
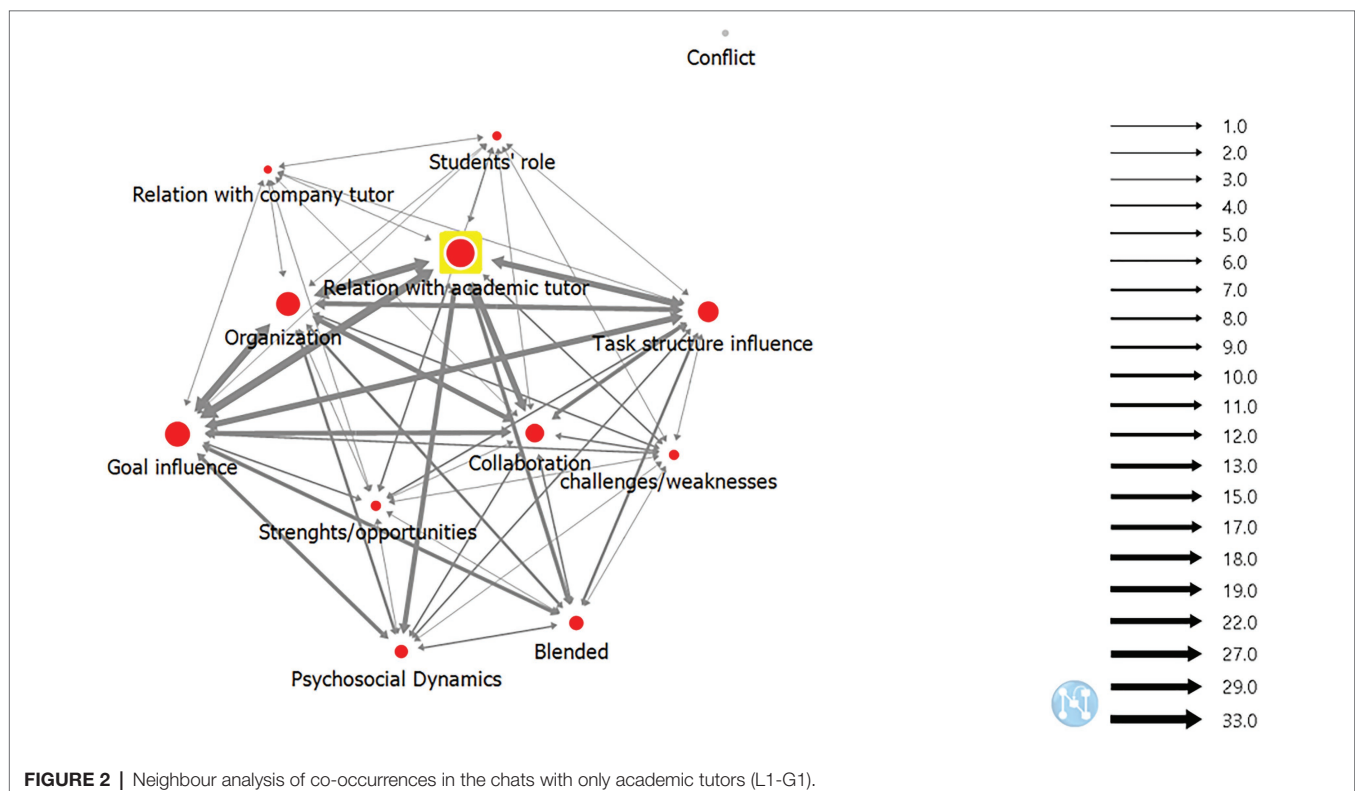
Excerpt 3 – G1

Academic tutor: *In my opinion, we first should ask for the material, so you can start analysing it.*

Academic tutor: *And as soon as you can, you should download the software.*

Student 2: *Sure, we need the material to get a better idea of what to do.*

The academic tutor chooses what organizational strategy is the most appropriate (download the software) and breaks it into specific times and tasks, showing a focus on the instrumental dimension in the guiding role. In fact, a dense link in the category network is that of the co-occurrence between tasks and tutors, namely between Task-structure influence and Relation with academic tutor (27.0). Even when the task concerns the academic tutor herself, she involves the students in checking on her task (see "Excerpt 4 – L1").

Excerpt 4 – L1

Academic tutor: *Is there any information I omitted? Anything you would like me to specify?*

Student 1: *No Academic tutor, it's ok for me.*

Student 1: *At the end it has been a work general enough.*

In this excerpt, the tutor refers to a document she wrote to summarize the work done by the group to inform the company tutor and she actively involves the students in the collaborative structuring of this report. In this regard, the co-occurrence between Collaboration and Relation with academic tutor is another dense link (27.0) in the category network. The tasks, the instrumental dimension of the tutorship, and the group organization become an opportunity for the tutor to trigger a collaborative strategy.

From this emerges a tutor style that may appear directive as it is strongly centered on the Task-structure, with dense co-occurrence links with both Goal influence (22.0) and Organization (22.0). The instrumental function of tutorship and the goal-oriented interaction push the group to ask for such directivity, and the tutor leverages this to activate collaborative dynamic. This is probably why Collaboration has dense co-occurrence links with Goal influence (19.0) and Organization (19.0). Through goal and organization, the tutor attempts to improve the collaborative dynamics, activating the relational function of tutorship role. In this function, the tutor shifts from a directive to a supportive style and, at the same time, pushes the group to develop collaboration and autonomy.

The results from the neighbor analysis are confirmed by centrality analysis (see **Figure 3**) which reports the averages of in-degree and out-degree centrality for different co-occurrences, highlighting the most central categories in the network.
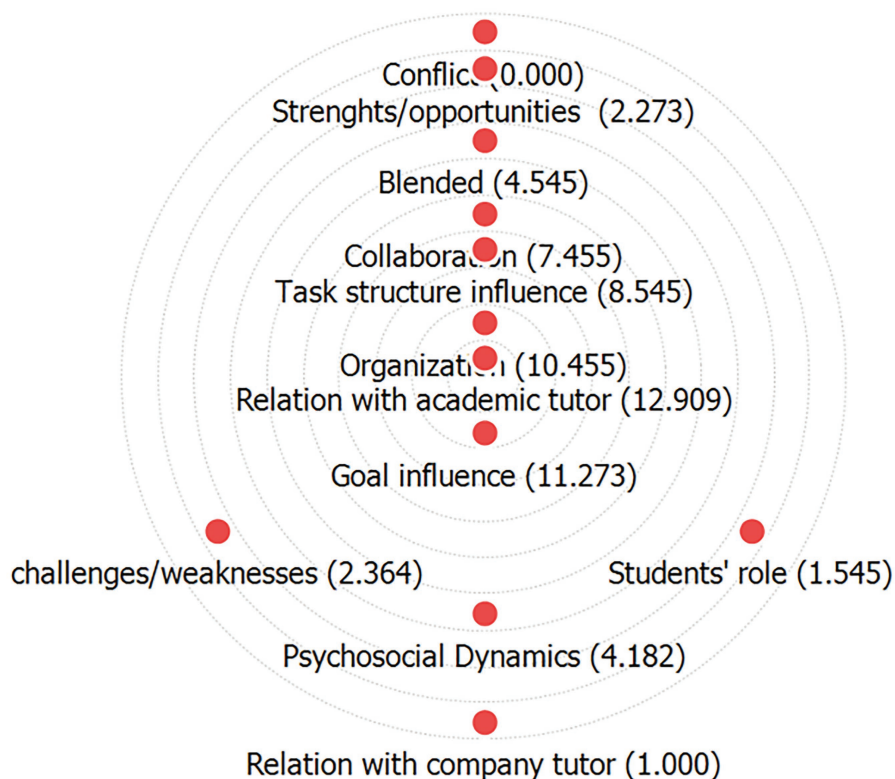

FIGURE 3 | Centrality analysis of co-occurrences in the chats with only academic tutors (L1-G1).

Relation with academic tutor (12.909) is the most crucial, followed by Goal influence (11.273), and Organization (10.455). In contrast, Task-structure influence (8.545) and Collaboration (7.455) are the last of the central categories. This tutor produces a directive style in his instrumental function, leading the group toward positive interdependence and collaborative relationships that allow the group and the individuals to evolve. This evolution allows the tutor to focus more on the relational function and to move toward a supportive style.

Neighbor and centrality analysis turned out to be important in answering our research questions: they showed the academic tutor's style and its impact on the interactive profile of the group (second research question), but they also revealed how the dual function – instrumental and relational – of this role adapts to the degree of evolution of the group (first research question). The strength of the links between the co-occurrences and their centrality have indicated a clear connection between the tutorship style and the situational factors: the academic tutor shifts style back and forth from directive to supportive, according to the changes in the group maturation and the flow of the interactive situation.

Co-occurrences in Depth

To better illustrate the specificities of tutor style and its adaptivity to situational factors, we now explore in depth the co-occurrences found in group dynamics of chats managed by academic tutors only (see **Table 3**). The most relevant is that between Goal influence and Relation with academic tutor because the goal shapes the tutor's role. The following excerpt (5) provides a good example.

Excerpt 5 – G1

Academic tutor: [to one student] *I understand your state of confusion, I was confused, too hahaha.*
Student 1: *I was just about to say that.*
Academic tutor: *Honestly, I was expecting a short tutorial for the software.*

Prior this exchange, students and the tutors met in a Skype call to discuss the object to be created. The academic tutors could sense the students' concerns. The academic tutors adopted two different strategies to manage students' anxiety: using irony to play down the stress and let students feel free to express their doubts and sense of confusion and offering to support students by obtaining further material and advising students to download the software. These two strategies clarify how the goal influences the dual function of tutorship: organizing the executive aspects of the goal to be achieved and managing the socioemotional aspects of relationships. Therefore, both the instrumental dimension and the relational dimension are evident.

Two other co-occurrences are also relevant: Goal influence and Organization, Organization and Relation with the academic tutor. In these co-occurrences, once again the boundary crossing object becomes the catalyst, possibly because of the organizational dynamic created by the academic tutor. Therefore, the goal

not only shapes the academic tutor role, but also the organizational dynamics of the group, as made clear by excerpt 6.

Excerpt 6 – G1

Academic tutor 2: *Anyway girls, consider the free version of the software, which I think lasts a month.*
Student 2: *I will try to do as much as possible by Friday.*
Academic tutor 1: *you will be delighted to celebrate your birthday in this way.*
Academic tutor 2: *Not all of you should download the software. Save a PC where to download it later.*

The goal to build the cross-boundary object is at the center of the group interaction and the academic tutor guides the organizational strategy, carrying out the instrumental dimension of the role. In this instrumental dimension, the co-occurrence of Students' roles and Strengths/opportunities is relevant because it represents enhancement of these two aspects, operationalized by the academic tutor (see "Excerpt 7 – L1").

Excerpt 7 – L1

Academic tutor: *Hello @ Company tutor, as expected I proceed with a report of the activities carried out by my group. At the moment, the students have paid attention to how the materials are presented, annotating when they were in video format, slides, texts. […] For this reason I encouraged them to look at the materials and wonder what other knowledge could be useful to integrate into this course without necessarily binding to the thematic organization proposed.*

In this post, the academic tutor values the active role of the students and indicates how they can further enrich their work in progress. The tutor is adapting the instrumental function of the role to the situational characteristics of the group because, by enhancing the students' role, tutor is intertwining the relational dimension with the instrumental one.

The tutor's guidance is characterized by the instrumental strategy and the co-occurrence between Relation with academic tutor and Task-structure influence foregrounds how the collective objective is structured through operational tasks. Two other interesting co-occurrences – Relation with company tutor and Students' role, Relation with academic tutor and Collaboration – also show the tutor's relational attention to collaborative dynamics. In fact, in the co-occurrence between Relation with company tutor and Students' role, the tutor fosters a relationship (see Excerpt 8) between students and company tutor.

Excerpt 8 – L1

Student 2: Ah *Academic Tutor, I have to ask you a clarification … When company tutor spoke about three weeks' time, was he referring to the work of the two sub-groups, right? Not the whole work. Or am I wrong? Do you want me to ask to the company tutor in our group?*
Academic tutor: *Yes, of course you can ask the questions directly to him. I can tell you that our commitment with the company ends on January 22nd. So I think three weeks is the overall time.*

Academic tutor: *However, in general if you have any doubt you can ask the questions directly, the group also includes you so that you can speak directly!*

Here we see that, in the co-occurrence between Relation with academic tutor and Collaboration, the intertwining of the instrumental dimension and the relational dimension of the tutorship is oriented toward a collaborative strategy (see "Excerpt 9 – L1").

Excerpt 9 – L1

Student 1: *So from now on we start to go in depth and to create connections in the material; this is fine with me.*
Academic tutor: *Ok when your groupmate gives us the ok, I'll send it to the group.*
Student 2: *Yes, it's okay.*

In this exchange, a student would like to start an activity and the academic tutor makes sure that the other students are involved to ensure the activity is collaborative. The instrumental dimension of tutorship, evident in the centrality of the Task-structure influence category in co-occurrences with Goal influence and Organization, is intertwined with the relational dimension, focusing attention on the collaborative dynamics. In fact, the last of the most interesting co-occurrences is between Organization and Collaboration (see "Excerpt 10 – G1").

Excerpt 10 – G1

Student 1: *Try to access through this link (link to their object).*
Academic tutor: *We can visualize it but not modify the content.*
Student 1: [to the tutor] *I tried to add you as a collaborator but it tells that it is still sending the request.*
Academic tutor: *However, you can do it also in another way… We will discuss this tomorrow in class.*

The students are trying to share the link of their object with the academic tutor to allow her to see it and also to contribute collaboratively to changes. Because of the difficulties in sharing the link, the academic tutor proposes an organizational strategy: to postpone the solution to the following day during the face-to-face lesson.

In summary, when tutors interact with students who are engaged but not autonomous in their work, the tutor's instrumental and directive style can lead the group to refine its skills. When students are already involved, the tutor's relational and supportive style can lead the group to be more collaborative. It seems that the relational function of tutorship style pushes individual members toward greater involvement and the whole group toward collaborative work.

In other words, an adaptive tutor who shifts from directive to supportive style, not only guides task performance and improves students' skills, but also increases student confidence and social effectiveness. A flexible tutorship style represents an adaptive response to the situation and to the evolving group and is a driving force behind group development.

DISCUSSION AND CONCLUSION

In this paper, we propose a distinctive and robust method to identify and describe the flexibility tutors need when monitoring online group interactions in relation to challenging tasks involving boundary crossing between university and workplace. We developed this methodological approach to answer our two research questions: first, is our method suitable to identify and describe the adaptive dynamics of the academic tutor committed in guiding students in building cross-boundary objects? And second, how do the adaptive dynamics change the guiding style of academic tutors?

In relation to the first research question, we suggest this research indicates that our method makes it possible to identify and describe how tutors structured their interventions, how the groups responded to these interventions, and how the tutors subsequently adjust their styles. In short, our methodological approach effectively supports in-depth investigation of group dynamics in an online context. The combination of a qualitative tool and a quantitative method employed in a qualitative way highlights the relationship between group characteristics and tutor guidance. Therefore, we hope this method can be applied in future research in similar contexts. In fact, we consider this method useful when at least three conditions are present: (i) groups are asked to work on the boundaries between different contexts, such as university and professional life; (ii) complex and challenging tasks are proposed; and (iii) a digital environment is used – WhatsApp and many similar tools even more supportive in tracking down the thread evolutions, such as Slack or Trello – which allows all interactions to be recorded.

In relation to the second research question, we found that academic tutors are focused on the organizational dynamics necessary to accomplish the goal, and this produces a convergent group interaction with no conflicts. Tutor guidance is based on the instrumental dimension without neglecting the socioemotional aspects. The academic tutors' objective seems to be group growth and, to this end, they shift their style from directive to supportive depending on the situation. Tutors move from a directive style (task-centered) of tutorship toward a supportive style (relationship-centered) according to the level of development and maturity of the group. When group interaction is centered upon the instrumental dimension, the academic tutor tends to be more directive than supportive. In contrast, when group interaction is centered upon the relational dimension, the academic tutor tends to be more supportive than directive. This adaptive tutorship style triggers student development, the group evolves in response, and tutors again adjust their style – in a circular influence process.

Our results confirm the relevance of the tutors in supporting online group work (Raiman et al., 2017) and in fostering students' deep understanding (Graesser et al., 1995) by activating knowledge construction (Chi et al., 2001) through participation. Our results also align with research into the influence of tutorship style on group learning processes (Gerhardt-Szep et al., 2016), and with research that contends that effective tutorship style is situational and responsive; that is, tutor guidance adjusts depending on learning goals, the digital tools being deployed, and learner maturity (Hrastinski et al., 2014; Meier, 2016).

The relevance of the academic tutor prompts new research directions about the various features of this role in instant messaging learning groups; for example, the kind of students who benefit from directive or supportive tutorship. Additionally, future research could explore this role in diverse contexts as well as other complex higher education learning communities.

While our research foregrounds the relevance of the academic tutor role, we suggest it is also important to explore the influence of representatives from the blended context (such as company tutors, as in our research). Future research could explore how to better integrate academic and professional tutors, for example.

Finally, we are aware that a limitation of our work is that the dataset and the sample are both small. Nevertheless, we believe our work can contribute in defining sophisticated methods, aimed not only at offering a snapshot of a specific situation, but also able to track down flexible and changing situations, as it occurs in life and especially in an educational context, with complex objectives and fixed deadlines.

We would like to see our method evolve and be tested through further applications and also by triangulating data from different sources. A possible follow-up to this method could be an integrated analysis of data generated from tutor and/or student interviews or from researcher field notes developed through online and/or in-person observation. This could support a multi-dimensional and dynamic picture of complex contemporary phenomena. We believe our work can contribute to developing robust methodologies capable of capturing complex and dynamic digitally-mediated group interactions that are increasingly prevalent in educational and professional contexts.

DATA AVAILABILITY STATEMENT

The data analyzed in this study is subject to the following licenses/restrictions: dataset may contain sensitive-context information, so only a portion of data can be made available. Requests to access these datasets should be directed to susanna.annese@uniba.it.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

SA – methodology, investigation, and writing-original draft. FA – data analysis and validation. VC – data analysis and software. KFM – english review, editing, and abstract. MBL – conceptualization, writing-paper finalization, and supervision. All authors contributed to the article and approved the submitted version.

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Phenomenological Qualitative Methods Applied to the Analysis of Cross-Cultural Experience in Novel Educational Social Contexts

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The qualitative method of phenomenology provides a theoretical tool for educational research as it allows researchers to engage in flexible activities that can describe and help to understand complex phenomena, such as various aspects of human social experience. This article explains how to apply the framework of phenomenological qualitative analysis to educational research. The discussion within this article is relevant to those researchers interested in doing cross-cultural qualitative research and in adapting phenomenological investigations to understand students' cross-cultural lived experiences in different social educational contexts.

Keywords: qualitative research, phenomenology, cross-cultural analysis, educational research, experience

INTRODUCTION: THE QUALITATIVE METHOD IN EDUCATIONAL RESEARCH

Many scholars in phenomenology hold the view that human beings extract meaning from the world through personal experience (Husserl, 1931; Hycner, 1985; Koopmans, 2015; Hourigan and Edgar, 2020; Gasparyan, 2021). Investigating the experience of individuals is a highly complex phenomenon (Jarvis, 1987): annotating and clarifying human experience can be a challenging task not only because of the complexity of human nature, but also because an individual's experience is a multidimensional phenomenon, that is, psychologically oriented, culturally driven, and socially structured. Hence, much uncertainty and ambiguity are surrounding the description and exploration of an individual's experience. Such uncertainty is due to the multidimensional aspects that constitute and form an individual's experiences, including ongoing and "mediated" behaviour (Karpov and Haywood, 1998), feelings, and cognition. In all these respects, the complexity of experience becomes especially evident in certain investigative contexts such as the one we decided to explore, that is the study of the cross-cultural interactions of individuals who experience a transition from their own cultural and educational social context to a different one. In this article, it is argued that a hybrid phenomenological qualitative approach that, as shall be illustrated, brings together aspects of descriptive phenomenology, and aspects of interpretative phenomenology (Moustakas, 1994; Lopez and Willis, 2004), could assist researchers in navigating through the complexity of cross-cultural experiences encountered by individuals in novel social educational contexts. Descriptive phenomenology was derived mainly from the philosophical work of Husserl and particularly from the idea of transcendental

phenomenology (Moustakas, 1994; Lopez and Willis, 2004; Giorgi, 2010). In contrast, an interpretive phenomenological methodology was derived from the works of scholars like Merleau-Ponty (1962), Gadamer (2000), and Gadamer and Linge (2008). These two approaches overlap in the research methods and activities and are deployed to assist the research by promoting engagement with responsive and improvised activities rather than with mechanical procedures. The general qualitative methodology of social science research has shaped phenomenology as a methodological approach just as reliable as quantitative and experimental methods, as recently discussed by Høffding et al. (2022), who stressed the advantages of phenomenology in qualitative research (see also Zahavi, 2019a,b). Since we are interested in cross-cultural experiences, in the past, for example, we used such phenomenological qualitative type of investigation to find out what it is like for Saudi international students to transition from a gender-segregated society to a mixed-gender environment while studying and living as international students (Alhazmi and Nyland, 2013, 2015). We were interested in further understanding the phenomenon of transitioning itself rather than collecting students' opinions and perspectives about the experience of transitioning. The investigation was conducted to capture and describe essential aspects of the participants' experience, to understand the experience encountered by students in their novel social educational context. Besides this specific study case, the same hybrid methodology, as shall be suggested, may be applied to the study of similar types of social environments and groups. We refer to our past work on cross-cultural transitioning experience to help the reader translate how the phenomenological qualitative methodology can be applied in relatable scenarios in educational research.

As Giorgi (1985), Van Manen (1990), Moustakas (1994), and other phenomenologists have stated, interviewing individuals who experience specific phenomena is the foundation source that phenomenological investigation relies on to understand the phenomenon. Accordingly, aspects that are core to the interviews are the following: (1) general attributes of the conducted interviews, (2) criteria of selection for potential participants, (3) ethical considerations of dealing with human participants, and (4) the interviewing procedures and some examples (these will be presented in section "Practising Phenomenology: Methods and Activities").

To design a phenomenologically based qualitative investigation, we suggest considering three aspects: (1) the aim of the investigation; (2) the philosophical assumptions about the sought knowledge; and (3) the investigative strategies. These three aspects of the investigation shall be approached while keeping in mind the two following rationals: (1) looking for essence and (2) flexible methods and activities.

1. The researcher's aim is that of identifying the essential and invariant structure (i.e., *the essence*) of the lived experience as this is described by the participants (Moustakas, 1994; Crotty, 1998; Cresswell, 2008). This allows the researcher to 'return to the concrete aspect of the experience' (Moustakas, 1994, p. 26) by offering a systematic attempt to present the experience as it appears in consciousness (Polkinghorne,

1989) and to focus on the importance of the individuals and their respective views about the lived experience (Lodico et al., 2006). It is essential to keep this aim (i.e., *identifying the essence of lived experience*) in mind when conducting a phenomenological qualitative investigation as this is the core aim of phenomenology. According to Finlay (2006, 2008), exploring and understanding the essential structure and themes of the lived experience encountered by individuals is critical. Researchers adopting these perspectives 'borrow' the participants' experience and their reflections on their experience to get a deeper understanding and to grasp the deeper meaning of the investigated experience (Van Manen, 1990, p. 62). This is what Finlay (2006, 2008) calls 'dancing' between two approaches, and it is also the approach that we endorse. As pointed out by Høffding and Martiny (2016), in this explorative process the interviewer needs to understand the relation between the interviewee's experience and their description of it, since the interview constitutes a second person perspective in which one directly encounters another subjectivity and shall not elicit closed answers such as "yes" or "no" (see section "Attributes of the Conducted Interviews"). This feature is useful when exploring an experience that has not been sufficiently explored and discussed.

2. The suggested phenomenological qualitative approach offers a strategy that 'sharpen the level on ongoing practices in phenomenologically inspired qualitative research' (Giorgi, 2006a, p. 306). Methods and activities for data collection are flexible, and the analysis is designed to be aligned with the theoretical and philosophical assumptions underlying qualitative research. The present strategy allows a researcher to dialogue with both the participants and the data to produce a multi-layered description of the experience. This feature is academically important in terms of conducting a rigorous qualitative study that provides trustworthy knowledge (Crotty, 1998; Denzin and Lincoln, 2003; Creswell, 2007, 2009; Bryman, 2008).

The three core aspects of the investigation (1) *the aim of the investigation; (2) the philosophical assumptions about the sought knowledge; and (3) the investigative strategies, informed by these two rationals*, are essential to developing a phenomenologically oriented qualitative method to examine the lived experience and for identifying its essence.

AIM AND METHOD

Thinking about the actual object of our investigation, that is, the lived experience of individuals is an essential aspect of phenomenological qualitative research. The researchers need to identify their aim very carefully by focusing on the lived experience of the subject being interviewed and on the structure of such experience rather than on the opinion of the participants about the experience.

In our previous studies, we were interested in describing the cross-cultural experience lived by Saudi students transitioning from their home country to another. Call the

experience of transitioning 'experience X' and call Saudi students 'group Y'. The research sought to examine the major question and the supplementary questions around which the study revolved, which was the following: "*What does the experience X look like for the individuals belonging to group Y?*"

As the question is broad in scope and quite complex, we decided to address it from a particular angle to grasp the essence of the students' experience rather than providing a superficial description or a personal reflection of the experience. The efforts were directed to identify the most prominent overt display of the students' experience; the focus was on investigating the most invariant and essential aspect of their experience. From this viewpoint, the research was directed to the quest of 'what' individuals encounter and 'how' they encounter it. This aim is characterised by the research design as exploratory (e.g., Blumer, 1986; Stebbins, 2001; Ritchie and Lewis, 2003). Exploratory research design allows researchers to "taste" and experience social phenomena and provides a journey of discovery that consists of adventure (Willig, 2008) and surprise. The researcher, guided by the research inquiry, may arrive to discover an unanticipated phenomenon.

In particular, the study of cross-cultural experience involves two aspects: first is what we can call a "transitioning experience" between two cultures. The second is the potential impact that "transitioning experience" has upon the identity of those individuals who lived the experience. The conceptualisation of the phenomenon (i.e., cross-cultural experience) must be addressed, and the theoretical perspective informing its conceptualisation should be considered while developing such a phenomenological approach.

Two theoretical perspectives can allow understanding the phenomenon of cross-cultural transition: the first one is the sociocultural theory, which has been developed from Vygotsky's works (e.g., Vygotsky, 1978; Doelling and Goldschmidt, 1981; Cole, 1995; Wertsch et al., 1995); and the second one is symbolic interactionism theory, which draws on the works of Mead, Blumer, and others (e.g., Kuhn, 1964; Mead, 1967; Blumer, 1986; Denzin, 1992; Clammer et al., 2004; Urrieta, 2007). These two perspectives informed the conceptualisation of the research phenomenon and how the phenomenon has been approached methodologically. For what concerns Vygotsky and neo-Vygotskian authors (and their sociocultural perspectives), they facilitate our understanding of the phenomenon of cross-cultural transition and its investigation. For example, Vygotsky and neo-Vygotskian authors conceptualise the individual ability to adjust to the new culture. The assumption that underlies the investigation is that individuals can acquire new cognitive developmental patterns of thought employing what these authors call "mediational assistance of tools, signs, and other cultures" (Kozulin, 2018).

For what concerns instead, the symbolic interactionism approach, this latter allows researchers to understand cross-cultural experienced phenomena by taking into consideration the role of symbolic meanings in forming individuals' experience. The core assumption developed from this perspective is that symbolic meanings are developed, while individuals acquire their understanding of both their internal and external world.

To analyse cultural identity and this transitioning experience, another relevant aspect to consider is that symbolic interactionists assume that the definition of individual self and identity are both constructed in and played out through interaction with the environment and the other selves surrounding us. As stated by Hollander et al. (2011), the most basic requisite for symbolic interaction is the existence of social selves who come together to share information, emotions, and goods—the full range of human activities. The conceptions that people have of themselves, and others shape how they present themselves. In turn, how they present themselves allows others to infer what actors privately think of themselves and others (p. 123). Another aspect to be noted is that in the context of cross-cultural transitioning, cultural identity reflects how individuals think and feel about belonging to their culture and to the larger society from which they come from; it is in the essence of their experiences, the sense of belonging to, or attachment with, either or both cultural groupings. To fully appreciate this, we need to "borrow" from different authors' arguments, ideas, and theoretical perspectives and adopt the hybrid perspective that we mentioned.

With this in mind, we present an overview of our research aims and the attributes that they involve: exploration and philosophical assumptions about sought knowledge.

Exploration

The study process is not a recipe to follow but rather a journey to take, and as Willig (2008, p. 2) pointed out, the concept of research 'has moved from a mechanical (how-to-apply-appropriate-techniques-to-the-subject-matter) to a creative (how-can-I-find-out?) mode'.

A study should be designed to maintain the subjective approach of the researcher towards the exploration of the phenomenon being investigated, as well as to appreciate the inter-subjective nature of the approach involved in the investigation of the phenomenon itself. A phenomenological qualitative method allows to track empathy and recognition of both the researcher's and the participant's subjectivity in relation to the phenomenon being explored.

The design is aimed to provide the researcher and the audience, with an opportunity to test and experience the phenomenon through descriptions of the essence of the experience. By concentrating on exploration as an essential aim, we evoke flexibility—the type of flexibility that allows researchers to shift between lines of inquiry and move from one activity to another to uncover the structure of the experience. The direction and proposal concerning the activities should be open enough to accommodate the complexity and ambiguity that surrounds any examined phenomenon. Flexibility consists of merging the exploratory research with phenomenological and qualitative practices.

Philosophical Assumptions About Sought Knowledge

We consider ontological assumptions, that is, specific beliefs about some aspect of reality, and epistemological assumptions, that is, specific beliefs about some aspect of knowledge, that

constitutes the phenomenon being the object of the investigation. Ontological and epistemological assumptions are considered an essential part of the research design. Therefore, researchers should identify these assumptions while engaging with the research process, as they will play a significant role in framing the research questions and justifying the research methodology, on the one hand, and the methods and activities, on the other hand (Guba, 1990; Guba and Lincoln, 1994; Crotty, 1998; Denzin and Lincoln, 2003; Creswell, 2009; Høffding and Martiny, 2016; Martiny et al., 2021; Høffding et al., 2022).

Ontological Assumptions of the Phenomenological Investigation

Ontological assumptions are, here, propositions about the nature of social reality—that is, what exists in a social context (Crotty, 1998; Blaikie, 2000). They relate to questions about reality: for example, what reality does exist? Does it have an external existence or is it internally constructed? However, not all phenomenologists consider ontological issues a real concern for designing and practising qualitative inquiry. That is because the ideas of phenomenology appeared as a reaction to the scientific positivist philosophical view of knowledge that dominated the philosophy of science. The phenomenological arguments, when they first appeared, were not concerned with ontological questions but rather they focussed on providing an alternative epistemological approach about how we can access knowledge that tends to be subjective and internally mediated. In other words, phenomenology, in its original form, is an attempt to explore the relationship between the knower and the known, which is an epistemological issue in philosophy rather than an ontological position. The main issue that concerns phenomenology, from these perspectives, is whether we assume or not that reality exists outside of human consciousness, i.e., before or independently of whether we think and reason about it. The epistemological question needs to be answered from both positions. The epistemological question is the real dilemma, and this concerns who is invested in the study of human consciousness. From this perspective, what is provided by human consciousness is our social reality, regardless of its internal existence, before we think about it. Knowledge is what research usually attempts to provide, therefore, it is what should concern a researcher. According to Spinelli (2005, p. 15), "We have no idea whether 'things in themselves' truly exist. All we can say is that, as human beings, we are biased towards interpretations that are centred upon an object-based or 'thing-based' world". In addition, ontological assumptions should be identified clearly before one practice phenomenological research. This perspective has relied on Heidegger's thesis, which moved the discussions concerning phenomenology to the ontological level when he discussed the philosophy of existence and being from a phenomenological perspective (Laverty, 2003; Tarozzi and Mortari, 2010).

The basic philosophical assumption underlying a phenomenological investigation is that truth can be found and can exist within the individual lived experience (Spiegelberg and Schuhmann, 1982). Our study is based on arguments about the existence of a social world as internally mediated, which means that as humans, we must interact with this existence and construct meanings based on our culture and beliefs, historical development, and linguistic symbols.

In our work, we considered an internal reality that was 'built up from the perception of social actors' (Bryman, 2008, p. 18) and that was consistent with the subjective experiences of the external world (Blanche and Durrheim, 1999). This assumption was supported by Dilthey (1979, p. 161) who said that 'undistorted reality only exists for us in the facts of consciousness given by inner experience (, and) the analysis of these facts is the core of the human studies'.

The meanings emerged from the research methods and activities, and from this systematic interaction with the participants in this research and from sharing their experience, for example, about our work on students transitioning from their home country to the novel educational social context. These meanings should be considered a central part of the social reality that a study should report upon. This assumption underlies and merges implicitly with the second level of assumptions, the epistemological assumptions of phenomenology.

Epistemological Assumptions of the Phenomenological Investigation

In qualitative research, the researcher can be considered the subject who acts to know the phenomenon that is considered as the object. Accordingly, the phenomenon of cross-cultural transition between two cultures can be seen as an (object) for the deed of the investigator who is seen as (subject). Identifying the relationship between subject and object is essential to developing a coherent and sound research design. The following epistemological considerations are relevant to the current investigation.

Intentional Knowledge

The first element is intentionality. This concept is at the heart of the phenomenological approach (Moustakas, 1994; Crotty, 1998; Husserl and Hardy, 1999; Barnacle, 2001; Creswell et al., 2006; Tarozzi and Mortari, 2010). The original idea of phenomenology was built on this concept, introduced by Brentano (1874). Intentionality is the direction of the content of a mental state. This is a pervasive feature of many different mental states: beliefs, hopes, judgements, intentions, love, and hatred. According to Brentano, intentionality is the mark of the mental: all and only mental states exhibit intentionality. To say that a mental state has intentionality is to say that it is a mental representation and that it has content. Husserl, who was Brentano's student, assumed that this essential property of intentionality, the directedness of mental states onto something, is not contingent upon whether some real physical target exists independently of the intentional act itself. This is regardless of whether the appearance of the thing is an appearance of the thing itself or an appearance of a mediated thing. Such consciousness and knowledge of the thing amount to perspectival understanding. Therefore, a person's understanding is an understanding of a thing or an aspect of a thing (object). The key epistemological assumption, derived from Husserl's concept

of intentionality, is that the phenomenon is not present to itself; it is present to a conscious subject (Barnacle, 2001). Therefore, the knowledge that an individual hold about the phenomenon is mediated and one cannot have 'pure or unmediated access' which is other than a subjective mediated knowledge (Barnacle, 2001, p. 7). We have access only to the world that is presented to us. We have an intention to act, to know what is out there, and we only can have access to an intentional knowledge that the knower can consciously act towards (Hughes and Sharrock, 1997). Therefore, the assumption held here is that knowledge is the outcome of a conscious act towards the thing to be known (Hughes and Sharrock, 1997).

Subjectively Mediated Knowledge

The second epistemological assumption is related to the previous one, that of intentionality. It is that we either assume that the social world and a phenomenon do exist outside of our consciousness (see, for example, Vygotsky, 1962; Burge, 1979, 1986), or that they do not, but we are able only, as individuals, to interact with it and produce meaning for it through a conscious act. Consciousness is the 'medium of access to whatever is given to awareness' (Giorgi, 1997, p. 236); therefore, epistemologically, only subjective knowledge can be known about the experienced world. This assumption leads to the next epistemological assumption held in this investigation, which claims that knowing other people's experiences is the outcome of constructed and dialogical knowledge.

Constructed Dialogical Knowledge

By stating that the knowledge obtained from a phenomenological study is constructed dialogically, we differentiated between philosophical knowledge on life experiences, and the knowledge provided by certain research practices that explore and understand other people's descriptions of their lived experience (Giorgi, 2006a,b; Finlay, 2008).

From a phenomenological perspective, we assume that knowledge provided through the research activities is a result of the researcher's and participants' interactions with the phenomenon that is subject to the investigation. The essence of the argument here is that the 'experience' is best known and represented only through dialogical interaction: an interpretative methodology that analyses (spoken or written) utterances or actions for their embedded communicative significance (Linell, 2009). For what concerns us, interaction occurred between two inseparable domains: between the conscience of the researcher and the participants, and between these consciousnesses and the phenomenon explored. The qualitative methodology provided a direction for this study by way of navigating through the first domain, which was the interaction between researcher and participants. The first domain had two levels of interaction, with the first being the relationship between researcher, participants, and raw data as a dialogical relationship—a dialogical relationship in the sense that the researcher is actively engaged, through dialogue (in the form of spoken or written communicative utterances or actions), in constructing reasonable and sound meanings from the data

collected from the participants (Rossman and Rallis, 2003; Steentoft, 2005). The importance of such a dialogical relationship, in phenomenological research, is supported by Rossman and Rallis (2003).

PHENOMENOLOGICAL QUALITATIVE METHODS AND STRATEGIES

Two forms of phenomenological methodologies can be noticed in the literature of qualitative research: descriptive phenomenology and interpretive phenomenology (Moustakas, 1994; Lopez and Willis, 2004). Descriptive phenomenology was derived mainly from the philosophical work of Husserl and particularly from the idea of transcendental phenomenology (Moustakas, 1994; Lopez and Willis, 2004; Giorgi, 2010). In contrast, an interpretive phenomenological methodology was derived from the works of scholars like Heidegger, Merleau-Ponty (1962), Gadamer (2000), and Gadamer and Linge (2008).

These approaches overlap in the research methods and activities and are used to assist the research by promoting engagement with responsive and improvised activities rather than with mechanical procedures. In fact, key principles of both descriptive and interpretative phenomenology are peoples' subjective experiences and the meanings they ascribe to their lived world and how they relate to it (Langdridge, 2007). No definite line distinguishes or separates these two approaches or attitudes. Deploying both binaries is what differentiates our phenomenological qualitative approach from other qualitative approaches in the field (see, for example, Finlay, 2008; Langdridge, 2008).

Descriptive Attitude

The descriptive attitude in 'the sense of description versus explanation' (Langdridge, 2008, p. 1132; Ihde, 2012) occurs where the emphasis is on describing what the researcher hears, reads, and perceives when entering the participants' description of their experience. According to Ihde (2012, p. 19) it is that attitude that consists in 'describe phenomena phenomenologically, rather than explain them'. The whole phenomenological qualitative approach process is not description vs. interpretation, since interpretation is inevitably involved in describing and understanding the description of other people's lived experiences (Langdridge, 2008). As presented in **Figure 1**, the descriptive attitude is served by the bracketing mode and by the reduction process in order to generate a textural description of the described lived experience (Moustakas, 1994; Creswell, 2007).

Bracketing

Bracketing refers to the efforts that should be made to be open to listening to and observing the described phenomenon with fresh eyes. It is an attempt to put aside any prejudgements regarding the phenomenon being investigated (Salsberry, 1989; Moustakas, 1994; LeVasseur, 2003; also see a critical discussion in Zahavi, 2019a, 2020, 2021, and in Zahavi and Martiny, 2019). This mode also allows one to engage phenomenologically with
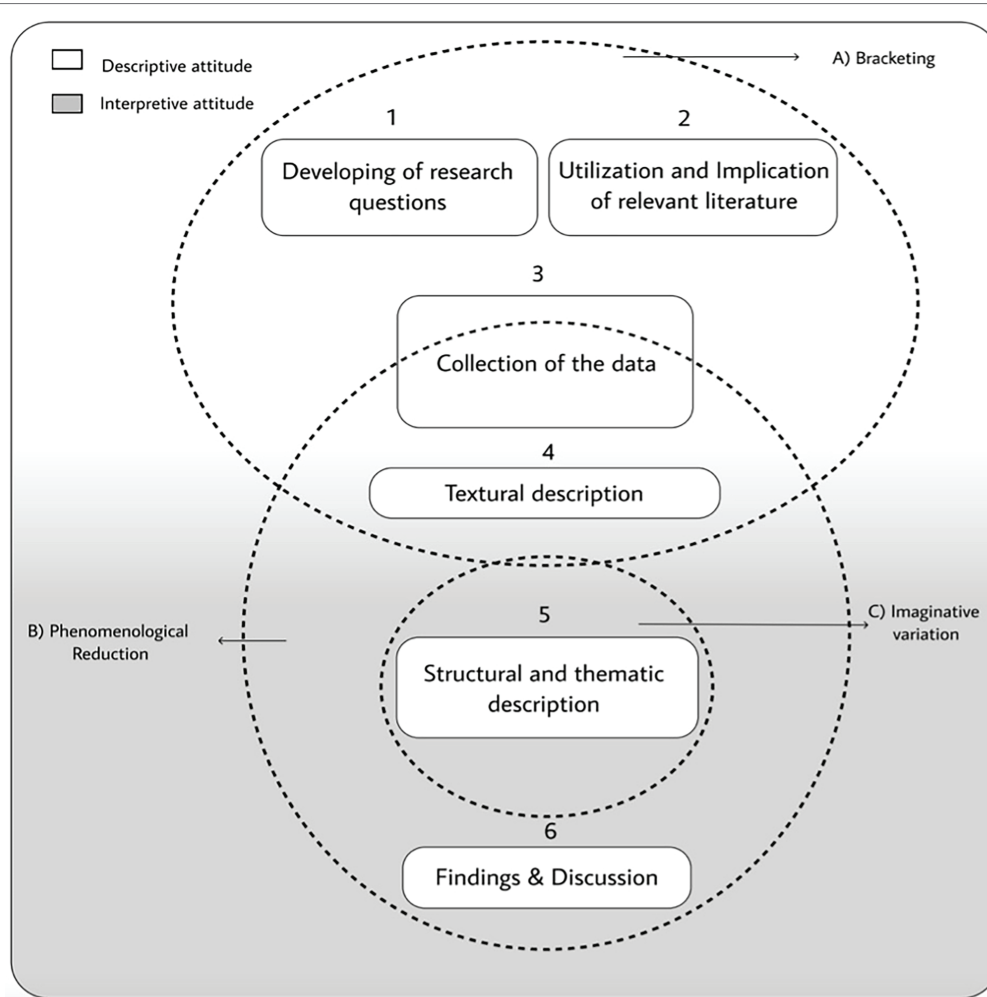
FIGURE 1 | The hybrid phenomenological qualitative method.

the reduction process concerning the participants' descriptions of their lived experiences. What the bracketing mode offers to a phenomenological qualitative study is: (1) temporary suspension of any prejudgements or assumptions related to the examined phenomenon that might have limited and restricted how the phenomenon appeared for the participants, while being aware that it is impossible to be completely free from any presuppositions; and (2) assistance in maintaining the involvement of previous experiences and perceptions about the phenomenon to recognise and realise what constitutes other aspects of the explored experience. According to Moustakas (1994, p. 85) adopting a bracketing status allows that 'whatever or whoever appears in our consciousness is approached with an openness'. The bracketing mode influences most stages of the research activities about the following aspects:

- Forming descriptive research questions free from presuppositions to guide and direct the research enquiry, leading to the achievement of a study's aims.
- Responding to and engaging with previous works that were concerned with the same experience.

- Conducting descriptive interviews that allow participants to share and describe their lived experiences.
- Re-describing the described experience with careful treatment of the data included, maintaining the involvement of the researcher, and avoiding being selective or discriminating in the re-description of the experience.

Phenomenological Reduction

Phenomenological reduction is the process of re-describing and explicating meaning from the described experience (Giorgi, 1985, 2006a,b; Moustakas, 1994; Crotty, 1998; Todres, 2005; Creswell, 2007; Finlay, 2008). Such strategies are used to underlie the data analysis process. For Moustakas (1994) and others (e.g., Todres, 2005, 2007), the phenomenological reduction of human experience deals with two dimensions of the experience: texture and structure.

The texture is the 'thickness' of an experience (Todres, 2007, p. 47); it is a description of what the experience is like. Accordingly, the texture is an extensive description of what happened and how it appears to the researcher. The texture

is the *qualitative* feature of the experience (Moustakas, 1994; Creswell, 2007). The structure of the experience deals with emergent themes, and these describe the essential aspect of the experience. Such themes 'can be grasped only through reflection' on the textural descriptions of the participant's experience (Keen, 1975, as cited in Moustakas, 1994, p. 79).

Interpretive Attitude

The interpretive attitude is the second strategy to be used to approach the data. It is part of the phenomenological approach towards discovering the essential structure and meanings of the experience as described by the participants. The interpretive attitude is part of the methodological strategies used to search for the essence of the experience. This approach is used mainly in the final stages of the research activities when the data analysis is being conducted.

As Finlay (2008, 2009) argued, 'interpretation (in phenomenological practice) is not an additional procedure: It constitutes an inevitable and basic structure of our "being-in-the-world." We experience a thing as something that has already been interpreted' (p. 10). Therefore, to achieve a meaningful description and understanding of the essential aspect of an experience, we should move from the bracketing mode to an imaginative variation mode to reflect on the first step of the phenomenological reduction, which is a textural description.

Imaginative Variation Mode

In the phenomenological literature, imaginative variation is akin to the induction process in that it aims to extract themes and essential meanings that constitute the described experiences (Klein and Westcott, 1994; Moustakas, 1994; Giorgi, 2006a,b, 2009; Creswell, 2009). It should be mentioned, however, that in the phenomenological practise, shifting from a descriptive to an interpretive attitude is 'interpretive so far' (Klein and Westcott, 1994, p. 141). It shall be noted that usually applying phenomenology within qualitative methods is seen as working with a version of 'factual variation' that, in comparison to 'imaginative variation', works with qualitative data (as described in Høffding and Martiny, 2016). However, since our approach is not purely fitting within the epistemological assumptions of positivism and neo-positivism, but rather it reflects the epistemological assumptions of the hermeneutical approach, we prefer to adopt 'imaginative variation', and remain consistent with our hybrid view that attempts to balance descriptive and interpretative methods of investigation. The imaginative variation mode enables a thematic and structural description of the 'experience' to be derived within the process of phenomenological reduction. This mode assists in focusing on the second aspect of the research, which requires an examination of how the experience might affect the cultural identity of the participants, that is, that part of their self-conception that is typically influenced by the cultural background of their country of origin, and that is responsible for shaping their social values and beliefs. This strategic mode can guide the researcher to shift from the descriptive to the interpretive attitude. According to Von Eckartsberg (1972, p. 166) such a mode 'constitutes

the reflective work, looking back and thinking about this experience, discovering meaningful patterns and structures, universal features that are lived out concretely in a unique fashion'. This will be considered describing "past experience" as "mediated experience" in the final analysis. And mediation is an essential process that individuals engage with in relation to their experience. Reflecting on people's personal experiences requires mutual and reciprocal respect between researcher and participants (Klein and Westcott, 1994). This aspect allows the researcher to engage with the texture of the participant's personal experience, to reflect on it, and to decide on possible meanings in relation to the whole context. It also allows the participants to evaluate the researcher's reflection. This methodological mode can play a significant role in the process and activity of data analysis.

PRACTISING PHENOMENOLOGY: METHODS AND ACTIVITIES

We provided an overview of the methodology that we endorse as hybrid since it embeds both descriptive and interpretive phenomenological attitudes. To implement and explicate this approach in the practice of the research, we can take suggestion of Moustakas (1994) about organising the phenomenological methods around three categories: (1) methods of preparation, (2) methods of collecting data and gaining descriptions about the phenomenon, and (3) methods of analysing and searching for the meaning. These categories are useful when it comes to conducting a phenomenological qualitative study because they allow for the reporting of the most significant methods and ensure that activities are conducted in a logical order.

Methods of Preparation, Activities, and Data Collection

If the nature of the study is emergent, like in most qualitative research (e.g., Creswell, 2009; Hays and Singh, 2011), the research purpose and questions are emergent too; they grew initially from personal experience and then emerge through the process of conceptualising a research topic around experience being investigated, for example, the experience of cross-cultural transition lived by individuals who move from their own cultural and educational context to a different one. In our past work, this was the transition of Saudi students, both males and females, from Saudi Arabia to Australia. These students experienced the transition from a gender-segregated, deeply religious cultural and educational social context to a different one, where gender-mixed interactions are not limited to members of one's own family, such as in Saudi Arabia. In Australia, these students experienced life in a gender-mixed educational social context that is not built on religious pillars. The experience that we investigated consisted of: the cross-cultural transition to a different educational social context. As Giorgi (1985), Van Manen (1990), Moustakas (1994), and other phenomenologists have stated, aspects that are core to the interviews are the following: (1) general attributes of the conducted interviews, (2) criteria

of selection for potential participants, (3) ethical considerations of dealing with human participants, and (4) the interviewing procedures and some examples.

Attributes of the Conducted Interviews

The main attributes of the interviews may be summarised as follows:

As an interview is influenced by the mode of bracketing, prior to each of the interviews it is necessary to elicit the participant's experience separately from any comparison with one's own. The interviews are about what the participants want to say rather than what the main researcher wants them to say or what the main researcher expect them to say. It is important to point out that the interviews are designed in such a way to encourage discursive answers rather than affirmative or negative answers (as discussed in Høffding and Martiny, 2016). Engaging with the interviews has the scope of seeking new views and perspectives about the phenomenon that is being investigated, and not simply to confirm or disconfirm what is already known about that phenomenon.

Here is an example of spontaneous answers to open questions taken from our previous work: Z. talks freely about the first week of experience in the novel educational social context in Australia: "Explicitly, the first class was horrible; was very bad. It is probably because I have not been in such position [mixing with males]. So, I was silent most of the time; I did not talk with any one most of the time; and I isolated myself in corner…. Mixing [with unknown males] is difficult for me because I have to deal with foreign men and I do not know them … I do not have a problem to speak with men. But the problem for me [is that] sometimes I think what if this man cross the limits between how I can deal with such behaviour. So I preferred to stay away from the men. In the first time it was hard, I could not do anything by myself. Many times, I just cried. The life [here] was mysterious in the beginning."

And again towards the end of the stay in Australia, Z. spontaneously shares how her worldviews about herself have been changed by being in a gender-mixed educational environment. For example, Z. stated clearly that she is now confident 'to deal with male'—after all the 'scariness' and 'horribleness' that was felt in the beginning. She learned from her experience in a gender-mixed environment how to make her own rules that males cannot cross. Z. said: "… Being here has changed my personality completely…. The most important advantages from (being here) refined my personality in a good way, and I became more independent…. I refined my personality. Not only me, who realised that, but my family also said that: Z. has changed…. Finally, I learned how to deal with man with confidence and how to make my own rule. So When I come back to Saudi Arabia, I will be more confident."

During the interviewing activity, is also important to share experiences with the interviewees in order to practice empathy (Corbin and Morse, 2003; Dickson-Swift et al., 2006; August and Tuten, 2008; Mitchell and Irvine, 2008; Mallozzi, 2009) and be respectful for what they feel about their experiences (Klein and Westcott, 1994). These techniques are outlined to show interviewees that the researcher is interested in hearing

detailed accounts (Hays and Singh, 2011) about their experiences. As Hays and Singh (2011) have suggested, such involvement during an interview activity may encourage participants to share their experiences more freely, if they feel they are in a friendly situation. The advantages of this technique can be reflected in the descriptions of the answers provided and in the participants' helpfulness in reviewing the transcribed interviews and adding or correcting data.

Selection of the Participants

A purposive sampling method can be used to select the participants. This is a type of nonprobability sample. The main objective of a purposive sample is to produce a sample that can be logically assumed to be representative of the population. This is often accomplished by applying expert knowledge of the population to select in a nonrandom manner a sample of elements that represents a cross-section of the population. For example, in our past work, such expertise was given by the author being a Saudi citizen who went to study in Australia. Such methods are considered fitting for most investigations if one wants 'to discover, understand, and gain insight … from which the most can be learned'. Another reason to use a purposive sampling method is that in qualitative, particularly in phenomenological inquiry, the aim is not to generalise findings to a population but to develop insights and in-depth exploration of an under-researched phenomenon (Onwuegbuzie and Leech, 2007). The concern is not about the number of participants. Rather, the focus should be on the intensity of participation and the diversity of the participants. Moustakas (1994) suggested that the number of participants in a phenomenological study can be from 1 to 20, depending on the time frame (see, Halldórsdóttir, 2000; Morse, 2000; Starks and Trinidad, 2007; Jones and Lavallee, 2009).

This section describes how the data and reports on the activity conducted can be treated to generate findings from the interviews. The following series of processes is indicative of the path followed to arrive at the findings for this research, which relied heavily on the works of Hycner (1985), Moustakas (1994), Giorgi (1997), and Wertz (2005) when a plan for data treatment is developed. Warning of Hycner (1985) against using the term data analysis when engaging in a phenomenological approach has been considered. The concept of analysis involves breaking things into parts, while phenomenology is about potting parts of any experience (phenomenon) together to get a sense of the whole, to get into phenomenological "reduction." We are looking for "the essence." This requires getting a sense of the whole rather than of the part. Therefore, we prefer to use "explication." Explication usually points to the process of being explicit about the constituents of the whole phenomenon. Using a popular term like analysis may be inconsistent with how the data are treated because the term analysis usually implies a process of breaking things into parts. Therefore, to avoid misleading uses of terminology, the suggestion is to use the term data explication, which Groenewald (2004) suggested. Explication usually points to the process of being explicit about the constituents of the whole phenomenon (Hycner, 1985; Groenewald, 2004).

The Interviewing Procedure

In order to capture and explicate the essence and the structures constituting the experience encountered by the participants nine steps can be followed: (a) transcribing participants' interviews, (b) developing a sense of the whole, (c) developing meaning units for each participant's experience (horizontalisation), (d) clustering relevant units of meanings, (e) translating the meaning units, (f) developing textural (i.e., narrative) descriptions for each individual, (g) searching for essential structures that could express the entire textural description, (h) evaluating the textural description, and (i) synthesising the structure from all participants' accounts. Each step is addressed in further detail in the remainder of the paper.

Transcription

After the interviews are conducted with all the participants, the interview recordings are transcribed. After having confirmed the privacy and confidentiality statements that are provided by the third-party transcribers are confirmed, verbally and by email, interviews are sent to the transcribers, and records should be deleted after the completion of the transcription process.

Developing a Sense of the Whole

Following the transcription process, the second step consists in developing a general sense for each participant's description. This involves listening to all the recordings several times as well as reading the transcripts several times. Repeating the procedure is useful to make sure the content of the interviews is carefully approached: In fact, this process helps the investigator to become familiar with the context of the units of meaning and themes that they sought to extract in the next step. At this stage, the goal is to get a general sense of what participants had told the investigator about their experience. This sense provides a foundation for the following process of data explication. Engaging in this activity helps the investigator to switch on and keep the focus on the phenomenon itself, which appear within the descriptions of the participants.

It is essential to the phenomenological attitude to pay full attention to both the spoken and written forms of the data. Developing a sense of the wholeness and of the entirety of what everyone had expressed regarding their experience is necessary because the goal of the investigation is to find the essential meanings of the experience as encountered by the participants (Hycner, 1985; Moustakas, 1994). Each transcript and record should be read and listened to separately and at different times. This step allows getting an overall sense of the data.

Developing Meaning Units for Each Participant's Experience (Horizontalisation)

After transcribing the interviews, and once a general sense of the whole description of the phenomenon has been gained, it is possible to formally engage with the data treatment in order to extract the invariant meaning units and themes that constitute the experience encountered by the participants. Every statement, phrase, sentence, and paragraph in each transcript is examined to elicit statements relevant to the experience. At this stage, the

attitude is to go through the transcripts with an open-minded attitude, as much as possible (Hycner, 1985). This means to stay in the bracketing mode and be as descriptive as possible. Moustakas (1994) called this stage of data treatment 'horizontalisation', as this is where the descriptions of each individual turn to a horizon. The horizon, in the discussion of the phenomenological data treatment, refers to the context from which an experienced phenomenon could appear; it is the source that comprises the core themes and meanings of the experienced phenomenon. The notion of phenomenological 'horizon' has been conceptualised differently according to which philosophical perspective is adopted. For example, the term can appear in Nietzsche, Husserl, and Heidegger, wherein it has been used to refer to very different concepts (Scott, 1988; Von Eckartsberg, 1989; Husserl and Hardy, 1999; Heidegger and Dahlstrom, 2005; Christofi and Thompson, 2007). Therefore, to avoid confusion around the term 'horizon', the term is presently substituted by the expression 'meaning units', as this term refers directly to what is being achieved at this stage of data explication. Invariant meaning units are the non-repetitive or overlapping statements that explicitly or implicitly capture a moment, or several moments, of what has been experienced (i.e., the texture of the experience). To develop the meaning units from the participants' accounts, the following sub-steps come next: *listing all statements relevant to the experience*, and *going through the list of statements* by checking each statement against two criteria suggested by Moustakas (1994, p. 121): (1) Is the statement essential for understanding the phenomenon being studied? (2) Can it be abstracted and labelled? Any statement that conforms to these criteria was included as an invariant meaning unit. The statements that did not meet these criteria—those that are repetitive, overlapping, or unclear—are eliminated.

This process is difficult as well as the most critical one (Wertz, 1985) because the entire investigation depends on these units of meaning. It takes time to be confident in eliminating some statements that do not meet the relevancy requirement.

Clustering Relevant Units of Meaning Into Groups

After developing the list of relevant meaning units, it is necessary to go through them several times in the mode of imaginative variation to identify a significant theme that could be clustered as a possible unit of meaning. Turning the attention to imaginative variation is useful in examining identified meaning units reflectively, adding the dimension that allows subjective judgements. To avoid inappropriate subjective judgements, it is important to keep bracketing one's own presuppositions to see what might possibly emerge (Von Eckartsberg, 1972; Moustakas, 1994). However, it should be acknowledged that the researcher's prior experience cannot be completely isolated, as the researcher must use their constituted mind (Al-Jabri, 2011b) to understand and to identify the emerging themes. To minimise this necessary risk, it is recommended to ask external reviewers to be independent judges and check for consistency under the themes that are selected. At this stage, each case is still being treated individually to identify the unique experience of each participant. This approach is also useful for obtaining an in-depth understanding of the data, rather than rushing into the whole. These clusters are the core themes

to use in organising the invariant meaning units (here referred to as "the core themes of the experience" of the phenomenon; Moustakas, 1994, p. 121), before revisiting them to develop the textural description of the participant's experience. This step helps organise the textural description of the experience (Moustakas, 1994).

Translating the Meaning Units

In previous stages, the data explication can be kept, as much as possible, to what is expressed by the participants. This should all be done in the primary language spoken by the participants (i.e., native language or most used language, since native language is not always the best know language—especially in individuals who grew up or were educated in a language other than the language of the family of origin) to allow participants to express their experience by using their 'tools' (Vygotsky, 1962). This is important for getting a deeper description of the experience because language interacts with thinking and consciousness dialectically. The underlying assumption is that language, as a mediating tool, shapes participants' experience, and it is also a result of experience, and a significant constituent of the epistemological system of a given cultural group. Furthermore, like Burkitt (2011, p. 269), we maintain that sociocultural theory and symbolic interactionism theory promote an assumption 'that language does not express thoughts that already exist but provides the tools to bring thoughts into existence'.

In our previous work, the preferred language during the interviews was Arabic, spoken both by the researcher and the participants. Subsequently, the interviews were translated into English to be accessible to the scientific community internationally.

Developing a Textural Description for Each Individual

The sixth step consists in constructing a description of the texture of the experience from the clustered meaning units. This step provides rich, thick descriptions of each individual's experience. The textural description, which is by now translated in the language in which the study is conducted (if different from the language in which the participants expressed themselves during the interviews), presents what is experienced by each participant to provide this thick description, it is important to ask the following question for every invariant meaning unit: what can possibly appear as the texture of the participant's experience?

It should be indicated that as part of the process at this stage, some of the texture can appear in different meaning units, which means there is still some repetition and/or overlapping of the meaning units that are not eliminated in the fourth step.

Searching for Essential Structures That Could Express the Entire Textural Description

After constructing textural descriptions for each participant, it is time to deploy the imaginative variation mode again to search for essential structures that could encompass the entire textural description of the participant: a possible theme that could be the essential structure of the experience of this participant—essential in the sense that the experience could not be described without this theme, or themes. At this stage,

the interpretive attitude comes into play to help the investigator to identify the structure of the textual description. The interpretive attitude is important during this process because it involves deep contemplation and reflection on the textural description to capture the structural meaning.

Evaluating the Textural Description and Structural Theme of Each Participant's Experience

Once the textural and structural descriptions are ready, we have reached the evaluation step. In this step, we suggest adopting the following criteria from phenomenological guidelines of Hycner (1985): Do the participants agree with the identified textures and structures to represent what they had described in the interview? Did the investigator miss any other essential aspect of the participants' experiences that the participants would like to add?

Synthesising the Structures From All the Participants' Accounts

The final step consists in synthesising the structures of the material gathered from all participants' accounts to 'communicate the most general meaning of the phenomenon (Giorgi, 1985, p. 20). Because this activity is the final activity in terms of the data treatment, the main research question of the study must be addressed directly.

The discussion over the structures that emerge from all participants' interviews should take the form of writing a composite summary to describe how the experienced phenomenon is seen by the participants (Giorgi, 1985; Hycner, 1985; Van Manen, 1990; Moustakas, 1994). In this summary, it is important to concentrate on the common aspects of the experience as an essence of the phenomenon. At the same time, it is crucial not to ignore the unique and different views of the participants.

CONCLUSION

In this article, we have presented a hybrid phenomenological method embedded in qualitative analysis that we suggest should be deployed in educational research. Our analysis is relevant to those researchers interested in doing qualitative research and in those interested in adapting phenomenological investigation to understand experiences in different educational groups and social contexts, such as cross-cultural transitions, as we have shown. A phenomenological qualitative method provides a theoretical tool for educational research as it allows researchers to engage in flexible activities that can describe and help to understand complex phenomena, such as various aspects of human social experience.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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A Distributed Framework for the Study of Organizational Cognition in Meetings

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This paper proposes an analytical framework for the analysis of organizational cognition that borrows from distributed and ecological cognition. In so doing, we take a case study featuring a decision on the topic of agreeing on a set point in the agenda of a meeting. It is through the analysis of a few minutes of video-recording used in the case that enables us to demonstrate the power of applying distributed and ecological cognition to organizing processes. Cognitive mechanism, resources, and processes are identified within this combined framework. Mechanisms are described as "socio-material" (CM1)—where "people" and "artifacts" are the related cognitive resources—and as "conceptual" (CM2)—with "group" identity, "topic" understanding, meaning of "procedures," and perception of "time" as resources. Processes are defined as "coupling," "de-coupling," and "un-coupled" depending on the type of relation in place. Finally, the paper presents an agent-based computational simulation to demonstrate the potentials of operationalizing this approach.

Keywords: distributed cognition, ecological cognition, organizational cognition, complex adaptive systems, agent-based modeling, multimodal interaction analysis (MMIA)

INTRODUCTION

In this paper, we wish to propose an analytical framework for the analysis of *organizational cognition* by focusing on how cognitive processes emerge when individuals use each other and the environment to make sense and interact during a work meeting. To this end, we draw on elements from an ecological paradigm (Hutchins, 2010; Gibson, 2014) and on the perspective of distributed cognition (e.g., Hutchins, 1995; Hollan et al., 2000).

In so doing, we take a case study featuring a group of people agreeing on a point in the agenda of a meeting. It is through the analysis of a few minutes of video-recording used in the case that enables us to demonstrate our approach to analyzing *organizational cognition,* accomplished as a joint organizational practice in an interplay between agents, situations, relations and environment. By focusing on an internal meeting in a Danish subsidiary of a large multinational company, we identify how people use each other and the environment to make sense, understand others and coordinate interaction.

The vantage point in distributed and ecological cognition rests on a break with the tradition of considering the human brain as the only component of cognitive processes while focusing on the system of exploited cognitive resources (e.g., language, body, emotions, artifacts, norms, etc.) that, together with the brain, enable or disable those processes. Though we are conscious about important distinctions in the way in which various strands of cognitive science describe how

cognitive processes are enacted, distributed or extended by items outside our brains and bodies (e.g., Clark and Chalmers, 1998; Clark, 2008; Hurley, 2010; Menary, 2010; Kirchhoff, 2012; Gallagher, 2013; Slors, 2019, 2020), the focus on distributed and ecological cognition emanates from a shared assumption that cognitive processes are distributed across parts of the brain, body and different actors and artifacts embedded in a material-cultural ecology. So, rather than focusing on individual action, or invoking mental representations as a basis for cognition, we are inspired by Clark (2008) and Hutchins (2020), who see cognition as a process involving "the interaction of the consequences of past experience (for individual, group, and material world) with the affordances of the present. In this sense, culture is built into the distributed cognition perspective as at least a context for cognition" (377). In the same vein, Chemero (2011) proposes that all cognitive powers are seen as agent-environment interactions, where action is a result of a relational, structural coupling between an individual and its environment (Maturana and Varela, 1987). This combined perspective moves the object of investigation from the individual to the system, emphasizing the systemic features of human co-action.

By focusing on people and how they engage in whole-bodied activities that enable sense-making processes (Cowley et al., 2017; Trasmundi, 2020), we investigate *organizing* as a cognitive process emerging from the interactions among elements in a dynamic system, where organizations can be viewed as distributed networks of thoughts and actions, pointing at how we use each other and the environment as thinking resources (Gallagher, 2013). As recent work highlights (Slors, 2019), this view (i.e., Gallagher's) aligns socially extended cognitive systems with the postulates of distributed cognition and allows us to define a more general framework for cognition. At the same time, together with Slors (2020) we acknowledge that both extended and distributed views of cognition do not place sufficient emphasis on the differences between social and artifact-based distributions. In our analysis, we focus specifically on two questions: What are the mechanisms involved in the emergence of organizational cognitive processes? And how can one capture aspects other than language and talk, when looking into organizational cognition? By taking a distributed and ecological perspective on organizations, we answer calls for a more "dynamic" and "complex" approach to the study of organizational phenomena (Langley and Tsoukas, 2010).

We conceive of *organizational cognition* in terms of *organizing*, whereby we contribute to research from a process-based philosophy on organizations (e.g., Langley and Tsoukas, 2010; Hernes, 2014), in particular we believe that our perspective can offer new insight into how people make sense and interact in organizational practice. In this, we find some overlaps with the sensemaking literature (e.g., Weick, 1995; Gioia, 2006), and the concept of collective mind (Weick and Roberts, 1993), and collective minding (Cooren, 2004). Despite a recent growth in the number of studies on *organizing* from a distributed and ecological perspective (Secchi and Adamsen, 2017; Cowley and Secchi, 2018), this paper offers a distinct contribution to the field by outlining an analytical framework

as a way of demonstrating how a distributed and ecological approach to organizing can unveil aspects that are unlikely to appear by using more traditional research perspectives when analyzing organizing.

The paper is structured as follows: First it shortly introduces the most relevant theoretical elements of distributed cognition and provides the basic coordinates to the reader. Then, it presents the case, methods employed and analysis, and uses data to define the conceptual tools to answer the two questions above. Finally, it demonstrates potential operationalizations of the framework by feeding the conceptual structure onto an agent-based computational simulation model (Edmonds and Meyer, 2015), which is particularly suitable to support theoretical explorations in the social sciences (Secchi and Adamsen, 2017).

ORGANIZATIONAL COGNITION: AN INTRODUCTION

Mainstream cognitive science and philosophy of mind has traditionally taken biology as an individual phenomenon, while sociality is understood as something purely collective and public (Cuffari and Jensen, 2014). This "divide" is also apparent in cognition studies applied to organizations (Walsh, 1995). For instance, Hodgkinson and Healey (2008) review major developments within cognition in organizations and isolate five key theoretical perspectives pervading contemporary research, all of which seem to adopt a pre- or early-nineties approach to cognition (Secchi and Adamsen, 2017). They are: "(a) schema theory and related conceptions of mental representations [...], (b) behavioral decision theory [...], (c) attribution theory, (d) social identity theory, and (e) enactment and the related notion of sense-making" (Hodgkinson and Healey, 2008, 391). Seeing organizing as a sense-making activity has in particular been inspired by the framework provided by Weick (1979, 1995) and is perhaps the best-known process-oriented account in the field (Langley and Tsoukas, 2010), and it is probably one of the most advanced accounts of sensemaking processes in organizations. We therefore refer to the sensemaking framework when defining the contribution of a distributed and ecological framework to organizational cognition.

Organizational Cognition Through Sensemaking

We find a rapidly growing interest in sensemaking within organization studies, (Cooren, 2004; Maitlis and Christianson, 2014; Brown et al., 2015; Sandberg and Tsoukas, 2015) making the sensemaking literature both very diverse and fragmented. In a review article of Weick's sensemaking approach, Sandberg and Tsoukas (2015) point to the immanent ambiguity of the concept, which is partly due to lack of consensus as to whether sensemaking can be seen as individual-cognitive (mental maps), or specifically social and discursive (linguistic and communicative).

From a cognitive perspective, sensemaking has mostly been grounded in an individual internal process of the mind,

relying on mental representations of reality, or as group-level consensus (Mohammed, 2001). As Weick and Bougon (1986, pp. 102–103) note, "organizations exist largely in the mind, and their existence takes the form of cognitive maps." As noted by Cunliffe and Coupland (2012, 65) from this perspective sensemaking is mostly understood as a "rational, intellectual process represented through cognitive schemas and models." Further, sensemaking is frequently seen as a retrospective process bound to the present where attention and meaning creation are directed backward, from a specific point in time (Weick et al., 2005; Langley and Tsoukas, 2010).

Other scholars see sensemaking as a social construction, giving the role of language, and communication a central position (Maitlis, 2005), relating sensemaking to conversational narrative processes (e.g., Boje, 1994; Brown, 2006). This is reflected in streams of studies that emphasize language, talk and communication as important aspects of sensemaking, (e.g., Cooren, 2004; Weick, 2012; Maitlis and Christianson, 2014). From this perspective, sensemaking is mostly conceived of as a social and discursive process, where the environmental context serves as a necessary background and input to the cognitive system.

Although extremely useful in many respects, these sensemaking perspectives significantly limit the explanatory and analytical powers of both communication and cognition. On the one hand, it reduces communication to talk and text, overplaying the role of conscious deliberate activities as opposed to more spontaneous semi-random or casual interactions, even if Weick attempted to correct this with the ideas of bricolage and improvisation; (Weick, 1993). On the other hand, it faces the risk of being an over-socialized (constructivist) account of human interactions in organizations (Cunliffe and Coupland, 2012; Maitlis and Christianson, 2014). In so doing, it does not fully consider, for example, the intrinsic meaning attached to artifacts and other external resources in the environment (Thompson and Stapleton, 2009).

However, more recent studies have started to focus on more embodied and embedded views on sensemaking (Cunliffe and Coupland, 2012) including sociomaterial, temporal and ecological aspects (e.g., Cunliffe et al., 2004; Feldman and Orlikowski, 2011; Whiteman and Cooper, 2011). These emerging developments within the sensemaking literature may help to overcome the above-mentioned limitations and help move the field of organizing forward.

But, in order to further advance our understanding of organizational cognition, we claim that it is necessary to go back to the roots of sensemaking – i.e., cognition (Weick, 2012; Maitlis and Christianson, 2014). In this, we refer to one of the most fruitful advancements in the study of cognition, one that is drawing on a distributed and ecological perspective (e.g., Hutchins, 1995; Hollan et al., 2000; Clark, 2008; Menary, 2010; Gibson, 2014; Cowley et al., 2017), which allows us to focus on the *interconnectedness* of agents, situations, relations and environment, thereby moving the object of analysis from the individual to the system.

Assumptions of Distributed and Ecological Cognitive Processes

The perspective in this article on organizations sees cognition in terms of agent-environment as well as agent-agent dynamics unfolding over time rather than in terms of computation and mental representation (Chemero, 2011). This enables us to focus on the interconnectedness of cognitive resources (Clark and Chalmers, 1998) rather than on location – i.e., on whether they belong to one's brain or to the tools one is using. This is also considered a "systemic" approach to cognition (Cowley et al., 2017).

Traditionally, there has been a sharp separation between what happens inside human beings – biological and cognitive processes, thoughts and emotions – and what happens between human beings – socially, linguistically and through communication. A distributed and ecological approach confronts the internal/external distinction and sees the study of cognition in contexts, which means that any individual is seen in direct relation with its environment. On the one hand, external and internal cognitive resources are intertwined in a way that it becomes very hard to draw a line between the two (Clark, 2008). On the other hand, there is an interplay among these resources (Clark and Chalmers, 1998) such that the ones affect the others in constant continuity.

The act of writing is an example of a distributed cognitive process, where one "externalizes" thinking using artifacts (e.g., computer, paper, pencil, the written words), and then re-internalizes the outcomes of this action, known as "re-projecting"; (Magnani, 2007) gaining a different perspective on the original in-brain activity. Simple tasks, such as compiling a shopping list of items, usually look different after one starts the externalization process and writes the items down. The action of writing down enables further thinking, and sometimes it allows to populate the list with items that one has not originally had in mind. In his approach to distributed cognition, Hutchins (1995) sees cognitive processes as distributed over space and time. This leads Hollan et al. (2000, 176) to specify that there are three "distributions:"

- Cognitive processes may be distributed across the members of a social group.
- Cognitive processes may involve coordination between internal and external (material or environmental) structure.
- Processes may be distributed through time in such a way that the products of earlier events can transform the nature of later events.

This approach emphasizes the interconnectedness of all parts of the cognitive process between internal, external, macro, meso, micro levels and the focus on social aspects (Hutchins, 1995; Neumann and Cowley, 2016; Secchi and Cowley, 2016; Cowley et al., 2017; Secchi and Adamsen, 2017). Defining organizing as a distributed and ecological process enables us to investigate it as a cognitive process emerging from the interactions among elements in a dynamic system (Hutchins, 2014). This has led others (e.g., Cowley et al., 2017) to hypothesize that the focus of the cognitive process may be on the system rather

than on a particular way of distributing, manipulating, or defining cognitive resources. This "systemic view" emphasizes the 'adaptive, coordinative and self-organizing nature of human interaction to the degree that human dialogue is viewed as a "functional whole." Moreover, from an ecological perspective, a system that is open and complex presents emergent properties. It is therefore possible to frame a group of people engaged in interaction, such as face-to-face meetings as a bundle of "coupling mechanisms" (e.g., Clark, 2003; Chemero, 2011) with individuals as component subsystems that emerge from the relation between "subsystems of body, brain, and mind" (Cameron and Larsen-Freeman, 2007, 162).

THE Ø-HOP CASE

The name Ø-Hop is completely fictional, and it is evocative of a summer activity in vogue in Denmark that consists in moving from one of the small islands surrounding the country to another. In fact, the letter "ø" is also a word meaning "island" in Danish, while "hop" is a short jump, like in English. We use this fictional expression to indicate how the individuals in the meeting switch more or less rapidly (or hop) from one *coupling mechanism* to another as the meeting unfolds. This mimics the frantic ø-Hop activity that some Danes entertain over the summer.

A significant part of organizational life is today spent in meetings, these are, perhaps, the typical representation of what happens in organizations; in fact, their dynamics, content, structure, socialization mechanisms, and rules of operations are a fair demonstration of the life of an organization. Meetings are a joint organizational practice with a particular focus on time, i.e., what happened in the past, what is happening in the present and, in particular, what will happen in the future, inviting a distributed cognitive perspective from the very outset. Accordingly, we see meetings as highly structured "dynamic" practices, distributed on and constrained by different timescales. They are the result of past decisions, and/or there may be references to prior decisions, and they are oriented to future meetings and possible future outcomes. Meetings may have participants with different sociocultural and professional backgrounds, they include invitations, an agenda, minutes taking, a specific physical setting (e.g., a meeting table, computers, pen and paper, etc.) and often a visual (power point) presentation — all acting as structuring devices in the making of the context. Moreover, meetings are "complex," as multiple groups interact in flexible and unpredictable ways. This means that these physical objects as well as social constraints function as enabling conditions for the trajectory and outcome of the meeting. In the following we aim at identifying how people use each other and the environment to make sense, understand others and coordinate interaction.

Data and Method

The data for this study is based on an ethnographic study in a Danish subsidiary of a large multinational company. The data selected for the present article come from a video recording of employees and management meeting, with nine people present,

FIGURE 1 | The room layout.
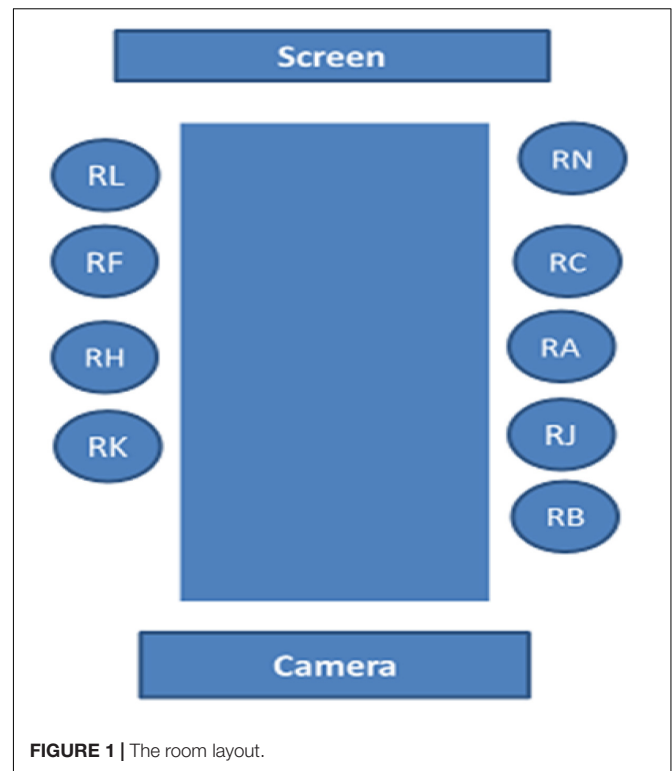
two females and seven males, and three different nationalities (Danish, German, Romanian), three managers (identified with M1, M2, and M3) and six employees (labeled E1–E6). The meeting was conducted in English.

The recording is 2 h in total and was conducted by only one camera at the end of the table and was made by a graduate student working with one of the authors in a project on intercultural communication (see **Figure 1**). The name Ø-Hop is fictional to preserve anonymity and confidentiality.

The full video recording of the meeting was reviewed several times and transcribed for analytical purpose. The participants provided their written informed consent to participate in this study. In order to protect the identity of the organization and the participants in the meeting, all names have been anonymized.

The purpose of our analysis is to develop a framework that enables us to answer the following questions: What are the mechanisms involved in the emergence of organizational cognitive processes? And how can one capture aspects other than talk and text, when looking into organizational cognition?

When developing our conceptual framework, we draw on MultiModal Interaction Analysis (MMIA) (Goodwin, 2000). The rationale of MMIA is, in part, inspired by Conversation Analysis (CA) in the sense that it is designed to investigate the sequentiality of social action. This is a detailed study of how participants in conversation co-construct a social order by looking at how interactants, on a turn-by-turn basis, orient to and thereby exhibit their understanding of the state of talk (Hutchby and Wooffitt, 2008). This implies that the focus is not just on *what* people talk about, but on *how* they do it and what kind of patterns can be derived from this sequential ordering.

This is often referred to as "next-turn-proof-procedure," and it has created the basis for an evidence-based methodology that basically examines the social order of conversations, that is, how turns are sequentially structured in a turn taking-system (Sacks et al., 1974) such as, for instance, the sequential co-construction of question-answer patterns in various social settings. However, compared to CA, MMIA has an additional focus on human interaction as a whole-bodied activity embedded in a physical and social environment. At the heart of the method lies the assumption that the verbal and bodily non-verbal dimensions of language are equally important dimensions of the act of "doing language" (or "languaging") with other people. Thus, MMIA combines attention to verbal actions with embodied actions, such as gesture, gaze, posture and facial expression (Goodwin, 2000; Cuffari and Jensen, 2014).

In order to support our theoretical argument, and in an attempt to demonstrate how the framework could be treated and, to some extent, generalized, we supplement the qualitative analysis with a computational agent-based simulation model (ABM) (Gilbert, 2008), using the software NetLogo 6.0.2 (Wilensky, 1999). The aim of the model is to demonstrate a potential application of our analytical framework.

Contextual Information

The context of the meeting is the problem the company is facing as they are currently using a computer program called "SRM Tool," but they will soon need to make a transition to another program called "Team Center." However, their IT department in Germany does not support a transition from SRM Tool to Team Center, which is rather problematic. The management has therefore found a solution, which they will present at the meeting. The solution being a temporary transition to another system called "Doors."

At the meeting, participants are supposed to discuss what changes are needed in order to solve the IT-problems and what requirements will be needed to make the transition from SRM Tool to Doors. The purpose of the meeting, however, is not quite clear to all participants, and the following two sequences (presented respectively in **Boxes 1, 2**) are taken from the beginning of the meeting at the time when they are trying to establish a "mutual purpose." Thus, the agenda is built around (1) how to do the transition, and (2) when to do the transition. However, throughout the meeting there are recurrent patterns of interaction in which both (1) the agenda is questioned, i.e., whether they should rather discuss if they are to do such a transition, and, as a result of that, (2) the value of doing such a transition is – directly and indirectly – put to question. In other words, tensions arise when trying to identify and decide on a mutual purpose of the meeting. In particular, instead of resolving the problem by discussing how to do the transition, they rather find two different solutions to the emerging problem. Solution (a), as proposed by management, is a temporary transition to another system called "Doors," involving two transitions (from SRM Tool to Doors and from Doors to Team Center). Solution (b), suggested by the employees, is to go directly to Team Center and skip the transition to Doors, which only involves one transition. The first solution appears to be easier on the technical side but heavy on regular employees, while the second is rather complicated on the technical side but easier for employees. This discrepancy gave rise to the discussion in the meeting.

We selected these two sequences because (a) they represent a situation that has happened at least once (most likely several times) to anyone taking part to a meeting, (b) the controversy over such a simple point (an item in the agenda) makes it easier to detect cognitive processes.

Further, the interactions are not always clearly detectable from audio only, it is therefore necessary to include video in order fully to understand and make the role of resources and cognitive mechanisms more apparent.

In the subparagraph below, we offer a brief description of two sequences extrapolated from the meeting, in an attempt to highlight aspects that will be relevant to build the conceptual framework as presented in the next section.

Data Description

Box 1 presents a detailed transcription of the first sequence, covering the initial part of the meeting (1 min and 54 s), where the interactions are particularly revealing of the starting conditions in which members find themselves.

At one point, M3 goes to the white board and makes a drawing in order to explain the purpose of the meeting. He then draws arrows between the boxes to illustrate how the transition will be carried out (reported in **Figure 2**).

If we look at the above sequence, something noticeable happens from line *1–15*: Two representatives from management have been accounting for their reasons to call for this meeting, and they have presented their solution – move the system to Doors – to an upcoming problem in relation to a shift to a new software. The decision is based on several problems which the management "discovered in the summer" (line *3*). In line *16*, however, one of the employees (E1) asks the question: "a question – eh – what transition do you mean – the transition to Team Center or – eh – ehm an earlier transition." Evidently, it is not clear to him what kind of transition they are in fact talking about, and this is not just the case for E1. Upon receiving the answer in line *19*, that the transition in question is a transition to Doors, another employee (E3) reacts promptly. From line *20–29* a series of adjacency-pairs (question-answer) between E3, M2 and E1 show that not only had E3 also been oblivious about the nature of the transition, she also resents not having been sufficiently informed before the meeting. By looking more carefully at the video recording, we see that, at the beginning, E3 is leaning back in her seat looking at M2, who is doing the talking. However, a shift occurs in line *11* just after M2 has uttered "there is no doubt that we are going to make a transition, that will come" – E3 suddenly leans forward and carefully studies the screen that displays the email invitation. Apparently, the information that "a transition will come" prompts her to scrutinize the actual text of the email invitation, again suggesting that the information about a transition is new to her. This is confirmed in line *24* in which E3, upon receiving an affirmative response to her question about the transition, raises her voice and clearly displays a token of surprise ("Ahhhhhh"), explicitly verbalizing her surprise: "this is absolutely new." The rest of the sequence is a discussion between

BOX 1 | Sequence 1.

L	P	Transcription	Time
1	M1:	…[…]- the intention of the meeting here is to I guess kind of brainstorm about ↓how can we move	S 2:01
2		These requirements – the requirements handling – into Doors [what]	E 2:14
3	M2:	[about] what is needed to move it (.) what we discovered in the summer when [*Name*] was on holiday for 5	S 2:14
4		Weeks ↓was that it felt a bit like nothing was working >the< process was not really known not really	
5 6		Implemented in the organization the tool was not working as it should people had a lot of questions and like that	E 2:36
7 8		*/M2 is making a movement with her hands while she talks, almost as if she is counting on her fingers as she lists the problems*	
9	M2:	So the situation was very bad for everybody and the frustration really was high by doing this meeting we	S 2:37
10		Want to have your input as users <what do you see is necessary in order to make the transition> there is no	
11		Doubt that we are going to make a transition that will come but we need wha̲t is needed in order to do this	
12		Transition and this feedback we need from you by doing this meeting we want to have your input as users	
13		<what do you see is necessary in order to make the transition> there is no doubt that we are going to make a	
14		Transition that will come but we need wha̲t is needed in order to do this transition and this feedback we need	
15		From you	E 3:01
16	E1:	A question – eh- what transition do you mean – the transition to Team center or – eh – ehm an earlier	S 3:02
17		Transition to – ehm – eh – like what you say – suggestion	E 3:14
18		*/Just as E1 poses his question E2 raises his hand and keeps it on and off for /Another employee [could not see who it is] says "ye-haaa" [approval]*	
19	M2:	I'm suggesting right now is to go to Doors	S 3:13 E 3:14
20	E1:	So you mean this transition SRM to Doors	S 3:14 E 3:18
21	M2:	Yes	3:18
22	E3:	S- sorry - so from SRM to Doors	S 3:19 E 3:21
23	M2:	°yeah°	3:21
24	E3:	Ahhhhhh this is absolutely new	S 3:22 E 3:24
25		*/E3 looks surprised at E1*	
26	E1:	It was in the invitation	S 3:24 E 3:25
27		*/E1 points to the screen*	
28	E3:	Yeah yeah yes – no no the invitation said future of SRM Tool	S 3:25 E 3:30
29		*/E3 puts her glasses on the table*	
30	E1:	[No it says our suggestion for]	S 3:30 E3:31
31	M2:	[(inaudible)] transfer to Doors before Christmas 2012	S 3:31 E 3:35
32	E2:	But then we will have two transitions [(inaudible)]	S 3:36 E 3:38
33	E3:	[just a] second I was thinking that [(inaudible)]	S 3:38 E 3:42
34	M2:	[(inaudible) the second] transition will be smooth	S 3:38
35		because this will not be our responsibility	E 3:43
36		*/M3 walks to the whiteboard while E3 and M2 talk and begins to draw*	
37	E2:	No transition is smooth	S 3:43 E 3:45
38		*/some laughter*	
39	M2:	No but if we continue with the srm tool we cannot expect the help from the it department in Karlsruhe	S 3:46
40		To make the migration (.)	E 3:55

L, line; P, participant; Time sequence: S, start; E, end. M1, M2, and M3 are managers while E1–E6 are employees; italics indicates actions relevant to the discussion; text in [] identifies something that is said on top of another person's talking.

two of the employees, E1 and E3, as well as between employees and management, E2 and M2, whether the information about the transition (from SRM to Doors) is indeed "NEW" information, or if it had been communicated in the email invitation. A discussion follows about whether such a transition can run smoothly or not. In this argument, M2 invokes the department in Karlsruhe as a powerful absent "other" as an outside third party (Linell, 2009) influencing the present conversation in the meeting.

The second sequence is about 3 min later into the recording and lasts 2 min and 50 s (see **Box 2**). It is still a part of the official meeting agenda – the temporary transition from SRM to Doors –

and it is still under discussion and still being questioned. The participants discuss the possibility of an alternative solution, i.e., to go directly to Team Center, instead of going to Doors first, and then move to Team Center, i.e., to have one transition instead of two. To give a livelier picture of the situation, **Figure 3** presents three snapshots taken in different moments of the meeting.

M3 starts this part of the meeting by stating that there are indisputable facts, and these are the end point of the transition ("eventually we will end up in Team Centre") and that this cannot go directly from the current software (i.e., SRM) to Team Centre (lines *4–7*). In line *13* (**Box 2**), E2 introduces a new solution, when
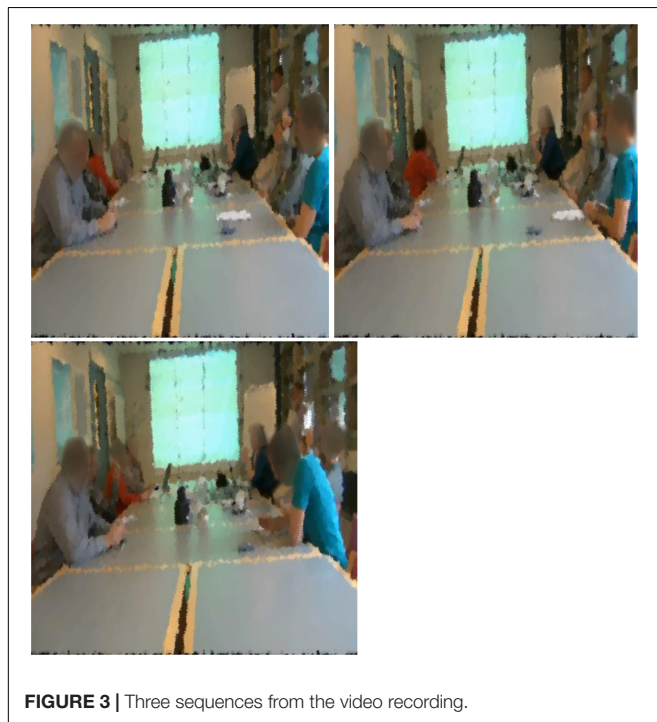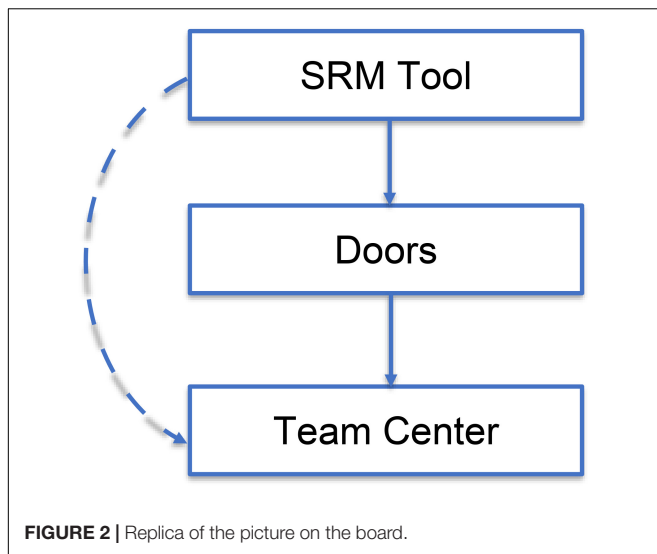
BOX 2 | Sequence 2.

L	P	Transcription	Time
1	M3:	So what we know is that eventually we will end up in Team Center [eh]	S 4:07 E 4:13
2		/M3 has drawn something on the board [see **Figure 2**] and points at the white board with his marker	
3		/M2 moves the chair making some noise	
4		and it is also a fact that there will be a transition from Doors to Team Center it is also a fact that	S 4:19
5		There will be no transition made from SRM to Team Center from central pi (.) so now our	
6		Proposal is to transfer into Doors and then this is then automatically or by help by – at least then	
7		We are not alone	E 4:41
8		/M1 says something to M2 (inaudible)	
9	E3:	So that means it's mandatory for all of us, or, anyway, highly recommended to use Doors, to install Doors	S 4:45
10		and start… (inaudible, voices overlap)	E 4:53
11		\E1 and E2 raise their hands	
12	E1:	E2 was first	S 4:57 E 4:58
13	E2:	Why not a transition directly for Team Center on our own (.) I think the Team Center modules are	S 4:58
14		Available (inaudible) at least what I hear is that they are available [(inaudible)]	E 5:13
15	M2:	[it's a suggestion]	S 5:09 E 5:10
16	M1:	We had that meeting where we were demonstrated this feature and it didn't have version control on	S 5:13
17		The requirements I would say that it is not finished yet	E 5:23
18	E2:	I heard different	S 5:25 E 5:26
19	M1:	Were you in the meeting as well	S 5:26 E 5:27
20	E2:	I don't know what meeting you refer to (inaudible) they are using the: (.) modules I believe	S 5:27 E 5:38
21	M3:	So what you mean E2 is to go this way	S 5:39 E 5:45
22		/M3 walks to the white board again and draws an arrow	
23	E2:	That is not in the current version of Team Center we have…	S 5:45
24		it's in a future version	E 5:47
25		/some brief inaudible exchanges while E6 moves the chair (making some noise)	
26	E6:	But I guess we did not upgrade to the latest version of Team Center with this upgrade…	S 5:55
27		/E6 pauses and looks in the direction of M1 (where M2 is also standing behind and next to the board)	
28		we just did…	E 6:00
29	E2:	[I don't think so]	S 6:00
30		But Team Center is not just what we know, there are there are lots of other models (inaudible)	
31		and I know [Name] in marketing is… have asked if we are allowed to…because they have also	
32		Postponed managing what you are saying, but he would like to run a trial and the (inaudible) would be great	
33		If we could (inaudible)	E 6:21
34	M2:	The intention is not to discuss solutions now	S 6:22 E 6:24
35	E2:	[Ok]	6:24
36	M2:	The intention is to clarify our mutual purpose to agree upon what it is we are doing	S 6:24
37		and then come up with [h] suggestions; your suggestion is good and I invite you to repeat it when I start	
38		Typing the minutes so that we get this idea as well	E 6:39
39	E2:	But I need to know if it has been decided to go to Doors, is this meeting to discuss if we should go to Doors?	S 6:40 E 6:45
40	M2:	No, the decision is we should go to Doors	S 6:45 E 6:47
41	E2:	/looking at the email	
42		It just says it is a suggestion and I also thought the meeting was to evaluate these (inaudible)	S 6:47
43		So, the meeting is just to discuss what is needed to go to Doors	E 6:57
44	M2:	[Yes]	6:57
45		\some nodding	

L, line; P, participant; Time sequence: S, start; E, end; M1, M2, and M3 are managers while E1–E6 are employees; italics indicates actions relevant to the discussion; text in [] identifies something that is said on top of another person's talking.

he argues that it would make more sense to make a transition "directly for Team Center on our own." In answering his question in lines *16–17*, M1 refers to a discussion and a conclusion on that discussion that took place in a previous meeting during which the "version control" of Team Center was addressed. Based on that, M1 concludes: "I would say that it is not finished yet." However,

directly questioning M1's interpretation of this discussion, E2 insists on a different version of that discussion by simply saying: "I heard different" (line *18*). This way of blatantly questioning the manager's version in front of the other managers and employees can potentially be construed as face threatening, in particular if it might appear that M1 does not remember correctly or chooses

FIGURE 2 | Replica of the picture on the board.

FIGURE 3 | Three sequences from the video recording.

to make his own interpretation. However, instead of going into the discussion about what was said and concluded, M1 decides on another strategy, namely that of questioning whether E2 had actually been to the meeting: "were you in the meeting as well" (line *19*). In that way, he manages to change focus away from his own conclusions about the meeting to a question about E2's presence, i.e., the right of E2 to have an opinion about this or not.

Again, this has clear normative implications, as can be seen in this example. If you are not part of, or aware of, the chain of meetings it can be difficult to "jump in" and have a say, as your opinion, and ability to navigate in the here-and-now will always be constrained, and judged, by your history in, and

knowledge about, the organizational context in general, and your activities, or lack of activities, in particular. In this case, E2 tries to avoid being held accountable for his (non-)presence at the earlier meeting by saying (in line *20*) that he does not know "what meeting you refer to." Still, the question about M1's interpretation of what was decided at the previous meeting, is not pursued in the following discussions. The fact that the manager sheds doubt about E2's presence at that meeting seems to prevent any further discussion on this. The sequence ends with M3 walking to the white board again drawing an arrow showing the trajectory of possible "transitions," thereby using the whiteboard to demonstrate the two possible solutions to the problem.

In the final part of Sequence 2, E2 and E6 discuss briefly (lines *23–33*) about upgraded versions of the software Team Centre or lack thereof, that would make it possible for them to have a direct migration. At one point, M2 breaks the discussion to state that this discussion is irrelevant because "the intention [of the meeting] is to clarify our mutual purpose to agree upon what it is we are doing" (line *36*) and to offer suggestions on how to do it. Again, E2 wants to be absolutely sure that this is the point and M2 confirms that "the decision is we should go to Doors" (line *40*). At that point, E2 repeats "so, the meeting is just to discuss what is needed to go to Doors" (line *43*). Some agreement signs come from M2 and from around the room. Finally, one of the points in the meeting's agenda seem to have settled.

COGNITIVE MECHANISMS IN THE Ø-HOP CASE

As seen in the brief introduction above, distributed and ecological cognition places a very strong role in the interactivity, (interplay); (Hutchins, 1995; Clark and Chalmers, 1998; Steffensen, 2013) between internal and external resources. Hence, any cognitive mechanism should be based on a classification of these resources. By using the Ø-Hop Case, we now attempt to build a conceptual framework that is relevant to organization research. As we move on in the description, a brief summary of core "mechanisms," "resources," and "processes" can be found in **Table 1**.

Socio-Material Cognitive Mechanisms

Meetings are usually distributed among different artifacts such as invitations, minutes, and also socio-physical "resources" such as, for instance, computers, white boards, projected images. This comes up very clearly from the Ø-Hop Case as well. For example, the email is projected on a large screen by the wall as Sequences 1 and 2 take place and sometimes the conversation explicitly refers to it (Sequence 1, line *27*; Sequence 2, line *41*). There is a board with mobile white paper that M3 uses in combination with a marker (Sequence 2, line *2*) to draw a "transition model" (Sequence 1, line *36* and **Figure 2**). The minutes are also mentioned as M2 is willing to take E2's suggestion on board (Sequence 2, lines *36–38*). One's own body is also part of a distribution in a cognitive system, so that raising a hand (or keeping one's arm up) serves as a signal to others and as a reminder to oneself of the function one is about to perform (Sequence 1, line *18*; Sequence 2, line *11*). This also serves

TABLE 1 | Cognitive mechanisms, resources, and processes.

Mechanisms	Resources	Processes			Relevant DEC literature
		Coupling	*De-coupling*	*Un-coupling*	
Socio-Material (CM1)	(*i*) People Case-related examples	Observable active participation in the interaction	The individual stops interacting with external social resources	There is no clear sign (emotional, verbal, behavioral) of activity or interaction	
		Example: M2 and E1 agree on the meaning of the transition (Sequence 1, line 21)	*Example: E3 was under the impression that E1 was in line with her, but E1 points out that information was in the email (Sequence 1, lines 25–26)*	*Example: E4 and E5 are in the same room as the others but they do not talk or even look at each other*	***Relevant DC literature:*** *Hutchins, 1995; Hollan et al., 2000; Magnani, 2007; Secchi, 2011*
	(*ii*) Artifacts Case-related examples	There is a clear way in which one uses or exploits an artifact available to either reason or to give a sign to others	The artifact is not used to establish any sort of relation but it is just a means to an end	There is no distinguishable sign that one is using an artifact for any constructive purpose	
		Example: M3 uses a marker on the whiteboard, allowing himself to explain again (differently) a concept previously expressed only verbally (Sequence 1, line 36)	*Example: E2 uses M2's statements to de-couple himself from the text of the email (Sequence 2, lines 41-43)*	*Example: fiddling with a pen on a piece of paper, drawing lines at random (maybe a sign of boredom?) instead of taking notes*	***Relevant DC literature:*** *Hutchins, 1995; Clark, 2003; Bardone, 2011; Cowley and Vallée-Tourangeau, 2013*
Conceptual (CM2)	(i) Idea of the group/organization Case-related examples	Individuals may engage with others more easily if they have a positive attitude toward the group/organization — this can be exemplified by commitment, identity and identification, justice, and other beliefs one may have of the place of work **N.B.**: this particular feature of CM2 can be referred to more specific relationships between, for example, two co-workers	One's positive representation of the group/organization may deteriorate over time, provoking a decreased engagement	An individual may feel as an outsider and never really get in tune with a positive idealized understanding of what the group/organization is there for	
		Example: M2 has a clear idea of what the meeting is there for and what her role is (Sequence 1, lines 3–6)	*Example: E6 brings in new information, with the idea to re-route the discussion on more technical grounds (Sequence 2, line 26)*	*Example: When E3 presents her disagreement, she seems to signal she is an uninformed outsider (Sequence 1, line 24)*	***Relevant DC literature:*** *Michel, 2007; Secchi and Bardone, 2013*
	(ii) Topic understanding Case-related examples	Mutual understanding ought to be based on the perception that there is some shared understanding of the topic under discussion	Sometimes people diverge in their understanding and this causes a diversity of meanings attached to the topic under discussion	Complete lack of understanding of the topic under discussion	
		Example: Toward the end, E2 and M2 agree (with many others) that the meeting is to discuss how transition will happen (Sequence 2, lines 44-45)	*Example: E2 attempts to detach himself from the two-step transition by proposing a one-step transition (Sequence 2, lines 13-14)*	*Example: We do not know about E4 and E5; for the purpose of the analysis, they seem uncoupled with the understanding of the topic as discussed.*	***Relevant DC literature:*** *Magnani, 2007; Michel, 2007; Secchi and Gullekson, 2016*
Conceptual (CM2)	(*iii*) Meaning of procedures in place Case-related examples	Organizational procedures (formal and informal) are a good conceptual anchor for those who seek certainty	Some procedures (formal and informal) may be interpreted differently by some, hence causing temporary or permanent confusion	There are no expectations of how procedures would unfold in a group/organization	

(Continued)

TABLE 1 | (Continued)

Mechanisms	Resources	Processes			Relevant DEC literature
		Coupling	*De-coupling*	*Un-coupling*	
		Example: M1 presents the idea that procedures are up for discussion when he states that they are there to "I guess kind of brainstorm" about the transition (Sequence 1, line 1)	*Example: M2, with a more specific explanation of how the meeting would be handled de-couples from what indicated by M1 (Sequence 1, lines 3–6)*	*Example: M1 and M2 ideas of how to proceed seem unpaired and opposite (Sequence 1) [although M1's silence may look like an attempt to couple with the idea]*	***Relevant DC literature:*** *Hutchins, 1995, 2013*
	(iv) Perceptions of time Case-related examples	Whenever two or more individuals interact, they lean on past interactions and, at the same time, keep thinking of future consequences of the current interaction	The interpretation that two (or more) individuals have of past of future events may diverge, causing a temporary or permanent disengagement from the interaction	The interpretation of that two or more individuals have on past or future events may be completely different	
		Example: M1 explicitly refers to a previous meeting (Sequence 2, line 16)	*Example: Perhaps in an attempt to swing the discussion, E2 states that the transition is time-sensitive referring to the marketing department (Sequence 2, lines 30–33)*	*Example: M1 and E2 seem to have a completely different memory of another meeting; they do not agree on when or what (Sequence 2, lines 16-20)*	***Relevant DC literature:*** *Cowley and Vallée-Tourangeau, 2013; Cowley and Steffensen, 2015; Neumann and Cowley, 2016*

as a social hook, as a basis to signal that communication is about to start, that someone is about to share something with the rest of the group. Most of these examples have at least a double meaning. On the one hand, they represent an anchor to the material or natural artifact they explicitly refer to (we call them "material resources" or "artifacts" (resource *ii* under CM1 in **Table 1** – CM1, defined below). On the other hand, they are intrinsically social in that they are either means of connection to others or are (more literally) others (called "social resources" or, perhaps more simply, "people"; resource *i* under CM1 in **Table 1**). For this reason, we propose to classify these as "socio-material resources" that work as cognitive enabling (or disabling) tools in what can be described as cognitive mechanism one (CM1) and are clearly related to the strategic trajectory of the events.

In this case, that of "socio-material coupling mechanisms" (CM1), individuals attempt to "adjust" to one another and to the group[1] (Hutchins, 1995, 2014). This means that there is no simple "coupling" (in its literal sense of only two entities affecting each other) but a bundle of couplings, which include mixed series of cognitive processes. This points to the dynamics in a group, assuming there are multiple interactions with members and with the group, all potentially occurring at the same time (the literature on small group dynamics is particularly revealing; e.g., Levine and Moreland, 2012). This perspective is also in line with the earlier literature on distributed cognition that sees cognitive processes as triggered by artifacts, (e.g., Hutchins, 1995; Clark, 2003; Magnani, 2007) seeing material artifacts and environmental structures as resources for interaction. There is also some overlap with the sensemaking literature, (e.g., Weick,

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[1]We refer to a not better specified "group" to indicate that these mechanisms can apply to teams as well as various types of formal or informal organizations.

1993; Weick and Roberts, 1993; Gioia, 2006) in that these socio-material couplings are usually triggered by action in a given situation. The concept of "coupled systems" has been used among distributed cognitive (scholars) for quite some time, but never applied to organizational contexts (Clark and Chalmers, 1998; Menary, 2010).

Conceptual Cognitive Mechanisms

By looking into the Ø-Hop Case, one soon realizes that there are other types of mechanisms that are not necessarily tied to material or social cognitive resources. It is the case when anchoring is made to an idea, thought, or to something abstract that is immaterial. In one instance, for example, one of the managers (M2) appeals to the "identity" of the group and calls for a final agreement on the meaning of the item in the agenda that was discussed for almost 7 min (Sequence 2, lines *36–38*, and again in line *44*). In many other instances, instead, participants struggle to understand what the purpose of the meeting is; for example, E1 in Sequence 1, lines *16–17*, E3 in Sequence 1, line *24*, as well as E2 in Sequence 2, line *39*. In these occurrences, comprehension is at stake and we can clearly observe participants as they try to grasp the meaning of what is the matter of the topic they are discussing. In the first case, cognition is anchored to the *idea of the group* (or the organization, depending on the situation; see **Table 1**, resource *i* under CM2—see below for a definition of CM2) while it leans on *topic understanding* (**Table 1**, resource *ii* under CM2) in the second case.

The Ø-Hop Case also presents other types of abstract anchoring. For example, how interaction materializes is something that may or may not happen in the making, i.e., as the meeting (or, more generally, the interaction) progresses. At

the very beginning, there seems to be uncertainty over *how* the discussion is going to take place. In fact, M1 presents the idea that procedures are up for discussion when he states that they are there to "I guess kind of brainstorm" about the transition (Sequence 1, line *1*). That is immediately rephrased by M2, with a – clearer, at that point, she probably hoped – more specific explanation of how the meeting would be handled (Sequence 1, lines *3–6*). In several other parts of the meeting, a structured process emerges from more confusing phases, where voices overlap and local couplings (i.e., not at the general group level but at the level of two or three persons interacting) happen. This is, for example, apparent when E3 looks surprised at E1 (Sequence 1, line *25*), or when M2 and E3 discuss as M1 attempts to explain what he means by moving toward the board (Sequence 1, line *36*). Or, again, when M1 chats briefly with M3 (Sequence 2, line *8*), appearing detached from the meeting for a moment. **Table 1** indicates these as "procedural meanings" and labels it resource *iii* (under CM2).

Finally, and perhaps, most importantly, there are several occasions in which participants refer to "time." This is not just the objective measurement of time but includes its perception as it is experienced by each participant (**Table 1**, resource *iv* under CM2). In the Ø-Hop Case, this becomes apparent many times. M1 refers to a previous meeting (Sequence 2, line *16*) as well as E2 (Sequence 2, line *18*), as if the current timescale is somehow affected by either past timescales or a meta-timescale that super-orders meetings on that topic. E2 comes back to the point that the transition is time-sensitive when he refers to something attempted by the marketing department (Sequence 2, lines *30–33*). M2 is, instead, very much concerned with the here-and-now and calls participants back on what she believes is most relevant in two different occasions, respectively at the beginning, in an episode with M1 (Sequence 1, lines *3–6*) and at the end with E2 and everyone else (Sequence 2, lines *36–38*).

In all these four circumstances, we are in front of "conceptual coupling mechanisms" (CM2), where group members try — both individually and as a group — to get attuned with the activity they are engaged in. We are not claiming that these processes are all necessarily conscious, (Levinthal and Rerup, 2006) actually, we are not making any claim on this particular aspect. In fact, most of the elements that enable these processes are embedded in the way group members approach and deal with ongoing activities.

While sometimes distributed and ecological processes need actual artifacts to be triggered (see above), some other times they need this type of "abstract" anchoring. Given the blurred and uncertain nature of abstractions, similar anchors may have a very diverse impact on different group members. Emotions such as fear may illustrate the case of an abstract anchoring mechanism on cognition. In their review study on entrepreneurs, Cacciotti and Hayton (2015) found that fear of failure can be both beneficial and detrimental for entrepreneurs who experience it, because it anchors current cognition to past experiences. In this same stream of literature, de Mol et al. (2015) define team cognition as an emerging property of the system, originating from individual cognitions. This means

that whatever is shared at that level serves, again, as abstract anchoring for all team members. This aspect is probably more in line with recent developments in the literature on distributed cognition and cultural ecosystems, where the emphasis has been on cultural niches (e.g., Hutchins, 2014; Secchi and Cowley, 2016).

COGNITIVE PROCESSES IN THE Ø-HOP CASE

These multiple coupling activities usually go on simultaneously and can be seen as attempts to create meaningful interactions, although not necessarily leading toward a shared view of what is discussed. In fact, together with these mechanisms one should look at the way in which cognizing emerges.

There are at least three possibilities here, as one may observe (a) coupling, (b) de-coupling, or (c) un-coupling processes. Specific examples on each of the six resources as they relate to these processes and the Ø-Hop Case can be found in **Table 1**. Here, we limit our attention to one example per process.

The first – i.e., "coupling" – is what has been defined so far and indicates how group members' cognitions align to socio-material and conceptual anchors or resources, with other members and with the group as a whole. The case study presents several examples of this process. Perhaps, the most explicit can be easily detected by positive reinforcements of agreement (typically a "yes," a nod, a smile, or other expressions of the same type). This happens toward the end of the meeting very explicitly when M2 gives confirmation about the purpose of the meeting (Sequence 2, line *44*). By that point in time, most participants seem to agree on this one item in the agenda they have been discussing (Sequence 2, line 45).

The second process refers to the disengagement of one's cognition from the group, others, and/or from artifacts. Hence, it refers to something that was coupled before and is no more. This "de-coupling" is also apparent in the case study, when E3 brings herself off the current discussion by asserting the topic is a complete stranger to her (Sequence 1, line *24*). In that way, she takes herself out of coupling with the idea (CM2, resource *ii*) and, perhaps, with the understanding of what the group has been gathered there for (CM2, resource *i*).

The third alternative refers to the impossibility, for an individual, to establish a connection to either a material artifact, a particular group member, or to an abstract concept that is used as an anchor for the group to function. In this case, neither socio-material (CM1) nor conceptual (CM2) mechanisms work, and there is no interaction. This aspect can be referred to E4 or E5 who never say anything, nor seem interested in the discussion (from watching the video, at least). Of course, it is very hard to make this statement by observations only, but an "un-coupled resource" process on, say, one socio-material resource (CM1) may well be accompanied by "couplings to" some other resources from CM1 or CM2.

There is a tradition for cognition research to study mostly what occurs under letter (a) "coupling" processes (Menary, 2010), i.e., to study positive cognitive occurrences (Steffensen, 2013), while

organizational cognition has traditionally taken (c) "un-coupled" processes, by studying interaction among separate, independent resources and individuals (Secchi and Adamsen, 2017). We claim, however, that all three are equally important in understanding *when* and *how* cognitive group dynamics works.

By no means do we maintain that one of these processes is positive while the others are negative, rather we encounter a series of ups and downs among members of a group at a meeting, for example. Failure to reach a common understanding may well be derived from too many un-coupled resources or sudden coupling and de-coupling processes, where individuals do not engage with either CM1, CM2 or both, or they stop doing so. Moreover, we maintain that any organizing activity is made of multiple processes, where a complex mix of coupling, de-coupling, and un-coupled processes attach themselves to the many combinations of resources.

What is relevant for our argument here is that, when organizational activities are ongoing individuals do not function in isolation. If we take the example of working meetings, there is an attempt that individuals (and groups) make to establish coupling mechanisms to connect with the activity "in the making" (or "through doing," see Magnani, 2007). These mechanisms may be established through coupling, cease to exist via a de-coupling process, coupling in smaller sub-groups, or cannot be established at all (i.e., they are un-coupled).

A deeper understanding of these processes also implies that there are many aspects that affect organizational cognitive processes that are not explicit and conscious actions — we are referring to written and spoken words. In fact, everything related to the bodily expressions, including but not limited to posture, mood, feeling, eye movement, arms and legs movement are relevant to assess the direction in which the organizational cognitive process goes. Interpretation of both explicit and implicit actions needs to be considered very carefully, since there may not be alignment between the two. In the following section we have attempted to render the processes described here such that they can be considered in their general applicability.

A COMPUTATIONAL MODEL OF COGNITIVE DYNAMICS

The case study above highlights a few elements that can be considered as the basis for framing how organizational cognition actually happens. In the following, we present a computational ABM (Gilbert, 2008) developed using the software NetLogo 6.0.2 (Wilensky, 1999). **Figure 4** shows the interface of our model. A version of this model, with **Supplementary Materials** and data is available on the open access platform OpenABM. ABM simulation is an advanced technique that has proven to work well with organizational behavior research (Secchi, 2015; Secchi and Neumann, 2016), especially with cognition-related matters (Conte et al., 1997; Cowley and Secchi, 2018). This model serves two purposes. One is to standardize the analysis of the qualitative empirical case and demonstrate that this

approach can be applied to a variety of settings. The other is to illustrate a possibility, namely, that of studying complex organizational cognitive dynamics (such as those happening in meeting) through agent-based computational simulation (Secchi, 2021). For these reasons, we do not present a full set of results for this model, but only the specific configuration of parameters that fits the empirical case analyzed above as a way to validate this ABM (Boero and Squazzoni, 2005). The description below follows aspects of the ODD protocol for ABM (Grimm et al., 2020) while more detailed information is available in the **Supplementary Materials File**.

Model Components

The aim of the model is that of demonstrating a possible application of the framework, with the simulation model being the bridge to either further virtual or empirical explorations. In the following, we quickly describe the components of the ABM and indicate which configurations of parameters replicate observations of the meeting above. The basic parameters and their values are described in **Table 2** where column two indicates the possible range of values each parameter can take and column three shows the values that replicate the results (see below).

The ABM features two different types of agents. Some agents are made to simulate the presence of people in the room, and they can be either managers or employees. Another agent-type simulates the talk. This latter agent is initially associated with the agent-person who is programmed to start the conversation at the meeting. Once created, this agent-talk moves from agent-person to agent-person depending on whether they are speaking or not. The agent-talk is characterized by a specific content, initially specified by parameter "content level" (**Table 2**).

There are nine simulated agent-persons in the model of which some can be set to be managers (labeled M; **Figure 4**) while the remaining are employees. To describe the coupling mechanisms, each agent is initially attributed attitudes toward the other agents on a random normal distribution (to represent CM1[i]; see **Table 2** for details) and could interact with material resources in range of one's attention (CM1[ii]). These are controlled by parameter "material" (see **Table 2** for details). Also, each agent has an idea of the group (CM2[i], parameter "group attunement") and has an understanding of the topic under discussion (CM2[ii], parameter "understanding") as well as procedures in place (CM2[iii], parameter "procedures"). Finally, each agent has some experience and acquaintance with other agents, to represent a time-sensitive longer timescale aspect (CM2[iv], parameters "acquaint" and "experience").

Material resources include a rectangular table in the middle of the simulated room, with a screen on the one side and a camera on the other. A board is positioned on the side, in between the table and the screen, and each agent has notebooks in front of them (**Figure 4**).

Model Procedures

Some of the parameters of the model can be modified through the sliders on the interface (**Figure 4**), some others require intervening on the code. The ABM is designed to let agents interact in order to modify, adapt, or temporarily eliminate parts
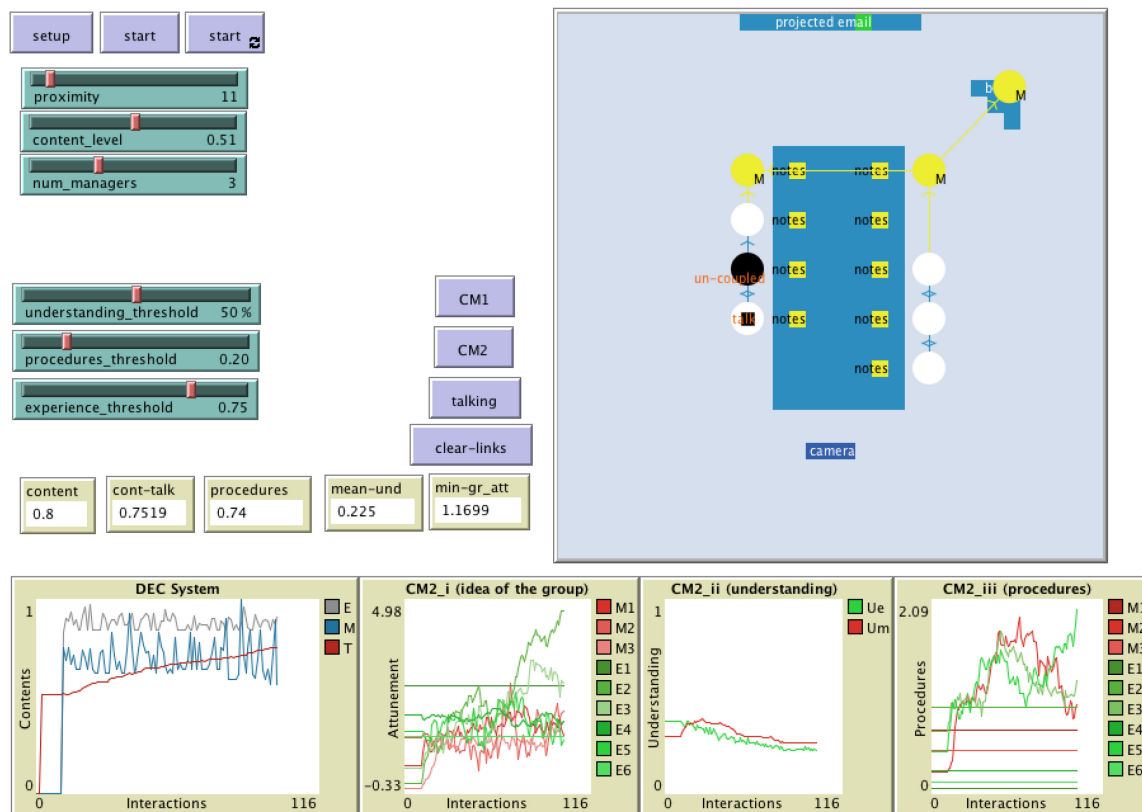
FIGURE 4 | NetLogo interface: the base example. The interface presents the end result of a model where couplings from the various cognitive mechanisms (CM1 and CM2) are set to replicate the outcome of the meeting—i.e. agreement on one item of the agenda—, after 100 interactions.

of their contribution to the cognitive processes. Most parameters described in **Table 2** vary depending on the interactions that form, develop, or cease to exist during the simulation. These interactions are visually recognizable by color (lime and yellow) and by the oriented links between cognitive resources. A link identifies an active cognitive process between an agent and any of the other resources – these links are activated depending on proximity and combinations of the agent's characteristics. These characteristics serve as thresholds that allow for the various cognitive mechanisms (CMs) to materialize. The interactions that stem from agent activities are, to use the words of our framework, the *coupling* processes. An interaction that ceases to exist witnesses an *un-coupling* process. Agents that are not engaged with a particular resource become black and are *de-coupled* (there is one in **Figure 4**).

The simulation also models talking. For simplicity purposes, this ABM does not allow multiple talks at the same time, but one squared agent with the orange label "talk" (**Figure 4**) appears and jumps from one agent to the other, depending on whether particular cognitive processes make it compelling for the agent to "say" something. The other agents may or may not pay attention to what this agent is "saying" (black links) and could reply. These processes obviously help to describe and set the content of the meeting for the agents. The plot at the bottom left corner of **Figure 4** shows the overall interpretation that

managers (dark blue line) and employees (gray line) have of the discussions during the meeting. The red line is the content that is shaped by the talk. So, in general, one may see that, on average, agents oscillate between different levels of their interpretations and the talk tends to position itself in between the two average interpretations of managers and employees (at least in this particular run of the simulation shown in **Figure 4**).

To be more precise in our description of these procedures, we can exemplify how CM[ii] works. The following pseudo-code offers a concise explanation:

> FOR agent-employee connected to agent-talk
> IF agent-employee connected to agent-manager
> THEN set *understanding* ± gap
> OTHERWISE set *understanding* + gap

Where the "gap" is the distance between the understanding that the two connected agents have of the content of the talk. This makes every interaction grounded on the initial understanding of each agent who is listening to the talk. Understanding is likely to fluctuate when the connection is with an agent-manager while the gap reduces when the connection is with another agent-employee. This is due to what observed in the empirical data, where employees would seek "alliances" with other employees more often than with managers. While the pseudo-code above

TABLE 2 | Parameters and notations.

Parameters	Value range	Set values	Note
hierarchy	$\approx N(0, [0.1, 1])$	$\approx N(0, 1)$	Attitude toward the role of other persons; distributed normally at random among agents (CM1), with mean 0 and standard deviation 1. Low values are more likely to activate use of material resources while higher values activate other agents as cognitive resources.
group_attunement	$\approx N(1, [0.1, 1])$	$\approx N(1, 1)$	Attitude toward the group's identity—CM2(i); distributed normally at random among agents, with mean 1 and standard deviation 1.
understanding	*random* [α]	α = 1	Own and shared understanding of the topic—CM2(ii); distributed randomly with numbers between zero and α (1 in this case)
procedures	*random* [β]	β = 1	Own and shared understanding of the procedures in place at the meeting—CM2(iii); distributed randomly with numbers between zero and β (1 in this case)
acquaint	$\approx N(0, [0.5, 1])$	$\approx N(0, 1)$	An agent's knowledge of other agents from before this particular meeting—one dimension of long-term timescales, CM2(iv); distributed normally at random with mean 0 and st. dev. 1.
experience	*random* [γ]	γ = 1	An agent's experience in the role it covers—one dimension of long-term timescales, CM2(iv); distributed randomly with numbers between zero and γ (1 in this case).
content	[0, 1]	*DoI*	The object that agents attempt to interpret with access to cognitive resources in the model. This is a function of the number of cognitive resources used for each agent; for the agent "talk" it is specified by the slider "content_level."
content_level	[0, 1]	0.51	The parameter is attached to the "talk" and identifies the minimal content from which the conversation starts; it is modified by interactions as the simulation starts.
und_threshold	[0%, 100%]	50 %	The minimum level below which resources related to CM2(ii) are not activated.
proc_threshold	[0, 1]	0.20	The minimum level below which resources related to CM2(iii) are not activated.
exp_threshold	[0, 1]	0.75	The minimum level below which resources related to CM2(iv) are not activated.
proximity	[10, 20]	11	This is the scope of interaction. Lower values indicate that each agent only interacts with those next to it while the highest range value puts each agent in contact with everyone else in the simulation.

DoI, depends on interactions, the function varies and it is specified in the additional materials online (OpenABM).

works for agent-employees, there is a similar one working for managers. The specific value for the changes in understanding levels are different in the sense that they move more slowly — we assume management has stiffer positions as per the empirical data from the study above.

Validation

Figure 4 shows the result of one run of the simulation after 100 interactions. The idea is that every step in the simulation represents one or more lines in the empirical analysis. Obviously, the analytical lines are not going to map exactly on the steps of the simulation but given certain configuration of parameters, the ABM replicates the outcome of the Ø-Hop case. In other words, after 100 opportunities for interaction, cognitive processes of the agents may converge on a particular content; as it happened in the case. This is a validation process in which the model has been made to systematically take different parameter values until the outcome converges with that of the case. The selection of values that allows for this convergence to happen is reported in **Table 2**.

In this simulation we are not aiming at explicitly modeling distributed and ecological cognitive processes, but to instruct agents to act in a way such that those dynamics may emerge under certain conditions.

Possible Applications of the Model

There are many uses of a model such as the one we have presented here. By manipulating the parameters' values, one may, for example, study how quickly agents reach agreement over interpretation of content, or what are the conditions for not

reaching such an agreement. One may also study how many unengaged agents (reducing the impact of the mechanisms) it may take to sabotage the meeting. Or whether more interactions would bring agents to a different interpretation. **Table 2** gives an idea of how many opportunities one may have to study the different coupling processes through virtual exploration of possible alternative realities.

If parameters in the simulation change and, for example, we move the "proximity" – i.e., how wide is the attempt to couple with other resources in the room –, we may find different equilibria. Although a full analysis of the model is inappropriate in this paper, given the focus on the empirical case and the theoretical framework developed, it is possible to anticipate that a preliminary test of the conditions in this simulation seems to suggest that "proximity" significantly affects the end result. This is in line with the analysis above in that the ability to relate with other resources in the room brings individuals to showing a positive attitude toward a shared common activity. This can be interpreted, on the one hand, as a relaxation of one's own assumption of roles and temporal understanding, and of a better match between distributed cognitive activities and what happens during the meeting, on the other hand.

Of course, more conditions need to be tested to fully support the qualitative findings. However, this preliminary test seems to suggest that distributed and ecological elements exemplified in CM1 and CM2 are essential to our understanding of organizational cognition.

A final note on the simulation concerns computationalism. In fact, using a computational tool such as an ABM may give the impression that we are back to a computationalist view

of cognition. Nothing can be farthest from the truth. ABM are artificial representations of processes that may happen in the observable world. While their outcomes can be compared to observed data or to reason around a phenomenon, by no means their internal processes are to be intended as a 1:1 representation of the observed system. That would be a copy not a model of the observed. Having said that, ABMs have limitations (for more details see Secchi, 2022; Chapter 6). In fact, the subjective choices of the modeler affect quite significantly the way in which processes, parameters, mechanisms, etc. are simulated. Another limitation refers to selectivity; the ease with which ABM handles complexity may lead to models too difficult to analyze. Finally, even when results are insightful one should refrain from directly transferring results to practice and always remember these are indeed computational simulations.

CONCLUSION

In this paper, we have argued that the dynamics of organizing should be understood and explained from the perspective of a distributed and ecological idea of cognition, which enables us to investigate organizing as a cognitive process emerging from the interactions among elements in a dynamic system. We conceived of *organizational cognition* in terms of organizing, whereby we contribute to research from a process-based philosophy on organizations (e.g., Langley and Tsoukas, 2010; Hernes, 2014). Also, we find important similarities with recent developments within the sensemaking literature (e.g., Weick, 1995; Cunliffe et al., 2004; Orlikowski, 2007; Whiteman and Cooper, 2011; Cunliffe and Coupland, 2012) with more embodied and embedded views on sensemaking, which includes sociomaterial, temporal and ecological aspects. However, the move toward a distributed and ecological perspective suggests that the unit of analysis shifts from the individual to the system, i.e., the interrelation between bodies and environmental structures, which allows us to analyze organizations in terms of interconnected cognitive resources, or, ecologies (Chemero, 2011; Steffensen, 2011). Conceptualizing cognition in terms of "enabling conditions" (Cowley et al., 2017), we see organizing as a process that is enabled by a number of coupling mechanisms put in place to get people attuned with the process. Following this approach, we studied the elements of a distributed and ecological approach, taking a specific case as an explanatory example.

In the paper, we focus our analysis on the Ø-Hop Case where something very typical in the life of business organizations happen. And yet, we were able to isolate specific cognitive trajectories and identify how interactional patterns were distributed on and constrained by different timescales to influence thinking and behavior in the group. The theory presented uses two different types of cognitive mechanisms – i.e., "socio-material" (or CM1) and "conceptual" (or CM2) — to operationalize the concepts and apply them to a qualitative interactional analysis of video material and to a computational simulation.

We found that the individuals had different understandings about what the activity meant, and the division between employees and management became increasingly apparent through the meeting, not just based on unequal power positions, but grounded in different conceptual and socio/material realizations. For various reasons, this difference created a breeding ground for tension between sub-groups, a tension that formed the trajectory of the meeting. This was observable on the video (and in the two sequences in **Boxes 1**, **2**), when individuals within each sub-group interacted and tended to co-adapt to each other.

Further, the Ø-Hop Case read by the lenses of our framework allowed us to create an agent-based computational simulation. With relatively few assumptions for this model, we were able to demonstrate that the dynamic of the Case is a special case of similar conditions where individuals meet to discuss at a meeting, for example. This means that the framework (the model) is a useful way, not only to describe cognitive processes in organizations, but also to study counterfactuals (what-ifs). The ABM also points at the fact that the framework is particularly suited to describe complex adaptive systems (Miller and Page, 2007) - such as those in the realm of organizational cognition.

We suggest, that understanding human action from a distributed and ecological perspective may contribute to a deeper understanding of organizational cognition and, in the same vein, shed new light on the way in which organizing is accomplished as a joint activity. Under these lenses, organizations can be viewed as distributed networks of thoughts and actions that takes into consideration how groups of people generate output as they use each other as well as material artifacts as cognitive resources in natural settings (Trasmundi, 2020).

This article contributes to the literature in two distinct and complementary ways. On the one hand, it proposes a distributed and ecological approach to the study of organizational cognition. This is something that is long overdue, given the developments among cognitive science that took place since the Nineties. On the other hand, we have shown how this approach can be operationalized in organizational contexts, with a framework and a computational simulation.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author/s.

ETHICS STATEMENT

Ethical review and approval were not required for the study on human participants in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct, and intellectual contribution to the work, and approved it for publication.

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2022.769007/full#supplementary-material

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Supporting and Studying Organizational Change for Introducing Welfare Technologies as a Sociomaterial Process

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Welfare technologies (WT) for older people is a rapidly expanding sector that offers a way to tackle the challenge of an aging population. Despite their promise in terms of advances in care services and financial savings, their use is still limited. Their design and implementation remain problematic, as they require changes in working practices through coordination among a multiplicity of actors. In order to address these challenges, the need for change is often expressed in terms of a lack of working methods appropriate to their scope. This has led to a proliferation of different toolkits, guidelines, models, etc.; however, these methods often imply a linear understanding of an implementation project and thus fail to take into consideration the emergent and situated character of the processes that lead up to the adoption of welfare. The aim of this article is to propose an alternative means of providing support for the introduction of these technologies by initiating a process for organizational change. The term "change" is understood here as something that is produced by practitioners—in collaboration with researchers—and not brought by researchers to practitioners. To this end, using the tradition of intervention research as inspiration, a learning process at the crossroads of different practices and objects was initiated. The center of attention of this article' is the sociomaterial process by which different communities of practitioners interact on the co-creation of a checklist. This is a new working method in which the focus is not the artifact in itself but how it emerges through successive interactions and iterations among different objects, practitioners and researchers, resulting in a joint sociomaterial process that reconfigures power relations and the work objective associated with WT. In other words, a new working method artifact is developed in a process in which practitioners, researchers and contextual objects interact and become one with each another.

Keywords: welfare technology, sociomateriality, practice, organizational, change

INTRODUCTION

There has been an increasing focus in recent years on the need to work with change in organizations, in academia as well as among practitioners. The care sector for older people is a particularly interesting context in this respect because it is undergoing profound changes that need to be organized, both within organizations and between organizations and users. Welfare technologies (WT) are increasingly being seen by municipalities as an approach to facing the urgent challenge of an aging population and tackling the severe financial situation in which local

authorities are finding themselves. The term "welfare technology" is well-established in the Nordic countries. According to the Nordic Welfare Centre, "Welfare technology is all technology which in one way or another improves the lives of those who need it. The technology is used to maintain or increase security, activity, participation or independence for people with a disability or the elderly."[1]

Despite its success at a policy level and extensive coverage in the media, the introduction of new WT still presents a major challenge, since it may be that neither professionals or older people use it in the way it was planned by those leading its introduction. As a result, the number of WT that have been effectively implemented remains low (Søndergaard, 2017). Problems arise in the design and implementation of WT (Cozza et al., 2019, 2021), and the lack of systematic approaches and evaluation models may hinder their adoption among operators and management (Baudin et al., 2020). Moreover, although the technologies are publicly funded, we see an unequal distribution among different municipalities (Frennert and Baudin, 2021). The importance of including users (Cozza et al., 2017; Glomsås et al., 2021) is also a central issue. In particular, there is recognition of the need for collaborative approaches in which different kinds of users are made a part of the implementation process from the start, and one central but still problematic aspect is the need to enhance collaboration among different intra- and inter-organizational actors and external actors (such as older people, relatives, etc.) around both the technology to be used and the need to reconfigure organizational practices. In order to tackle this need, institutional actors have proposed a rapidly multiplying variety of implementation tools,[2] including guidelines, toolkits, models, and platforms.

It has thus been acknowledged that the introduction of WT implies a need to change organizational practices, but there are different ways of working with change. This is often presented as a need to find new working methods and tools, and as we will see later, this was also the case in our study. The methods we have listed above are often linear, however, and organize change as a top-down process. This approach has been criticized by scholars, who have shown that these assumptions of linearity need to be scrutinized, and that change is not easily managed but is a more emergent and organic process than these models imply (Breese, 2011). The aim of this study is to explore an alternative way of providing support for implementing these technologies through collaboration, one that does not take it for granted that a change process is linear, and that involves stakeholders from the outset. In other words, the study explores a process for initiating organizational change in a heterogeneous community of practitioners working with WT. Here, the term "community" is used to refer to "widely dispersed, fluctuating and weakly bounded community forms" (Engeström, 2007, p. 1). It brings together different, yet interdependent, working practices in multiple institutions involved in care work for older people using WT. The intention behind this process is that work should be done *with*, rather than *for*, practitioners.

To this end, a transformative process (Engeström, 1987) was initiated whereby researchers and practitioners were engaged together in producing change in current organizational practices. Beyond a cognitive understanding of working and learning, work is understood in this paper as a sociomaterial (Nicolini et al., 2003; Orlikowski and Scott, 2008; Orlikowski, 2009; Gherardi, 2019) and collective accomplishment that unfolds as an *agencement* (Gherardi, 2019) of human actors, objects and bodies. In this framework, these *agencements* are merely temporary stabilizations of dynamic processes that are constantly under way. The term "change" is understood here as a modification of the *agencement* among the different actors engaged in an experimental project aimed at rethinking collaborative work with WT.

The project takes its inspiration from the method of the Change Laboratory (CL) (Engeström, 1987) which was developed at the University of Helsinki and has the aim of producing the change necessary for a system of activity to evolve. The method is grounded on a conceptualization of work as situated practice, and of learning not as a cognitive achievement but as emerging from the context in which the process unfolds and from local interactions. Hence, knowledge for change is developed within a system of activity, and the role of researchers is to accompany that process. Unlike other methods, solutions are not pre-defined in this approach and the process is not linear, since the method seeks to allow for the complexity and uncertainty of work by encouraging the development of a shared understanding of what the problem is and working together on a possible solution. As we discuss how this method was mobilized in a Swedish municipality, our focus is not on the new working solution in itself but rather on the process whereby human actors and emerging objects interact in an iterative process. This paper is of specific interest to the framework of this special issue as it allows the study of groups in an intervention research context in which practitioners and academics are involved and of the sociomaterial dynamic of co-creation and organizational change.

The article is organized as follows. First the theoretical framework and methodological approach of CL (Engeström, 1987) will be presented, followed by the case study and details of the empirical process. We will then show how we have drawn inspiration from this method in order to give an account of the experimental process applied in a cross-organizational context engaged in adopting WT. The discussion and concluding section will then elaborate further on the overall process of inter-organizational sociomaterial processes in the area of welfare technology, and as a process of co-creation with practitioners more generally.

MATERIALS AND METHODS

Combining the Change Laboratory and a Sociomaterial Understanding of Organizational Practices

The methodological approach adopted in the project takes its inspiration from the experience of the experience of the Change

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[1] https://nordicwelfare.org/en/welfare-policy/welfare-technology

[2] https://nordicwelfare.org/en/publikationer/welfare-technology-tool-box/

Laboratory (CL), a method developed by Engeström (1987) and colleagues (Engeström and Sannino, 2010; Virkkunen and Newnham, 2013; Engeström et al., 2015; Sannino and Engström, 2017; Nummijoki et al., 2018) at the Center for Research on Activity, Development and Learning (CRADLE) at the University of Helsinki. The method has its origins in cognitive (or social) psychology, in particular in Cultural and Historical Activity Theory (CHAT) (for the origins of the method, see Virkkunen and Newnham, 2013). Since the 1970s, CHAT has made a major contribution to the understanding of human activity as a complex system produced by interactions between an individual subject and his or her community (Engeström, 1987) which is organized by a certain kind of division of labor and by certain rules. Another crucial element of the notion is the idea of mediation, in the sense that an action is always mediated by artifacts that intervene in the performance of the object of the activity and in collaboration with other humans.

At the center of attention for the CL are collaboration, work activities and intervention methods. The method does not focus on an activity in itself but on how it can develop. In this sense, it is a methodology for conducting transformative actions. The first Change Laboratories were implemented in the 1990s. As with other methods of action research, the aim was not to produce observations or knowledge from an external observer's point of view, but to produce change. As defined by Virkkunen and Newnham (2013), "The CL is a formative intervention method for developing work activities by the practitioners in collaboration with researcher-interventionists" (p. 15). The core idea of the CL is to work on problematic situations in order to produce change in an organizational context. Within this framework, practitioners are considered to be the agents of change, while researchers help accompany the process. Researchers may produce a hypothesis of a solution which is then tried, modified and developed by practitioners according to their experience. The specific aspect of the methodology compared with other methods of action research is that practitioners work on the development of the solution, and not merely on the implementation of a solution that has been developed by researchers (Engeström et al., 2014). The aim of the process is "an expansive reconceptualization of the idea of the activity and reconfiguration of its structure" (Virkkunen and Newnham, 2013, p. 9).

In other words, change is not something that comes out of an external unit—a ready-made, external solution: it happens through a process of reconceptualization of the object of the activity by the participants themselves as part of a learning process. The aim of empowering participants to be the main actors of change (transformational agency) is also integral to the method.

In this framework, the object of the activity is not fixed or given, but depends on the multiple interpretations, understandings and processes of sense-making. The activity is also treated as being mediated by objects that also play a central role in the learning process and the generation of alternatives (Virkkunen and Newnham, 2013). Here, learning is not viewed as a cognitive, individual process: it is inherent in the activity system in which human actors and objects interact.

A central element of the method is the so-called double stimulation (Vygotsky, 1999) which is considered to lie at the heart of agency formation. The first stimulus—which is presented to participants in the form of previously collected mirror data—is a problematic situation, or the main contradiction experienced by actors in their work activity. In the second stimulus, participants are confronted with external artifacts so that they can develop new concepts and alternatives (the zone of proximal development, Engeström, 1987) in order to reconfigure the system of activity (Sannino and Engström, 2017). Contradictions experienced by actors are thus seen as a source for solving problems and learning when interacting on a new object. Learning happens when actors who are experiencing contradictions interact on new alternatives that have the capacity to reconfigure the object of the activity.

In practical terms, the method consists in the organization of a cycle of workshops in which practitioners join with researchers-facilitators to problematize, analyze a working situation and elaborate possible solutions through which the object of the activity is reconceptualized (Virkkunen and Newnham, 2013). The process does not follow a linear logic, in the sense that it is connected to the actors' iterative process of signification.

In this study, a methodology inspired by CL was mobilized in the area of WT with the aim of demonstrating what it produces in a context that lies at the place where different organizations intersect. In the first phase, the researchers looked for contradictions and tensions that might help the participants frame a problem, and then work on a solution.

It is worth noting the contribution made by Cultural and Historical Activity Theory—from which the CL derives—to the practice turn that since the 1990s has brought about a paradigm shift in the way work, knowledge and learning are understood. In this framework, knowledge is not considered to be a cognitive, individual activity, but one that is intimately inherent in situated interactions within organizational practices. Practices become the loci where learning, organizing and innovation take place (Gherardi, 2019), and there is no separation between working and learning. In this regard, the CL brings an important feature of practice theory: that is, the role played by the materiality in knowing and working. Objects play a crucial role in the execution of tasks and in the material and discursive re-alignment that practice is about. But in this regard, one should note an important difference in the understanding of materiality and scope between CHAT and a stream of theorizing on sociomateriality (Orlikowski and Scott, 2008; Orlikowski, 2009) that foregrounds a relational understanding of reality that is crucial to practice theory (Gherardi, 2019). As Fenwick (2010) points out "The Marxist notion of systemic "contradictions" is central to CHAT, and individual perspectives and interests are constantly at play in negotiating these contradictions. In these features, CHAT retains a more humanist orientation [….]. This human-centric analysis is also evident in the clear delineation of non-human "artifacts" as bounded, distinct from humans, and while embedding cultural histories, are relegated to the role of mediating human activity. CHAT also foregrounds a socio-political analysis of human activity, including constructs such as "division of

labor" and "community" (and even social class, prominent in many CHAT analyses), which is anterior to the emergence of elements that may or may not comprise a "system" (Fenwick, 2010, p. 10).

On the other hand, the concept of sociomateriality foregrounds a relational understanding of reality that brings the inseparability of social and material dimensions of practice to the fore. "While an ontology of separateness has long influenced the social sciences—a legacy of Cartesian dualism—its primacy has been challenged in recent decades, particularly through developments in science and technology studies (Barad, 2003). Scholars here have been working within a relational ontology, which rejects the notion that the world is composed of individuals and objects with separately attributable properties that "exist in and of themselves" (Law, 2004, p. 42). This ontology privileges neither humans nor technologies (Pickering, 1995; Knorr Cetina, 1997; Schatzki, 2002; Barad, 2003; Latour, 2005), nor does it treat them as separate and distinct realities" (Orlikowski, 2009, p. 13). In this regard, terms such as "entanglement," "assemblage" or "*agencement*" (Gherardi, 2019) become relevant to refer to the situated and temporary local encounters of social and of the material.

This means that by leaning on these later developments of practice theories, we build on the CL as a way of working with change, but without distinguishing between the social and the material, or between the subjects and objects of an activity. Rather, we understand subjects and objects as produced through the ongoing assemblage of humans, non-humans, places, routines, etc.

In the following paragraphs we will show how a process of transformational change was initiated at the boundary of different communities of practitioners involved in a process.

The Case Study

The research took place in a municipality in Sweden that is considered to be fairly advanced in the area of WT, thanks in part to the close connection between the local university and the municipality. This collaboration has resulted in powerful synergies between research and teaching in the area of healthcare and care, on the one hand, and practice and public policies on the other. In Sweden, social services are a right that all citizens possess, and they are delivered by the municipality. In particular, the study focused on the introduction of a camera for remote monitoring at night (often called "the night camera") as an example of welfare technology. This is one of main technologies municipalities are working with, since there are possible benefits for both municipalities and users if physical visits at night are replaced by digital ones. Digital visits take place in the form of a camera, which is generally placed in the bedroom and is activated a few times every night at specific points in time agreed with the user. Social services personnel can thus monitor the situation from screens in their offices. About 70 night cameras have been activated in the municipality up to today. This has allowed a partial change in the way care services are delivered from night visits to night monitoring (although most visits are still physical or partially physical).

The research process and experimentation presented here has been conducted within the framework of the IVRIS project—which is funded by the national research agency Vinnova—which aims to introduce WT through collaborative practices. The project brought together university researchers and personnel from the municipality—from different units of the care department, including a manager of case officers, homecare personnel (manager and worker), a digitalization manager and a developer—the regional office in charge of disseminating knowledge in the healthcare and care sector (which we will refer to from now on as DISK) and the regional assistive technology center (henceforth RAT), with both a technician and a developer. During the process, two older people who were members of an association for older people were also invited to take part in the workshops so that their perspectives could be included. The municipality has shown a particular interest in this project, and a mid-term report has been presented to the senior management, which is seeking to adopt new ways of working with WT and improving internal coordination among different administrative departments in this area. RAT works mainly with hospitals and people who have just left hospital and need assistive technologies in order to be independent at home, and with other people who need different kinds of assistive technologies. RAT employees thus have an extensive and profound knowledge of technical devices and new technologies, as they are actively looking for new products and understand the technical features of the devices. At the moment, however, there are only limited connections between those municipalities that are responsible for providing welfare services that are at times supported by WT to older people and the RAT. This often results in municipalities adopting solutions with an inadequate insight into the devices' adaptability for broader local infrastructural systems and professional practices. DISK is at last establishing its role as the main knowledge provider, and is trying to impact municipalities' choices in terms of WT. In this regard, this research project has been one of the first occasions (if not the first) for bringing all these relevant actors together.

In other words, the project brought together a community made up of different practitioners—both inside and outside the municipality—and older people engaged in WT to initiate a transformative process of organizational change.

In order to be taken into consideration, all these participants were formally partners (except for older people's association) in the project: that is, they received funding and committed to the project through the research contract required by the funder.

Empirical Process

Inspired by the CL method described above, "mirror data" were first gathered, mainly through interviews (see the details in the next session).

A cycle of workshops was then organized that brought together most of the people who had previously been interviewed and other representatives of the above mentioned organizations. In these workshops, the participants were invited to interact and exchange their reactions to and reflections on a set of materials (in particular, quotes on practices collected by the researchers during our interviews), in order to analyze actual work practices (not

only problems, bottlenecks and contradictions but also strengths) and develop new ideas and tools for changing practices. The work then turned to the development of a checklist. The way the workshops were organized changed as the COVID-19 pandemic affected the opportunities for meeting in person. Three in-person interactive workshops were held, and were attended by an average of 7 to 10 people. Then, owing to the pandemic, two remote workshops were organized with selected informants to tackle the digital format. A third remote workshop was organized with all original participants as a last opportunity to present and discuss the final version of the checklist. The participants in the workshops were a heterogenous group, ranging from senior and middle managers (in the municipality), project managers (RAT and DISK) and personnel at an operational level for the remote monitoring of older people and home care (RAT and municipality). Last but not least, two older persons from an association for older people were involved.

As mentioned above, two sets of data were collected: mirror data from interviews (which ranged from 90 to 120 min) and data from recordings made during the workshops. Both the interviews and recordings were transcribed verbatim and analyzed. The interviews were semi-structured with the objective of identifying bottlenecks experienced by participants in their work with WT. Interviews has been analyzed according to a grounded theory perspective (Charmaz, 2001). In terms of the recordings of the workshops, our analysis focused more specifically on identifying expressions of "transformative agential change" (Haapasaari et al., 2016) specifically connected to the use of WT as it emerged in the process and in interactions with the material support that was given to the participants, in particular extracts from the mirror data, the checklist proposed by the researchers and the final checklist proposed by the participants themselves.

It is worth mentioning that, as developed by CRADLE, the CL is based on ethnographic work and intensive sessions that also require a high level of engagement and time from practitioners. Beyond the fact that it lacked the resources to conduct such a comprehensive study, the project was also particularly affected by a high turnover of the practitioners involved in it (who changed their jobs or areas of responsibility), and above all by the pandemic. This meant that the participants in the process were not always the same, which required a great deal of work by the researchers so that they would be able to provide precise, updated and detailed accounts of the entire process and each workshop to this mobile community of participants. In addition, the time limits imposed by the project meant that it was not viable to follow the implementation of the co-created solution, so it was impossible to give an account of the complete process of organizational change. Within these specific premises and limitations, our work and intervention were inspired by the methodological experience of the CL, which was adapted without aiming to reproduce the specific method in full. What is presented here is thus an example of a sociomaterial process inspired by the CL method, one that is feasible for smaller projects in which the material that can be produced is limited and the opportunity to meet participants is constrained by their work situations, something that is common to many projects and organizations.

What we will see is how the process does not follow a linear dynamic, but has a more iterative movement that is built up in the process through sociomaterial interactions. The configuration of the actors—both human and material—changes during the process as well as their power relations.

RESULTS

Collection of Mirror Data

The first step was to collect mirror data to be used in the first workshop to make the participants react and potentially be critical. In particular, preliminary interviews were conducted with the different individuals involved to varying degrees in the process of adopting the so-called night camera in this Swedish municipality. More specifically, interviews were conducted with the municipal managers for quality in the care division (*Vård- och Omsorgsförvaltningen*); the digital strategist from the same division who was responsible for developing new digital solutions for care work; the project manager of the communication, IT and digitalization unit (*Kommunikation, IT och Digitalisering Enhet*); and in some case officials (*Biståndshandläggare*) who assess the needs of older people and decide upon each case. Finally, an interview was carried out with the head of the night patrol unit (*Nattpatrullen*), who monitors the older people at a distance and visits them during the night if needed.[3]

Along with these interviews, the researchers were able to build on their observations of meetings of the project group that worked on implementing the night cameras. The researchers also interviewed key informants at DISK and RAT who were indirectly involved in the implementation of the "camera strategy." It was decided to involve DISK in the design of the process and as the facilitator of the workshops from the very beginning because it already had experience with the subject in the region and with project testing in the WT field (albeit for people suffering from dependencies, for example, rather than older people). The two participants from DISK supported the researchers with making sense of and selecting the material. They also took the role of coordinating some of the workshop discussions. It was also decided from the outset that they would take care of the final results of the process through their website.

The material that was collected and selected involved very different aspects of the practice as a whole. It was organized into a narrative detailing the story of the introduction of the night camera and into different topics. Six challenges were selected from interviewees' quotes as being specifically meaningful:

1. "There is too much focus on devices"
2. "It does not work to just copy solutions"
3. "Which competences and roles should be included and how? when do we start working with the introduction of WT"?

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[3]Some of these interviews and observations were conducted in the framework of the IVRIS sister project Sins-Developing the capacity of leading technology-related social innovation in cooperation (Vinnova, 2017–2019).

4. "How can we take advantage of the existing initiatives and competences in the region?"
5. "We do not follow up"
6. "Who should be responsible for the technical objects?"

First Stimulus—Materializing, Articulating, and Re-materializing

During the first workshop, the participants were introduced to the methodology, and in particular were invited to react to each of the "challenges" selected in the previous phase. The aim of presenting these data was to encourage reactions to a possible definition of the problem or contradictions. Each challenge was presented with longer quotes and projected as a PowerPoint slide on a large screen and discussed individually.

Reactions to each of the challenges were collected on a whiteboard in the form of notes. This material generated intense discussion and the need and motivation to go for welfare technology was not in general questioned by any of the participants during this phase. The contradictions focused on two main problems related to the need for changing organizational practices:

Too Much Focus on Devices and an Urgent Need to Better Identify Needs

The focus on devices does not make it possible to think about WT in terms of something that should fulfill someone's needs. The difficulty experienced by municipal services with working with people's needs instead of devices and procedures was clearly reported:

"*We often set the structure first, but do not focus much on the person. Where are our users in all of this, where are they? Where are other categories in all of this? Social benefits and things like that, in this? These will often come at a later stage (...). We say: "Now that we have this gadget and this working method, what do you think about it?". It should be before and say: "How can we solve this [problem] with the resources we have got?." That is, it is about where to start, where we should start. So, we need to ask them [older people]: "What do you need in order to be more independent?" and then find the right working method and gadget. We are not doing that, but rather saying [to the older person]: "Now we have found something to replace it. Does this make you more independent?""* (Lisa, head of case office).

The Need for New Working Methods in Order to Initiate and Implement Welfare Technologies

What emerged was the problematic nature of the current approaches to WT and the need for new working methods.

" *I'm thinking that when we talk about implementing something, it sounds like it's all about just starting to use something. But it's a new way of working and that's the key issue. It's not the camera that is important. You need a new way of working; you need a new... everyone needs to work differently*" (Julia, case officer).

The question of new ways of working (*artbetssätt*) took different forms and significance depending on the different practitioners. New approaches were also called for in order to pool existing skills at a regional level. The municipality was accused of not taking advantage of existing competences outside its own organization. This was also related to the heterogeneity of the solutions, and a lack of compatibility between some of the devices.

"*We have a technician who works with the door telephone [porttelefoner], but all the municipalities in [name of the Region] have different electronic locks on the doors of their homecares, so it doesn't work*" (Malin, RAT).

But pooling competences also means integrating users and other internal actors into the process of introducing new technologies. Internal and external actors with relevant skills were not always involved when a new project starts:

"*We forget to train the user and this is why it takes so much time to make him or her use it [the technology]* (Gustav, night patrol)."

It was acknowledged that the organization works in small units, which hinders the initiation of projects that require collaboration from different departments.

Some possible methods or tools to solve these issues and promote change were raised during this phase, and the idea of a checklist was brought up.[4] This solution was acknowledged and supported by one of the representatives from the association for older people who had worked in an industrial sector where checklists were used extensively.

"*I think the organization is busy delivering a service and what they should do. Then you must have a checklist or some structure or a coach who passes by and recommends how the work should go. Just as we turn to procurement, which knows exactly what to do with procurement, so we have people who work with information security who know "This is what we must do." We have lots of expertise, but we should use it in the right order. A kind of support that you pick up at..."* (Sara, IT unit).

"*A development plan, an implementation plan. This is how the industry has gone when you think of isonite houses and quality support. Then you have developed a checklist with a number of steps that you must go through, answer, before you can continue to spend money on it. To facilitate decisions and make sure you haven't missed anything (.) it goes back to the beginning, "Then we have to bring this in at the beginning." So you always have a process of improvement. I don't know how it works in the municipality, but I can imagine that it can be very difficult to have an improvement process with things like this there. There are so many people involved. But that's what you have to work with*" (Sven, association for older people).

Other potential tools were also mentioned in this phase: guidelines, implementation plans and standard guidelines developed by public authorities.

"*You also have autonomous municipalities in Finland, but there is a State that says "You must follow this standard, then you can buy whatever products you want." I think the remedies are needed in Sweden as well, and it will probably come, but it will take time*" (Peter, DISK).

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[4]Incidentally, in IVRIS' sister project SINS, the idea of a checklist had already been raised by a project management team from the same municipality working on the adoption of welfare technology.

The lack of a method did not emerge as something completely new: a participant from the IT Department mentioned that the municipality was already working on a project/change management tool inspired by the Benefits Realization Management (BRM) approach. She is also the project leader for developing this tool.

"The Swedish Financial Management Authority has something called DIGG [Agency for Digital Government], the people who are responsible for digitalization at government level. They have developed a method called the benefit realization template. (. . .) You specify the need when you find it, and you look and estimate what qualitative and economic benefits you have. You also look at when and in what way to follow up the effects. So it is a method, an aid in the introduction of something. I think that's what we need, we need something to hold on to and we all need to work the same way." (Sara, IT unit and project manager of BRM at the municipality).

In this phase, a multiplicity of critical aspects and practices emerged associated with the current design and implementation of WT. The discussion that began from the mirror data was a way of reinforcing and expanding what had been done by the researchers with the mirror data. From the beginning, it seemed that the night camera was not at the heart of the discussion, which rather focused on the need of new working practices (*arbetssätt*) and tools. The camera was cited to give an example of some of the methodological problems (fragmentation among departments), bottlenecks in the procedures (the constraints set by the bid) or the technology itself (the rapid aging of technology, which increasingly leads to leasing solutions).

In this phase, the researchers brought certain issues to the fore by selecting them and producing slides with quotes that justified why they were important. At the same time, the researchers used these slides to approach the style of language used in organizations. The representatives of the different roles and organizations recognized themselves in the quotes and articulated and expanded on the issues. They seldom disagreed; rather, they added to the complexity by building on their own experiences and recounting the issues from specific points of view.

The older people mobilized not only the knowledge they had developed as clients of the municipality, but also knowledge and experiences from their professional lives, for example how things are done in industry. The knowledge they articulated in this way was based on experience, and referred to concrete situations; it was not just about abstract principles, but addressed the situatedness and sociomaterial nature of care practices (Cozza et al., 2019). To try to facilitate an open discussion, the researchers and DISK asked questions and follow-ups, while at the same time retaining the power to materialize what was being said by writing notes on a whiteboard.

Workshop 2: Further Explorations of the Possibilities for Organizational Change

In workshop 2, the participants were asked to work in pairs (from different organizations or departments) and to discuss specific bottlenecks and challenges from their specific professional perspectives when designing or implementing WT. For the most part, they worked on matters they believed needed to be addressed. **Figure 1** shows the material that was produced.
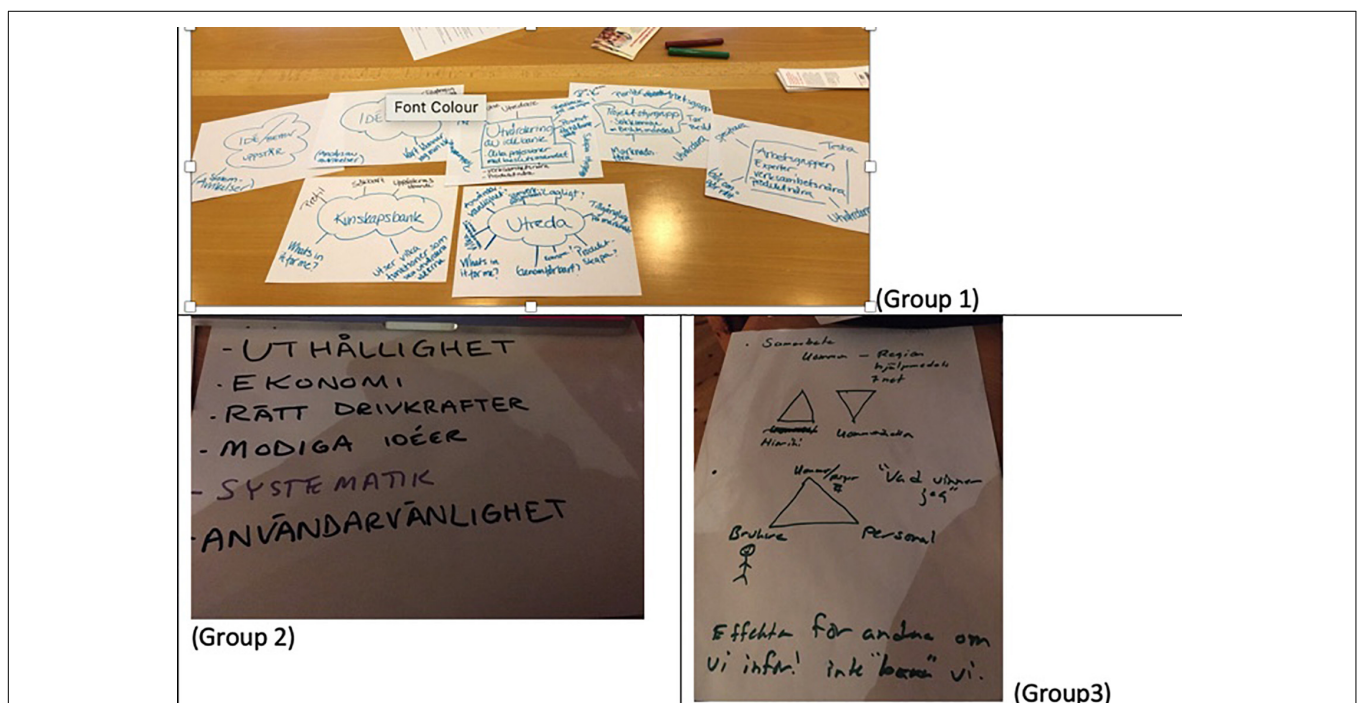
FIGURE 1 | Contribution of the different groups to the discussion on bottlenecks and challenges from their specific professional perspective.

They foregrounded the importance of collecting and following up initiatives in banks of ideas. The first group worked around a system of ideas on how to collect, take care of and build up around ideas or initiatives in the area of WT; who can propose ideas or initiatives; and how to collect and store ideas from a multiplicity of sources (from a management group, from operational staff, from older people, from their families or from another municipality).

The second group worked on certain principles that were lacking or that were important when starting a project or idea, such as perseverance, the right driving forces or brave, systematic or usable ideas. The third group focused on collaborations among different actors (users, personnel and the municipality) as well as on the benefits these actors would derive from the changes to be made. A fourth group discussed who the person leading the process should be, and concluded that the manager was not always the right person: "*Where to go with the idea so that is not "killed" by the wrong person? The manager may not be the best person.*" It was also debated how to better cooperate internally and with external organizations.

In the second part of the workshop, the focus moved once again to possible solutions. As we have already mentioned, the need for a method—and in particular the idea of checklist—had emerged in the first workshop, and so in the second workshop, the researchers prepared different types of checklists for the participants as examples of possible tools (**Figure 2**). Checklists have already been used in highly complex organizational contexts such as the medical sector (Gawande, 2011) or in the reorganization of social services (see for example the experience of Community Labs in the Region Emilia Romagna: https://www.secondowelfare.it/governi-locali/regioni/welfare-di-comunita-le-innovazioni-che-vengono-dallemilia-romagna/) based on a simple "do not forget" principle. In other words, the aim of checklists is to tackle the complexity of organizational work and keep together all the threads of a practice that may exceed the one single organization, as in the case of the design and supply of welfare services. The researchers showed different types of checklists and asked the participants to develop their own according to what they saw as being important to "remember." They also asked them to add what had emerged in the first part of the workshop to their checklist (**Figure 3**). The participants were asked to work in three groups to prepare their own proposals (**Figure 3**).

In the first case, the idea of developing an application to collect and follow new ideas was raised. In the second case, there was an attempt to identify specific phases: documents on decisions, a pilot study, a prototype, a field test and a decision on broad implementation. In the third case, there was an attempt to keep the idea of a checklist with different tasks, phases and comments, and a space to check what had been done.

The initial focus of this second workshop was to expand the participants' experience of the process of adopting WT (using the example of the night camera), and in particular of disturbances or problems they had encountered in their own work practice. It turned out, however, that things did not work that way. Participants' focus in this phase was on what should be done, or what general aspects should be taken into consideration

to improve the situation, instead of digging into their own professional experience. The tendency was to produce a narrative of the problem and bottlenecks from a general perspective and not from one that was specifically problematic from their own standpoint. It is from this view—on a general level—that they began to identify a number of desirable elements that should become part of (a) possible solution(s).

In this regard, there seemed to be a need to nurture new ideas so that they were not overlooked or killed, given that new ideas can come from different people inside or outside of the organization, and that there is no systematic way of supporting and working with new ideas. It also became clear that the participants envisioned a way of working that made good use of all the knowledge and experience that was distributed across a variety of actors who may not have been in contact with each other at that time.

Second Stimulus: The Researchers' Checklist for Guiding Organizational Change

After the attempt to expand the participants' experiences and understanding of the situation, the aim of the third workshop was to move forward and begin to explore a possible solution and therefore make advances in the proposal of a second stimulus.

First of all, as described above, a project/change management tool was mentioned in the first workshop by one of the participants, who is also in charge of developing it in the organization (we have called her Sara for the purpose of this article). The researchers therefore decided to explore this tool in greater depth in order to discuss how it might be connected to the ongoing process of intervention research. Benefit realization management (BRM) was being tried out at the IT and Digitalization Unit as a planning tool for new initiatives. A search in the literature revealed that it is extensively used by organizations even though it is viewed as being somewhat rationalistic as a tool, and not a true representation of the complexity of organizational life (Breese, 2011). In the third workshop, therefore, BRM was presented by Sara (the IT Unit and BRM project manager). Sara has a background as a project manager for IT projects and has developed her own version of BRM combined with other planning models. Her tool is therefore made up of two main phases, "understand" followed by "create," inspired by the Double Diamond Model.[5,6] The former- understand- is understood as an investigation phase to collect information, documents, competences and eventual approval of an initiative, while the latter- create- is conceived as the production (of a solution but also of needed contracts, bids, etc.) and implementation phase (including trainings and change management).

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[5]See a description here of this model inspired by design thinking https://www.designcouncil.org.uk/news-opinion/double-diamond-universally-accepted-depiction-design-process.
[6]http://wiki.doing-projects.org/index.php/Double_Diamond_in_Project_Management

FIGURE 2 | Examples of checklists shown at the workshop.

FIGURE 3 | Participants' first draft of checklists.

The reactions to BRM were very positive, as it was perceived as an attempt to systematize the process and to deal with different initiatives that might be developed over the course of time.

Joan (RAT): *You talked about pausing the other items. They're not thrown away right away? And that is where they might sit for a while until there are more pieces that might fit together?*
Sara (IT unit and BRM project manager): *Yes.*
Joan: *That's smart!*
Sara: *And I'm also thinking that if we do that at the healthcare administration, what if the municipality, with their overall view, could have the signals that "We are thinking about this." I'm thinking, we're talking about the healthcare administration,* but if you look at projects for Smart [name of municipality] or Smart stad there is a fair chance we will develop neighbouring technologies.

It is worth noting that when the researchers decided to expand the tool and have BRM presented at one of the workshops, they did not know what role it would assume in the ongoing intervention-research process. But as we will show, from that time on, BRM became a part of the discussions and was connected to the checklist, which was the researchers' second stimulus, so in a way, the second stimulus turned out to be two—the checklist and BRM— instead of one.

Based on what had been developed in the previous workshop, in the second part the researchers proposed a draft checklist developed around the specific case of the camera (see **Table 1**). This represented the second stimulus, which was meant to make participants analyze the problem and reflect on a possible solution.

The researchers' checklist first distinguished areas inside and outside the organization, and then a multiplicity of questions that were not to be forgotten and were to be answered by a "yes" or "no," possible actions to be taken and some space for notes. They attempted to condense all the possible questions and issues that had emerged in the previous workshops and as part of the mirror data. These questions had no chronological order or phases. As the discussion in the previous workshop had been on benefits, the checklist started the same way. The questions were also formulated so as to make potential users reflect on what they might have missed or whom they might have forgotten to include, so that there would not be too many questions, and so that they would be able to guide users more implicitly.

The second stimulus inspired a number of reactions, and in the discussion, the participants expressed what they believed was critical and did not work in the checklist as presented to them, and what changes should be made in order to make it work. The participants first reacted to the researchers' checklist, and then guided the researchers to take notes on a computer on how to amend it.

Wrong Start (or What's the Order?)

The first reaction to the checklist was that the beginning was wrong. The participants seemed to agree that it should not start out with the benefits, but rather with identifying the relevant actors and competences (such as legal experts) both inside and outside the organization who should be part of the process. Understanding the problem or need was also considered to be an important starting point.

"*From my perspective it becomes impossible to answer the first question "Are there well-defined benefits for the organization?" if I have not understood what parts of the organization are affected*" (Julia, case officer).

"*What are the well-defined benefits for the organization? To me this is going about it the wrong way, because it will automatically make me think about my own part in this instead of first identifying the internal and external actors*" (Julia, case officer).

"*When we did this [BRM], we did not work like that. Now we're using these 30 minutes to identify what stakeholders there are in the upcoming analysis. You don't know from the start, but will need to find out*" (Sara, IT Unit and BRM project manager).

Or it should start by understanding the problem.

"*I would try to understand the reason and the problem. I found that to be missing* [from the checklist] (Sara, IT Unit and BRM project manager).

"*But I do of course understand that a checklist might never be totally linear, never. You might need to take it step by step and at times go back to prior steps. I understand that. But my first reaction here is that the order is not very logical*" (Julia, case officer).

Do Not Decide on the Target Group Too Soon

Another element the participants agreed upon in the discussion was the need not to decide who the target group was and close it too soon. The tendency to tailor specific solutions to a specific target group may lead to wrong decisions.

Julia (case officer): *If we think about this "remote monitoring at night for older people," we failed. Why only for older people?*
Sara (IT and digitalization unit): *And why only at night?*
Julia (case officer): *Exactly. We failed as early as at that stage with this specific implementation.*
Joan (RAT): *But then you have remote monitoring, taking away everything that will point to a certain group or time or something like that. Because this is more than just giving the night personnel a better deal.*
Julia: *Or the older people.*
Joan: *Or the older people. Yes, but in this case to feel more secure. But it is also about children or people with autism or whatever.*

It Is Too Specific and Not Useable: The Need to Be More General

Another element they reacted to was that that checklist was too complex, and was unusable.

"*For me, I always get caught up in details and that makes it too specific. I mean, the fact that the actors are identified by name. (.) the list I see might become unsustainable… I'm thinking that the checklist might be difficult to use if you have a lot of boxes that are not used at all, visually confusing (…) It should not become a 30-page novel!*" (Julia, case officer).

Keeping a certain level of abstraction was also desirable as it meant it could be adapted to different contexts and their specific categories, as the following two quotes indicate:

"*Even if it [the checklist] will in part be specific for the municipality of [name of the municipality], the idea is that it should be adaptable and generalizable for other municipalities as well*" (Peter, DISK).

"*It cannot be at that level then, because the municipality of [name of the municipality] consists of all administrations and companies, everything. So you will need to find these general categories for the organization, internally and externally, other actors, volunteers. I am thinking civil society. Because they might also be very influential*" (Julia, case officer).

Connections Between Benefits Realization Management and the Checklist: Replacing the Project Manager

The discussion then moved on the relationship between BRM and the checklist, and to the fact that they should be complementary, and not overlap. The checklist could help prevent errors or risks associated with the planning process (BRM) or a reminder of something to be done while planning.

"*What do we need to be reminded of in BRM or what can go wrong?* […] T*he function a checklist might have here is if there is no project manager appointed, someone asking questions… I mean, instead of a person, is there something asking questions like "Have you done this and this," so to speak.*" (Klara, researcher).

TABLE 1 | First draft of a checklist by the researchers.

Short description of the new solution	Night monitoring service for elderly people through night camera			
Elements of the arbetssätt	Questions	Yes/No	Possible actions	Notes (actions done; specific bottlenecks, etc.)
Organization as a whole	Are the benefits for the organization been clearly set?		If yes, specify.	
	Does this contribute to organization mission (uppdrag)?		If yes, specify how? If not, check with Biståndshandläggare, hemtjänst, nattpatrullen	
	Do the different parts of the organization have the resources/competences to put into the process?		If, yes specify. If not known, check with Biståndshandläggare, hemtjänst, nattpatrullen	
	And does this need further specification of the organization or professional groups mission?		If yes, please specify…	
	Is there another way of fulfilling the mission in regards to these needs?			
	Are there any specific competences that need to be developed		If yes, please specify…	
Organization/Internal users	Are all parts of/affected by/can affect of the arbetssätt been involved?			
	Has the Bistånd been involved?			
	Has the IT department been involved?			
	has the development department been involved?			
	Has the home care been involved?			
	Has the communication department been involved			
	Are there others that need to use the technology used in the arbetssätt?			
External-users (for instance older people, relatives)	Have potential users been involved?		Older people already users, relatives of users, potential users,	
	Have elderly's relatives been involved?			
	Have elderly people associations been involved			
	Has homecare personnel been involved?			
Technology	Is it already used internally otherwise, and could it be used for this too?		Check IT department, etc.	
	Is it already used externally and how?		Check other municipalities, Hjälpmedelcentralen DISK, 4M samarbete	
	Is the technology tested or validated? (for example pilot tested in other municipalities, in research studies or in evaluations)			
	Do other solutions exist on the market?		Check DISK, RAT, Older people associations	
	Is it user-friendly?		Test Collect others' tests Check Older people associations, current users, FoU	
	Is it easy to maintain?		Check DISK, RAT	
	Do does it need to interact with other systems/apps?			
	How secure does this needs to be?			
	has an option been provided in case of fail?			
Legal infrastructure	Are there legal restrictions or requirements?		Check with the Bid service	
Budget	Is it possible to insert this action into the current budget ?		If yes, specify which line of budget If no, please specify	
Other departments	Does the new solution affect other departments?			
Other organizations	Does the new solution affect other organizations?		If yes, which ones	
Does this generate new ideas regarding other arbetssätt?				

The BRM project leader, Sara, mentioned that at the beginning of the planning process [BRM] it is important to gather different perspectives and not to work in small groups, but also that at present she is the only one gathering these perspectives. She wanted a process that was more independent from her as project leader. Spontaneously, she raised the idea that the checklist might even replace her:

"*If I'm allowed to speak freely, I want to be. . . I want it to be more people describing this initiative, the need, to gather what comes from the civil society, from the ground level—describing it early on in a structured manner (.) I was thinking I could be replaced* [laughter]" (Sara, BRM project leader).

Other participants agreed with this and reinforced the thought.

"*What you are compiling there [in BRM], could be compiled by the group or the people who came up with the initiative*" (Joan, RAT).

This discussion about the researchers' checklist allowed an improved appropriation of the process. The participants identified problematic elements of the proposed checklist and identified alternatives, this time connected to their own experience and work practices. It was even thought that the

checklist might replacing the project leader herself. There was also an attempt to try to make the checklist more usable.

A New Checklist as a Working Method

At a certain point, the researchers decided to let the participants talk and work alone, and began working on a new paper version of the checklist (see **Figure 4** and its translation in **Table 2**).

The participants came up with a six-step process that identified actions to be taken at various stages of the project from the beginning of the project concept to the follow-up. For each step, there could be specifications or principles to follow (these were the researchers' categorizations, not the participants'). Each phase ended up with a point at which a decision had to be made as to whether to persist with the idea or drop it. It was also decided that the list should have a chronological order.

The agreed process begins with an idea (a solution, a need, a problem, a political agenda, etc.).

In the first stage, which they call "preparation," someone within or outside the municipal administration advances an idea. During this phase, there is an initial identification of a need or problem, a first definition of the target group and a working group. At this stage, there may more than one target group and more than one solution. Attention is also paid to checking whether anyone within or outside the organization may already
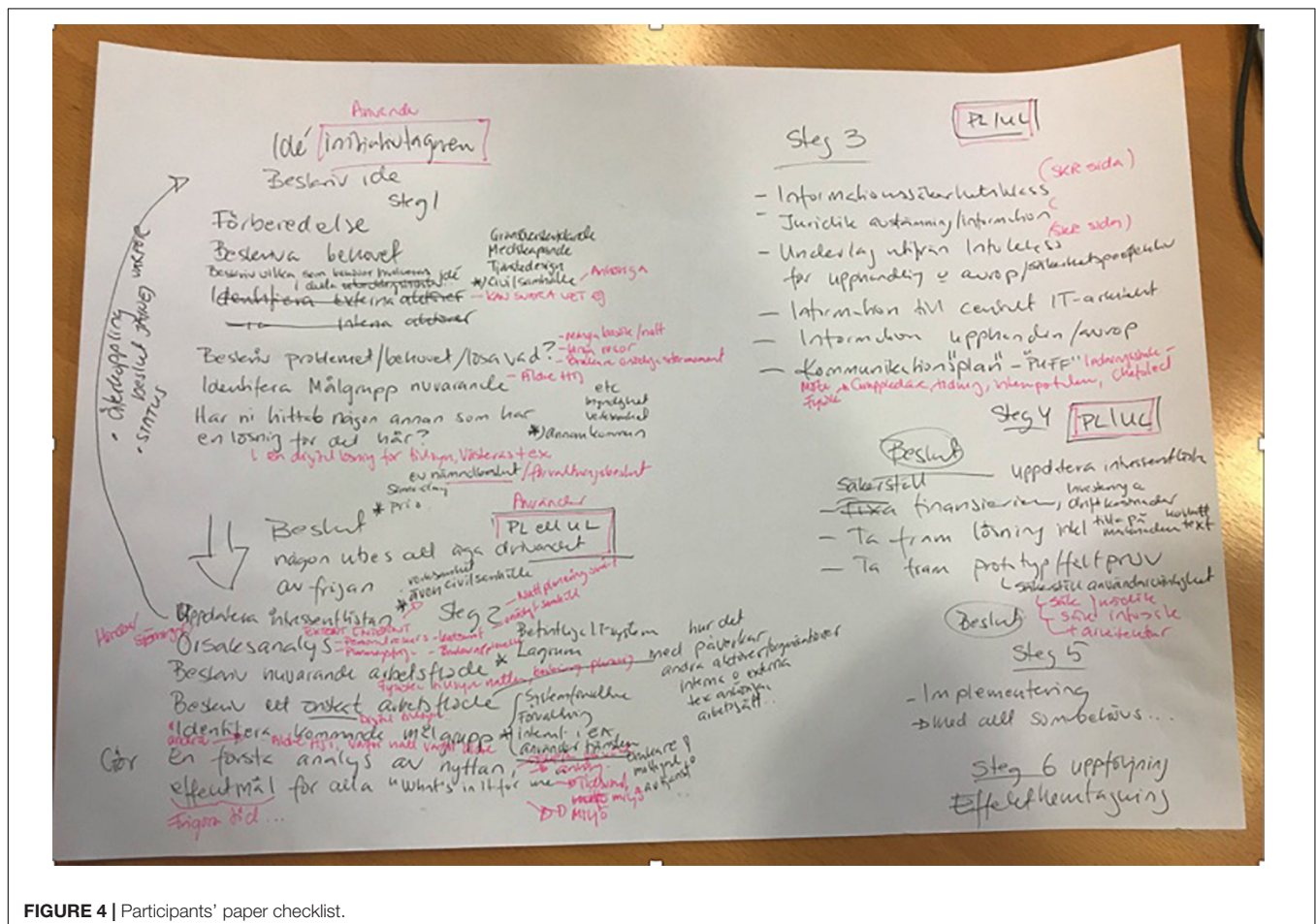
FIGURE 4 | Participants' paper checklist.

TABLE 2 | Researchers' translation of participants' checklist into a table, organized into different categories.

Steps	Actions	Specifications
An idea appears		
Step 1—Preparation	Describe the need	
	Describe who needs to be involved	Boundary crossing
		Co-creation
		Service design
		Civil society
	Describe the problem/need/solution to what	
	Target group at the moment	
	Have you found anyone else that has a solution for it at the moment	
Decision—possibly "committee of politicians decision"—coordination and prioritization		
Step 2—Someone pointed out for leading the initiative—project manager or developer (?)	Update of the stakeholders list	In the organization
		Also civil society
	Root cause analysis	
	Describe the current workflow	Current system
		Legal requirements
	Describe the desired workflow and how it affects other actors/organizations, for instance relatives	
	Identify the future target groups	IT system technicians
		Staff in the unit (förvaltning)
		Internal ?? use the service?? receiver of the service
	Do a first benefit analysis, "effektmål"	Time to do other things
		Environment
Decision		
Step 3—Same person as above	Information security classification	
	Check and inform legal officers	
	Material about ?? for bid and "anrop" (when you already have a supplier with a bid) —security perspective	
	Information to ?? IT-architect	
	Information to bid and anrop people	
	Start drafting communication plan	
Decision		
Step 4—Decision—same person as above	Update the stakeholder list	
	Get the funding, for the investment and for operating the new solution	See the questions in the checklist produced by the researcher
	Create the solution, including checking what is already on the market	
Decision		
Step 5—Implementation	Produce a prototype/field trial	Make sure it is user-friendly
Decision		
Step 6—Follow-up		

have a solution. The involvement of citizens and civil society is important at this stage.

In the second step, the focus moves to a description of current work practices and how future work practices should be. This is also considered to be a way of identifying target groups and checking the stakeholders.

"Should we put "preparation" and then "next step" here? To describe the current workflow and thoughts about how one would like to work, so you have some preparations here and then step two here. So if we put "Step 1" here and then down here we have "Step 2.""

"Describe the current workflow," or how should I put it? And then "describe desired workflow" or "desired flow" or do you know this already at the "idea" stage? […] "Describe the current routine" maybe, or "describe the current workflow," because then you will find the target groups and if there are more stakeholders" (Sara, IT Unit and BRM project leader).

In the third step, the initial idea must be fleshed out: other people need to be involved in order to add details to the process (the security coordinator and legal officer, personnel responsible

of the bids and for communication need to be involved) and the effects must be specified:

> "What effect will we have? Yes, we might have less transport or we reduce stress because we do not need to…" (Sara, IT unit and BRM project leader).

The fourth step focuses on creating a solution, finding funds and updating the stakeholders again. In this phase there is an explicit reminder of the questions in the researchers' checklist. The fifth phase (implementation) and the sixth (follow-up) were mentioned but not developed. The checklist therefore mainly focuses on initiating the process and the successive phases until the solution has been developed.

What was designed was a process in different stages in which there is a progressive definition of the idea with its actors and a progressive formalization and concretization of the process until implementation and follow-up.

One might say that in this process, the checklist partly reproduces the BRM linear dynamic, which consists in having an initial descriptive part (of the problem, of the actors, of the "workflow"), followed by a design/implementation part. The checklist thus emerges in relation to BRM. At the same time, during the discussion the participants mobilized the questions proposed by the researchers in the previous checklist so as to ensure that no important elements had been forgotten, and in particular to update any stakeholders who might be involved. The checklist thus also emerges in relation to the proposed stimulus. A clear connection to these questions was made in step 4 of their checklist, and also during their discussions.

For example, in order to develop step 1, they referred to the researchers' draft so that they would be certain not to forget anything:

> "Before decisions to proceed, good to check priorities and possibility of coordinating with other initiatives" (from the researchers' checklist).

Once again, the discussion on this step 3 was based on the questions presented in the previous checklist around the safety of the technology and its user-friendliness. They seemed to reuse several of our questions, but formulated them differently, as shown in the following quotes:

> "How safe does the technology need to be? It's about this information safety classification and basic data from the information classification for procurement and ordering. It's this one… the "safety perspective." So it's included. And we have another one: "Is the technology user-friendly?" That must be about designing prototypes and…" (Julia, case officer).

> "There is a question here "Is it necessary to further specify the responsibility of various organizations or professions?" And we added that to it, just from another point of view, to look at more stakeholders" (Joan, RAT).

It might be said, therefore, that the final checklist is the product of an alignment of different objects: not only the BRM and the researchers' versions, but also the formal material presented during the workshop. In particular, the checklist developed by the participants maintains the linear approach of

the planning tool, while at the same time seeking to add—and also reformulate—certain qualitative dimensions ("how" questions) that emerged from the researchers' proposals: some "how" questions and in particular the need to update the stakeholders and people to be "listened to" at each stage and the potential target groups.

The Last Workshop and the Final Digital Checklist

This story was brought to an unexpectedly early end by the COVID outbreak, which made it necessary to call a halt to the physical workshops after the third meeting. In the meantime, the researchers and DISK met Sara (the IT Unit and BRM project leader) on several occasions in order to gain a better understanding of what the BRM model does when organizing new initiatives, and decided to work on the input from the third workshop to develop a digital platform of the checklist, with the help of an information design professional (a former student at the university). Further discussions were therefore held in this group not only to formulate questions in ways that met the practitioners' needs as expressed in the previous workshops, but also to incorporate the researchers' insights to be included in the emerging web application, which has spatial limitations. The questions also needed to be as brief as possible in order to enhance their clarity. Considerable energy was also dedicated to determining how to present questions and what visual metaphors to use in order to materialize the idea that the checklist supported a transformational process, rather than an implementation, that might require iteration, and which questions are related to each other at each stage, rather than in chronological order. The final checklist is therefore the result of a re-materialization of the participants' checklist, to which the researchers and DISK have added their knowledge of the problems entailed by viewing the introduction of technology as a linear process (see **Figure 5**).

DISCUSSION

The aim of this study was to initiate a process of transformational change in a context in which multiple and interdependent practices at the boundaries of different institutions are engaged in performing care for older people, and where WT are used. The research project provided a framework for bringing together practitioners within and outside a municipality in Sweden, as well as older people, in order to develop a new tool for introducing WT. While investments are being made in WT in terms of public discourse and political strategies, the need for new working methods is a central challenge. In order to initiate the transformational process, the study drew its inspiration from the methodology of the CL (Engeström, 1987), which had its origins in Historical and Cultural Activity Theory (CHAT), and which focuses on change and learning as ongoing practical achievements. Building on more recent conceptualizations of practice, and in particular on the idea of work as a sociomaterial accomplishment, we have articulated a method by which change—and its content and forms—is not pre-established, but is produced in the course of the process
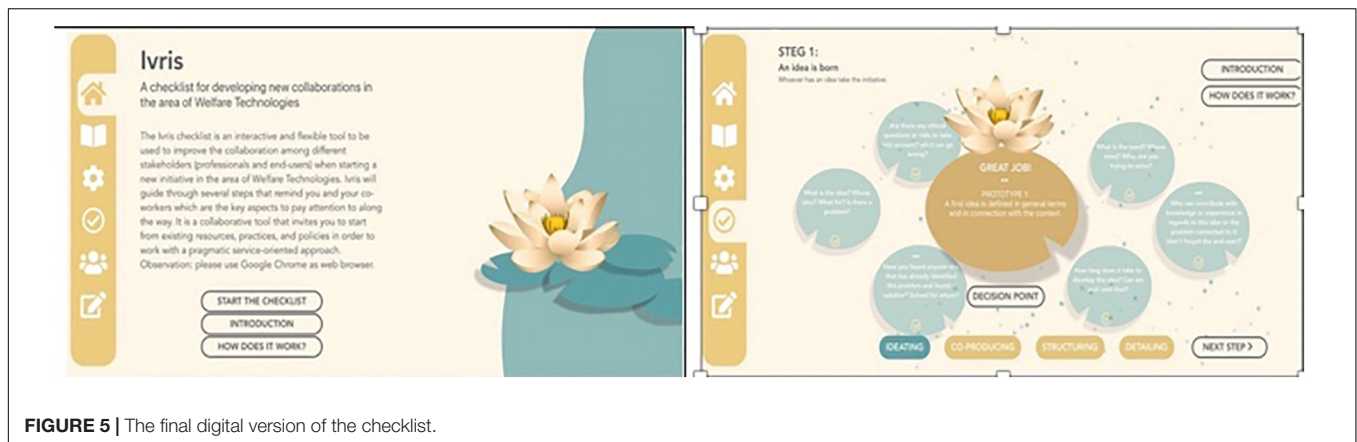
FIGURE 5 | The final digital version of the checklist.

itself without distinguishing between the subject and object of an activity, but by considering them as co-constituting each other.

The researchers proposed a series of workshops in which initial mirror data were provided to initiate a discussion on the problems and contradictions experienced by participants associated with the introduction of the night camera system. A second stimulus was then proposed by the researchers to initiate a discussion on a possible solution.

The first stimulus—the material collected by the researchers— enabled extensive brainstorming on existing bottlenecks and contradictions in the adoption of WT.

In the first stimulus, the practitioners and older people came together and reacted to the mirror data prepared by the researchers. A number of problematic issues emerged from this first discussion, especially the need to move the focus away from devices and toward new working methods and practices. In particular, attention was drawn to a lack of coordination among the different units of the administration and outside the organization, specifically the involvement of external experts (RAT and DISK) and end users (older people). The checklist was initially identified as a potential solution. This tool is based on a simple principle, which is "not to forget," and is commonly used in a wide variety of sectors—from industries in the engineering sector to public services—to help coordination of highly complex work activities.

In this phase, the process was led mainly by the researchers and the data and material they had gathered and organized for the purpose.

The process continued with an exploration of different aspects that should be integrated into the solution, such as how to collect and deal with and prioritize initiatives and ideas in the area of WT, what principles should inspire the process of adopting WT, and last but not least what kind of profile would be the most suitable to lead the process. Doubts emerged about whether managers are the most suitable candidates for this role.

The checklist thus took the form of a solution through successive materializations and encounters with other objects that emerged during the process itself.

In the second stimulus, the checklist proposed by the researchers was challenged by the participants on a different

basis—because it did not provide relevant questions, because it was not in a particular order, because it was not sustainable— and they decided to develop their own (albeit one connected to the researchers' version). As Engeström claims, resisting interventionists' proposals and proposing something new represents an important turning-point in a sociomaterial configuration and in the distribution of power among actors. He writes: "The participants take actions that redefine and transform the initially planned object of the learning effort, thus changing the entire course of the process and forcing the interventionists to redefine their script. The deviations and negotiations are important instances of emerging transformative agency among the participants (Engeström and Sannino, 2012 in Engeström et al., 2014: 123)." The decision not to continue working on the researchers' checklist marked a deviation by the participants from the interventionists' process design or script (Engeström et al., 2014).

In this phase, BRM—a systematic planning tool that was already in use at the municipality—came on the scene as a new actor, and was welcomed by the participants as a pragmatic, "smart" tool. In this way, a new alignment of actors was produced whereby the checklist—the main solution—and BRM began to be thought about together. The new structural materialization of the checklist produced by the participants was similar to that of BRM. This clearly produced a new sociomaterial alignment in which the checklist emerged as complementing or integrating the planning tool, which proposed a somewhat linear and idealized approach to management planning (Breese, 2011) and did not encourage the involvement of external actors to the same extent. This is not all, however: there was even the idea that the checklist should take a leading role in the process of adopting WT, substituting the manager and his/her power to control the process in favor of a more collective way of appropriating and leading it. In this phase the researchers felt that the process was moving toward a dynamic of traditional and rationalistic planning process, but they let the process be and followed the actors.

In the final part of the process, the new materialization of the checklist—the digital version—was produced whereby in the end two different logics were combined in the final

tool. There was a need to control and rationalize a planning process on the one hand, and the need to amend it in order to move closer to actual working practices within the administration and to keep the connections of a complex and composite work when initiating WT on the other. The checklist is the result of a specific alignment of actors during the process and their interactions. It has been conceived as a dialectical process between the researchers' way of framing the situation and problem and the practitioners' method, with their own practices and sense-making. In the first workshop, the researchers retained power and control because it was they who presented tangible texts and wrote new ones. Later, "handing the pen over" to the practitioners when they were asked to react to the original checklist and produce their own after the second stimulus also meant losing control and their priority position when it came to formulating solutions. Each time something written was produced it gave rise to reactions and resistance, as it did not completely meet the others' expectations. When the researchers proposed their checklist, the practitioners disagreed, even though they incorporated some of the original text in their reformulation. On the other hand, when the practitioners presented their text, the researchers and DISK reacted, because they viewed the practitioners as being caught up in discourses of linearity and solutions, rather than being open to problematizing and constructing something different based on these issues.

The final product represents a path between the different ways of constituting and articulating practices, and has a completely different form from what is customarily used in organizations, which may make it easier to see its value. It also materializes the need for a variety of actors, within or outside an organization, to participate in the introduction of WT, and thus reminds a user and enables her/him to invite different actors into the process where required. When in use, the checklist may therefore create the premise for assembling actors in the process of introducing WT, and may help keep them connected throughout the process.

CONCLUSION: ON ORGANIZATIONAL CHANGE AND WELFARE TECHNOLOGIES

This study has described a transformative process that leads to the development of a solution—a checklist—to support cooperative work in the context of working with change when introducing new technologies. The new device/solution is the result of a process in which practitioners, researchers and contextual objects interacted and became one. The process from which the checklist emerged was in the form of successive back-and-forth movements among different objects that the practitioners and researchers interacted on.

The methodology of intervention research that was proposed is not strictly speaking a way of "studying groups" (as this special issue called for); rather, it is a means of initiating a co-creation process at the crossroads of different communities of people—practitioners, older people and researchers—and

materialities (Orlikowski, 2009). In the methodology that was adopted—which was inspired by the CL (Engeström, 1987)—the solution was not pre-defined and the transformational process was not traced beforehand. The researchers and practitioners engaged in an iterative process the result of which was not known in advance, as will the actors—human and non-human—who will participate in it and the role they will play.

The checklist and the contradictions that emerged from it represent a way of moving the focus of attention away from a multiplicity of problems and principles to the development of more suitable concrete propositions that tie in with practitioners' work experience and practice. However, while the checklist appeared from the outset to be a potential tool on which actors could work, the planning tool (BRM) emerged as an actor in the process. This led to a reorientation of discussions on the checklist in relation to this powerful pre-existing rationalistic framework (Breese, 2011). In this process, the zone of proximal learning (Engeström, 2000) resides in the interstices of this rational and linear framework—which is provided by the planning tool, and more generally by the administrative organizational infrastructure—which it is hard for practitioners to make visible and for participants to question.

The process also speaks of agency formation, in the sense that the practitioners in the process are the same people who pick up a pencil and re-design their own tool and working method, using their own practices, motives and sense-making as a starting point. To what extent this leads to a complete reconceptualization of the object of the activity, as the CL aims to, is something this study cannot determine as COVID—another emerging actor in this research process!—made it impossible to follow the application of the checklist to concrete welfare technology initiatives (which could be the subject of another study).

In any case, as Engeström claims (Virkkunen and Newnham, 2013), the focus of attention in transformative processes does not reside in the solution itself—the final checklist in this case—but in the dialectical work to overcome its contradictions and through its different materializations and re-materializations that leads to its development. It is in this sense that the methodology that has been adopted in this study raises interesting questions for further research in the area of organizational change, where several stakeholders and professions are involved in general, and more specifically in relation to WT. In this regard, Engeström (2007) has returned to the idea of community [and in particular the idea of "community of practice" (Lave and Wenger, 1991)] to point out that in contemporary society, there is a need to study work and collaboration within communities that are more dispersed and loose, but also highly interdependent, as is the case here.

The transformative process we have suggested makes it possible not to work on general solutions, but to let practitioners—with the support of researchers—generate their own solutions, starting out from their specific and composite organizational practices, networks, ambiguities, uncertainties and tacit knowledge connected to care work. This is the sense in

which change is proposed as a specific and contextual *agencement* (Gherardi, 2019) of human and material actors. In this process, we see a reconfiguration of the sociomaterial alignment of actors that leads to a new understanding and knowledge of the solution that is outlined. In this reconfiguration, we also see different displacements of power relations: from the researchers to the practitioners who reinvent the initial checklist, to BRM and then to the checklist, whose agency is meant to replace the manager's role.

The iterative process we have shown suggests that WT are a matter of local and multiple *agencements* of humans and materials. This proposed change in the adoption of WT implies negotiation among sociomaterial practices at the organizational boundaries whereby power and agency are temporal stabilizations, and are always distributed between the social and the material.

DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author/s.

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Communication Technologies and Aid Practices: Superbergamo, Group Chats, and the COVID-19 Pandemic

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This article examines "Superbergamo", a collective which emerged in response to the needs of vulnerable citizens during the first wave of the COVID-19 pandemic in Bergamo (Italy). The analysis reveals the central role of social media and group chat systems in facilitating the spontaneous creation of the group, and the subsequent development of coordinated voluntary emergency activities that brought aid to thousands of local people. Inspired by Actor-Network theory, the analysis traces of the group's emergence, showing how human and non-human actors—including social media and group chat apps—played a crucial role in shaping the aid practice. In so doing, we contribute to the literature on emergency responses from the public and social media. More significantly, we show how the critical contribution of technology to the development and sustenance of aid practices can be mapped, by providing evidence of how groups, practices and sociomaterial networks are necessarily entangled.

Keywords: Actor-Network Theory (ANT), social media, group chats, WhatsApp®, COVID-19, aid practices, groups

INTRODUCTION

The COVID-19 pandemic disrupted ordinary life, creating an uncanny sense of social isolation. The closure of borders and accompanying lockdowns, saw several welfare agencies (private and public) downscaling their social and health support services in order to limit the spread of the virus. In response, scholars have noted how members of the public self-organized to offer relief to the most vulnerable members of the community (Andersen et al., 2020; Koos and Bertogg, 2020; Woodman, 2020; Carlsen et al., 2021). According to Fernandes-Jesus et al. (2021), mutual aid groups constituted an indispensable element of the public response to the pandemic, offering many forms of support, in particular grocery shopping. Similarly, Mao et al. (2021) noted how local communities were able to mobilize and organize into multiple and diverse forms of community action and support. Moreover, some existing groups changed their focus to support their local neighborhoods, with many people becoming active in *inter alia*: providing information about COVID-19; helping with shopping, packing and delivering food; fundraising and making donations; collecting prescriptions; dog walking, and offering emotional support through telephone helplines (Mao et al., 2021).

Social media played a crucial role in the self-organizing nature of social movements (Swann and Ghelfi, 2019), work (McGregor et al., 2019), and public responses to the crisis (Starbird and Palen, 2010, 2011; Cheng et al., 2020). Moreover, social media constituted a useful technology to mobilize people in times

of emergency and crisis (Carlsen et al., 2021), and this applied for both pre-existing organizations, and new aid groups that emerged during the pandemic.

Despite the evidence showing the relevance of social media for crisis intervention (Palen and Hughes, 2018), scholarly consideration of the role played by social media in self-organized support services during the COVID-19 pandemic, has been conspicuous by its absence. We fill this gap by analyzing the case of Superbergamo, a self-organized group that had hitherto coalesced around a pre-existing cultural association. During the very first peak of the pandemic this group performed extensive aid activities in Bergamo; the city hit hardest by the first wave of COVID-19.

We contribute to the scholarship on public self-organization under crisis conditions, and the use of social media in generating mutual help within communities, in particular, the role of WhatsApp (both the client itself as well as the nature and form of chats) in spontaneous aid[1] activities during the pandemic. While showing how social media and group chats enabled, supported, and permitted aid activities across the city (and its province), we also suggest ways in which mutually entanglement of groups, technologies, and aid practices are best understood. We aim to contribute to this research topic with an analysis that shows how the intricacy of human and non-human relationships can be traced in the emergence and development of a new (sociomaterial) practice of aid, in ways that eschew positivist epistemologies.

The article gives a rich description of the spontaneous appearance of "superbergamo", highlighting how the group itself, and the aid practice that emerged, was shaped by encounters within and between human and non-human actors. Following practice theory (Reckwitz, 2007; Nicolini and Monteiro, 2017), we consider practice to always be a sociomaterial phenomenon and the group as the social entity behind a practice. Thus, our analysis—Inspired by Actor-Network Theory—stresses the network of human and non-human actors that gave rise to the new aid practices, where the practice of aid and the group itself is conceptualized as a result of the network of relations between several human and non-human actors. Consequently, we are less attentive to the elements of Superbergamo as a pre-existing group and instead focus on the use of social media and group chats by following the actors and mapping the connections that gave rise to the extraordinary manifestation of aid practices that took place in Bergamo in 2020.

Contributing to debates surrounding the nature of crisis and social media, as well as the scholarship concerned to articulate the study of groups underscored by a non-positivistic epistemology, the article is organized as follows. First, we briefly consider the use of social media environments, communication technology and group chat apps in the context of a crisis. Secondly, we develop an approach that enables the study of technology in practice by utilizing elements of Actor-Network Theory for the rich analysis/description of the entanglements that enabled the

aid practice. Thirdly, the case is explored through the empirical research and the qualitative methods used. Fourthly, we illustrate and discuss excerpts coming from Facebook and the original WhatsApp chats used by the group, to show Superbergamo as an emergent group, the actual practice of aid, and how the group's coordination and impact on the population emerge from the sociomaterial entanglements. We conclude with the argument that analyses of the role played by social media in supporting and shaping aid practices, makes a meaningful contribution to the literature about crisis responses. Moreover, the article highlights the importance of enriching the extant scholarship about groups by emphasizing the emergence of social entities behind spontaneous sociomaterial practices.

SOCIAL MEDIA USES DURING THE CRISIS

Researchers of crisis informatics (see Palen and Hughes, 2018 for an overview) explore the nature of social phenomena in mass emergencies mediated by communication technology and social media environments (Schneider and Foot, 2004; Foot et al., 2005; Shklovski et al., 2008). As Palen and Hughes (2018) argue, risk informatics was initially characterized by placing attention on social media and other web applications that shared information on crises. For example, Torrey et al. (2007) noted that several citizens used online means to coordinate disaster relief, such as clothes, toys, and other items. Other authors have highlighted cases where citizens have used social media to help find missing persons and locate housing for crisis victims (Palen and Liu, 2007; Macias et al., 2009). These early studies demonstrated that through social media, citizens could obtain information, offer help relating to the crisis (Palen and Liu, 2007) and participate in the management of disasters remotely, far from physical emergency sites (Hughes et al., 2008; Heverin and Zach, 2010; Vieweg et al., 2010; Qu et al., 2011).

More recently, in the wake of Hurricane Katrina, attention has been paid to the potential of peer-to-peer communication in response to crisis events (Palen and Hughes, 2018). The focus has thus been on the use of social media to share information, assess the impact of an event and find out who was affected by it (Vieweg et al., 2008; Palen et al., 2009). Social media can also work as a "backchannel" allowing members of the public to obtain, provide, and seek informal information that it adds to the formal emergency response channels (Sutton et al., 2008). For example, Vieweg et al., show how microblogging—including Twitter—can improve situational awareness during emergency events (Vieweg et al., 2010). According to the authors, "situational update" information that people communicate through microblogging in mass emergency situations is one source that contributes to situational awareness, defined as an understanding "the big picture" during critical situations. Despite the great emphasis on the public's provision of information during crisis, research on social media and disaster is not limited to this area of research.

As Palen and Hughes (2018) highlight, social media, chat apps and other communication tools, are also used to support populations affected by crisis events. For example, Twitter collected and donated funds to those affected by the earthquake

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[1]We refer to spontaneous form of aid practices as self-organized aid, aid from the public, mutual aid, aid from the community, public response to crisis and similar terms used by different branches of the literature.

in Haiti (Starbird and Palen, 2011). Similarly, Debnath et al., point out how textual intra-group conversations within disaster management organizations can be considered as underutilized information (Debnath et al., 2016). In particular, they argue that WhatsApp groups and chats ought to be considered more reliable places to understand the post-disaster work of volunteer organizations, compared to applications such as Facebook and Twitter, whose material is significantly affected by non-relevance and inaccuracy. According to them, group chats as WhatsApp can provide a detailed overview of a disaster situation, relevant movement patterns, as well as keeping accurate data on requirements and problems.

The term digital volunteerism is also used related to citizens' effort to develop applications or provide services to meet humanitarian needs. Liu and Palen (2010), Shanley et al. (2013) all refer to a pre-existing community, OpenStreetMap (OSM), that volunteered to create a map for Haiti's capital city that contributed to the humanitarian action after the earthquake in 2010. Defined in this way, digital volunteerism is related to the spontaneous citizens' effort that develops applications or provides services to meet humanitarian needs (Palen and Hughes, 2018).

STUDYING TECHNOLOGY IN PRACTICE

In a comprehensive sense, social media are tools that can be utilized in multiple public practices during a crisis. However, the contribution of social media in the definition of new practices during their emergence is somewhat less clear. A deeper analysis of the role social media plays in emerging practices in the context of a crisis, requires accounting for human and non-human elements of aid practices. A post-humanist approach to practice can be particularly helpful in taking account of non-human elements that participate in practice (Gherardi, 2019; Parolin, 2021). This approach can be defined as "post-humanist" because it tries to decentre the human subject (Cetina, 1997) and focus on relationships. As Gherardi maintains:

> While theories of action assume a linear model of explanation that privilege the intentionality of actors, from which derives meaningful action, theories of praxis assume an ecological model in which agency is distributed among humans and non-humans and in which the relationality between the social world and materiality reconfigure agency as a capacity realized through the associations of humans and materiality (Gherardi, 2010, p. 504).

Within management and organization studies, practice theory[2] is represented in some of the most pertinent traditions that articulate situated analyses of collective work practices (*see* Nicolini, 2012 for an overview). This approach encompasses a range of models that have been concerned to show how knowing in practice (Gherardi and Nicolini, 2000; Gherardi, 2008,

2019; Nicolini, 2012; Nicolini and Monteiro, 2017) generates knowledge within situated work practices, *inter alia*: social learning approaches that promote the concept of a community of practice (Lave, 1988; Lave and Wenger, 1991; Gherardi et al., 1998; Wenger, 1998); ethnomethodological studies of work (Garfinkel, 1967; Lynch, 1993), workplace studies (Engeström and Middleton, 1996; Heath and Luff, 2000; Luff et al., 2000), situated cognition (Hutchins, 1995, 2020); as well as technology as social practice and variant streams of research that have promoted a deeper consideration of sociomateriality in work and organization (see Orlikowski, 2007).

These scholars consider technologies (and technologies of communication) as elements in situated ecologies, which means they are shaped by the repertoires and situated modes of action within a community of users. For example, the concept of technology-in-practice (Orlikowski, 2000) indicates an interest in considering how its users have learned the interaction between humans and non-humans, giving rise to a specific practice. In this respect, Orlikowski (2007) considers technology not only as the means by which participants share the same perception of environmental indicators, but also as a constitutive element of the practice. Indeed, every social practice—including work practices and help practices during crisis—is made by a network of human and non-human actors.

A focus on practice emphasizes a relational ontology based on interdependencies between human and non-human, subject and object, person and material world, networks and society (Orlikowski, 2007). These elements, including technologies, are not considered as possessing essential characteristics as their properties can only be developed in relation to other subjects, social groups, or networks (Østerlund and Carlile, 2005; Mattozzi and Parolin, 2021). This approach rejects the ontology of separateness that regards technology and humans as essentially differentiated and separate realities, embodying instead a relational ontology (Barad, 2003; Law, 2004). Such an approach privileges neither humans nor technologies; rather, it focuses instead on the constitutive entanglements enacted in situated practices (Suchman, 1987; Cetina, 1997; Barad, 2003; Latour, 2005; Pickering, 2010).

Orlikowski's approach resonates with the theoretical and methodological tools offered by Actor-Network Theory to analyze[3] how human and non-human actors participate in collective action—or using a practice vocabulary—a sociomaterial practice. In Actor-Network Theory, human and non-human actors both play a role in the course of action, each having the potential to modify a state of affairs by making a difference to the practice. Human and non-human participants share distributed, variegated, multiple, and dislocated agencies, which Suchman (1987), Lave (1988), and Hutchins (1995) explain in critical interrogations of "situated" and "distributed" cognition.

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[2]As Andreas Reckwitz maintains, practice theory "refers to a group of approaches in late twentieth-century social and cultural theory which highlights the routinized and performative character of action, its dependence on tacit knowledge and implicit understanding. Besides, these approaches emphasize the "material" character of action and culture as anchored in embodiment and networks of artifacts" (Reckwitz, 2007, p. 1).

[3]According to Latour, there is no difference between description and analysis (Justesen, 2020) as a description of relations should be considered an analysis (Mattozzi, 2019; Mattozzi and Parolin, 2021). To avoid misunderstandings, we propose to use the term "rich analysis", a term that we deem embodies ANT's descriptive-analytical approach.

It is crucial to note that in highlighting non-human participation in practice, does not mean that an action is determined only by the objects. For example, baskets do not *cause* the fetching of provisions, nor do hammers "impose" the striking of a nail. Non-human participation in the action means that whilst they have agency and influence the course of human actions, they are not in themselves determinants (see Mattozzi and Parolin, 2021). In ANT the continuity of any course of action consists of in chains of human and non-human connections, as Latour maintains: "things might authorize, allow, afford, encourage, permit, suggest, influence, block, render possible, forbid, and so on" (Latour, 2005, p. 72).[4]

Grasping the role of objects or technologies in the flow or chain of the connections, however, is no simple matter. Indeed, it is possible to track their actions only through the traces that they leave on the path. As Latour puts it again:

> To be accounted for, objects have to enter into accounts. If no trace is produced, they offer no information to the observer and will have no visible effect on other agents. They remain silent and are no longer actors: they remain, literally, unaccountable (Latour 2005, p. 79).

Moreover, once traces have been collected, understanding how to interpret them is a matter of methodology (see text footnote 3), which ANT usefully provides two clarifications for.

First, the concept of "actor" in Actor-Network Theory is not conceived as a rational thing that are abstracted from any given context and in full possession of their agency. Rather, they are conceptualized as someone (human), or something (non-human), whose acts are deeply and critically influenced by the entities around them. Specifically, in ANT, "… an 'actor' in the hyphenated expression actor-network is not the source of an action but the moving target of a vast array of entities swarming toward it. It is crucial to retrieve its multiplicity" (Latour 2005, p. 46). In this sense then, an actor is something that is made to act by many others, it comes into being with others and has little singular essence. Latour uses the metaphor of a theater to explain the controversy related to who, and what, is acting when "we" act. Put simply, on stage, an actor never acts alone, and when we watch an actor act, we always wonder if what we see is reality or fiction or who really determines the action. In a theater play, the question of agency opens up and is not attributed uncritically to whom we see acting. Similarly, in ANT, it is crucial to reconstruct how, and by whom, a human and non-human actor was influenced in making the action. It can only be done by collecting clues and trails left by the actors. As a consequence, uncertainty about the origin of action has to be resolved as a matter of enquiry rather than assumption.

While mapping the human and non-human contributions to the emergence of action, clarification of how actors qualitatively participate in the collective action takes place. This is the point that the second and fundamental ANT clarification arises: not all human and non-human actors play the same role in the emergence of action; some are more important than others, a hierarchy of relevance which depends on whether they are intermediaries or mediators.

According to Latour, an intermediary is an entity that transports a meaning or a force without any transformation. Describing the inputs of an intermediary is enough to understand its outputs: "For intermediaries, there is no mystery since inputs predict outputs fairly well: nothing will be present in the effect that has not been in the cause" (Latour 2005, p. 58). In understanding the emergence of collective action, it can be seen if an actor works as an intermediary when it does not add anything, other than carrying the action effect forward. If an actor acts as a mediator, the consequences are completely different. A mediator transforms, translates, distorts, and modifies the meanings or the elements they are supposed to carry (Latour, 2005). Therefore, if we have chain of mediations in a network, many new and variable situations will succeed. These mediators make things do other things, in ways that cannot be foreseen.

It is crucial to note, an actor is not an intermediary or a mediator *per se*, but the expression of their potentialities depending on the positioning that they have in the network. Latour uses the example of a computer and a conversation:

> A properly functioning computer could be taken as a good case of a complicated intermediary while a banal conversation may become a terribly complex chain of mediators where passions, opinions, and attitudes bifurcate at every turn. But if it breaks down, a computer may turn into a horrendously complex mediator while a highly sophisticated panel during an academic conference may become a perfectly predictable and uneventful intermediary in rubber stamping a decision made elsewhere (Latour 2005, p. 39).

An intermediary, then, can be significantly complicated but also non-relevant for the action to take place. A mediator can be very simple, but it may lead in multiple directions, changing all the contradictory accounts attributed to its role.

Following ANT, it cannot be asserted in advance what kind of actor a particular technology is, and which type of agency it has, and what is its contributions might be to the action. To be clear, it is not possible to say if a technology is an intermediary or a mediator without reading the network in which it is inscribed. The complex networks of human and non-human actors have to be followed in order to comprehend how a technology's potential contributes to the action.

THE CASE AND THE RESEARCH METHODS

To excavate a deeper understanding of the dynamic relations between technology, people and spaces in aid practices, we looked at the emergence of an organization in response to the COVID-19 pandemic. The group named Superbergamo (Supporto Unitario Popolare e Resiliente or Unified Popular and Resilient Support in English), promoted a food and medicine service during spring

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[4]On a similar matter James Gibson coined the famous concept of affordance (Gibson, 1986), while Suchman (1987) and Goodwin and Goodwin (1996) explore the assortment of modes of action of technologies.

2020 in Bergamo; the Italian city most affected by COVID-19. During the pandemic's peak (March–June 2020), this group, comprised of local people active in Bergamo's cultural and social associations, generated a social project designed to sustain people in need. Starting before the official lockdown Superbergamo, rapidly became a crucial player in meeting the community's needs as the depth of the crisis emerged and took shape.

During the most dramatic peak of the pandemic, Superbergamo was able to make 2,672 interventions. These included delivering groceries, drugs, oximeters and oxygen from pharmacies, medical prescriptions from GPs, small services at the post office, collecting medical reports, preparing and distributing free grocery packages for those without money, and other similar services. Focusing on the emergence of the collective actor who provided the aid practice, we focus on both human and non-human components and their relationships. It will become clear that Superbergamo as a collective actor, and the aid practice itself, was the result of the chain of relationships we are mapping. By describing the relationships between human and non-human elements, we can provide a more nuanced understanding of the contribution of social media and group chats to the constitution and execution of spontaneous emergency responses by the public.

Bergamo Outbreak and Collective Action

Bergamo was the epicenter of the COVID-19 outbreak in the Lombardy region and for a period of time Europe as a whole. With at least 6.000 COVID-19 related deaths, it remains one of the worst affected cities in Italy (Senni, 2020) and the world (Bernucci et al., 2020). The Guardian described the experience of Bergamo as being in a "lazaretto of pain", where hospital staff faced the horror of selecting which patients to treat on the basis of who had the greater chance of overcoming the infection. The city's cemeteries were so full that they were forced to ask neighboring provinces to remove their corpses for burial (Bonalume, 2020).

Superbergamo emerged from an idea expressed on the day 6th of March 2020 in the group chat of a local cultural association called Maite, and its service starts the same day. After a local newspaper article about the initiative (on the 7th of March), the service receives tons of requests for groceries and medicine (Scardi, 2020). On the 12th of March, a Facebook post from Maite provides some initial data: "70 volunteers active in the Bergamo area and Province. 4 switchboard operators who alternate with a hot telephone. About 100 phone calls arrived between Monday 9th and Wednesday 11th of March and 64 interventions carried out in Bergamo and the Province". Prior to, and during the first weeks of the lockdown[5], local and regional institutions provided no services for the most vulnerable sections of the population, save for advising them not to leave their houses (Pellegrinelli and Parolin, 2021). Thus, when Superbergamo's service started noting was put in place by the municipality to intervene and support the vulnerable population.

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[5]Bergamo was affected by local and regional lockdowns that started on the 8th of March 2020, while the national lockdown took place some days after (11th of March 2020).

The Municipality of Bergamo also set up and coordinated a service made by volunteers, named "BergamoXBergamo", to provide help to the citizens during the pandemic. However, the service was only implemented some weeks later the start of the activity of Superbergamo and it learns from it. An article in the local newspaper (Eco di Bergamo, 2020; 24th March 2020) titled "Volunteers to help citizens 'BergamoXBergamo' is born" (our translation) was dedicated to the initiative promoted by the Municipality quoting the municipal councilor. As the article states: "After a first phase focused on assistance to the elderly population, mainly addressed to emergencies, based on the availability that numerous volunteers reported to the Municipality of Bergamo and thanks to the spontaneous self-organized groups, 'BergamoXBergamo' the intervention plan of volunteers and volunteers organized by the Municipality of Bergamo takes shape" (our translation). The self-organized groups here referred to are those activated by Maite that will compose Superbergamo. Moreover, despite its activity in the whole province Superbergamo also participated in the Municipality initiative (that was limited to the Municipality area) as an independent group. Superbergamo, extemporaneously born from a local cultural and social association, gathered volunteers (over 300) and quickly established a solidarity network for the delivery of necessities (especially food and medicines). The complex and stratified Superbergamo project can be divided into three phases (Pellegrinelli and Parolin, 2021). The first phase (between the end of February and the first half of March 2020), runs from the establishment and initial deployment of a self-organized delivery service of groceries, up to the construction of a more complex network, including various local groups and associations. The second phase (from mid-March until the beginning of April 2020) saw the re-organization of the service in response to the overwhelming needs of the community. Finally, the third phase responded to the growing need for financial support from a significant proportion of the community. On the one hand, this phase took the form of fundraising initiatives; whilst on the other, of distributing solidarity grocery parcels for people in economic difficulty.

Research Methods

This case is based on qualitative research we carried out between March 2020 and July 2021, studying the emergence of the group and the development of its activities. The research includes:

- Several online and offline interviews (more than 60).
- Online participant observations.
- The analysis of different texts and inscriptions (in particular from social media and the group messaging app).

Given that the activity of Superbergamo coincided with the strictest lockdown Italy has ever known, most of the group's practices were carried out and coordinated exclusively online. Therefore, to account for the aid practices provided by Superbergamo, we focused on the network of inscriptions (Latour, 1999) involved in its socio-technical assemblage (including numerous WhatsApp chats). According to Jérôme Denis and David Pontille, mapping socio-technical networks in ANT (Actor-Network-Theory) entails the following of "small traces of paperwork, marks on sheets of paper, specific words

in documents (e.g., authors names and citations), files, minutes, reports, etc." (Denis and Pontille 2020, p. 2). Consequently, our data comes from several sources: interviews, observants participation, and materials we gathered from the Superbergamo initiative, like Facebook posts, WhatsApp chats, emails, text and handwritten messages, minutes of meetings, excel documents, regulations, online self-regulation documents and newspaper articles. Indeed, we collected an enormous amount of written material, including several WhatsApp group chats where aid initiatives were conceived, discussed and implemented. However, following Latour, we decided to concentrate our attention on specific inscriptions that allowed us to understand how the mobilization of new resources is accomplished:

> we do not find all explanations in terms of inscription equally convincing, but only those that help us to understand how the mobilization and mustering of new resources is achieved (Latour, 1986, p. 6).

In this sense, it was crucial to follow Facebook posts and messages in WhatsApp group chats in the context that they were written, to reconstruct the emergence of the group itself and the subsequent aid practices.

WhatsApp chat is an instant messaging App launched in 2009 and subsequently acquired by Facebook in 2014. According to Seufert et al. (2015): "WhatsApp is the most popular MIM application in the world having around 700 million monthly active users" (Seufert et al., 2015, p. 225). WhatsApp chat is based on Mobile Instant Messaging (MIM), an online service that overcomes the traditional Short Message Service (SMS). The benefit over conventional SMS is that MIM services are primarily free and can share media like videos, images, and audio messages. One of the most prevalent characteristics of MIM applications is group chatting.

According with Ling and Lai (2016) group chatting has consequences in the micro-coordination of social life. Prior to group chatting apps, micro-coordination usually assumed a dyadic form of interaction (using either SMS or mobile voice calls), mobile messaging apps have allowed multisided interactions that facilitate task-based chat groups (Ling and Lai, 2016). As with other mobile group messaging services, WhatsApp chats play a key role in gathering groups and micro-coordinating their activities.

To describe-analyze the emergence of Superbergamo, and the aid practices promoted by the group, we followed the messages in several chats, Facebook posts and other coordination tools related to the project. Superbergamo activity relied on several WhatsApp groups and subgroups (see e.g., the "Attack" group below), to facilitate the operational management of the service directed to the population. The multiplication of these spontaneous WhatsApp groups under the umbrella of Superbergamo, mostly with many to many structures, were intimately connected with the character of its project development. In Superbergamo, chats emerged spontaneously within a collective yet simultaneously fragmented process, surrounding the project's operational needs and evolution. Moreover, these virtual subgroups became indispensable for coordinating activities and developing strategic reflection. In this respect, communication technologies and their

inscriptions, were embedded within, and part of, participatory processes: gathering the group; moving a complex machine that worked primarily remotely; and simultaneously imagining and managing its evolution. Therefore, analyzing these chats will elicit a deep and rich understanding of how both the group and the practice emerged.

THE DISCUSSION

Using Group Chats to Set Up a Collective Action of Help

As anticipated Superbergamo's story began on the March 6th, 2020, 2 days before the lockdown in the Lombardy region began (lockdown was nationwide by the 11th March), and in a context where initiatives from public institutions were conspicuous by their absence. Nonetheless, information about the outbreak spread and so did the concern among the vulnerable population. Amongst other local cultural associations who had already canceled activities, *Maite the Bergamo Alta Social Club* located in Bergamo's upper town and home to various cultural and artistic associations, had already alerted many about the pandemic's risks thanks to a doctor involved in the team (Pellegrinelli and Parolin, 2021).

At 9.00 a.m. on the March 6th, 2020, in the WhatsApp group "Info Maite"—which includes about thirty of the most active associates—Piter, the president of Maite association, wrote a message: "I have a practical idea to support over seventy in the district. Like taking your groceries home or just ordering them online. Any volunteers available?". What follows are enthusiastic messages about the idea. As another activist said, [The idea was] "to extend to the neighborhood what we had already begun to do for our parents and our elderly neighbors." (Interview with a volunteer).[6]

Later in the day, after some rounds of enthusiastic appreciation and practical considerations within the chat "Info Maite", a Facebook post appears at 14.47 on the page of Maite with the following text:

Excerpt 1

In the days after the closure of the MAITE—Bergamo Social Club, many of us are at home being cultural and school workers, we have decided to make ourselves available to those who, even more than us, suffer from forced loneliness due to a personal or health issue.
Those who need it (over 70 or people with difficulties linked to health issues will have priority), can call us at +39**********.
We can bring you the groceries, run small errands, go to the post office... in short, give support.
We have masks, sanitisers, delegation documents and other authorizations...

Moreover, copies of the announcement were printed and posted around (in the local groceries, pharmacies and bars) in the upper town district of Bergamo where Maite is based. The mobile

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[6]All the participants have been anonymized with generic Italian names. However, we chose to keep the real name of the associations and groups involved, the name of the chats the punctuation and the emoticon used in them.

number in the announcement was the one used at Maite for booking the events. The chat "Info Maite" was also used for discussing how to set up the service proposed.

Excerpt 2

[...]

06/03/20, 10:46 - Piter: Is someone available to be the contact to call for support requests?

06/03/20, 10:46 - Roberto: But you say that we do not ourselves act as an intermediary for the infection to the older people?

06/03/20, 10:47 - Piter: obviously, intelligent measures must be taken

[...]

06/03/20, 12:08 - Valentina ❤️: I can be the one who answers the phone

06/03/20, 12:09 - Luca: Yes, perhaps better to check if the phone is still working. After that, it is a good initiative, but if they call you have to go. If one calls and is answered twice spades... are we sure we can be there?

06/03/20, 12:10 - Valentina ❤️: It depends how many volunteers are there

06/03/20, 12:10 - Valentina ❤️: Availability?

06/03/20, 12:13 - Piter: Simone e Davide have given their availability

06/03/20, 12:27 - Luca: In principle, I am available

[...]

06/03/20, 12:41 - Valentina ❤️: You have to recover hands sanitisers and face masks when you go to the elderly you put on and don't touch yourself

06/03/20, 12:43 - Piter: today I'm going to get everything we need

06/03/20, 12:44 - Michela: Pharmacies have run out of face masks 🧐

[...]

06/03/20, 14:10 - Piter: Fausto do whatever you need and want

06/03/20, 14:10 - Piter: Cinzia can you deal with Facebook and various groups?

06/03/20, 14:10 - Piter: I have 20 printed copies, Marco, Manuela, Chiara, Annalisa, and others from the upper town, can you hang copies around?

(Extract from Info Maite WhatsApp chat).

The same day of the Piter's first message, the conversation on the Info Maite chat helps to define and set up the aid service. In a short period of time, some roles have been roughly defined: the one answering the phone (Valentina), the one responsible for putting the ad on Facebook (Cinzia), the one who will provide masks and sanitisers (Piter), and the ones called to post copies around the upper town (Marco, Manuela, Chiara, Annalisa and the others). The excerpt also shows how a shared orientation to the situation is negotiated within the exchanges. Roberto asks if volunteers risk becoming vehicles for the contagion, sparks a conversation about the importance of face masks and hands sanitiser, and a further chat dwells on practical matters such as checking that mobile phones are still working. What begins to emerge is a shared orientation toward creating a service addressed to the local elderly population,

based upon a mobile phone message and volunteers coming forward from a local association, and instigated by a group chat previously used to coordinate Maite's activities. This shared orientation to the situation marks the emergence of what Suchman calls a "situational territory" (Suchman, 1996), a complex territory that incorporates technologies, discourse and practice. The emerging "situational territory" is neither defined nor fixed, rather it is in the process of being shaped by the exchanges taking place. The division of labor, tasks and positioning of the volunteers within the collective action are emerging elements from the group exchanges taking place within the chat. Nevertheless, a "common state of readiness" to take care of the emerging needs of the vulnerable elderly was being suggested and negotiated, giving rise to the future practice of help.

A few hours after Piter's initial message (sent at 9.00), a Facebook post was published (14.47), the phone used for receiving the calls is turned on (14.54) and a new WhatsApp chat, called "Attack", is set up (15.10) by Valentina—the activist of Maite who volunteered for managing the phone—to gather the volunteers that will provide the service. The new chat allows to include those who wrote to Maite after seeing the initiative on Facebook and are willing to volunteer to join it. The chat group "Attack" became the virtual place from where people interested in joining were addressed, creating both the group of the volunteers and a crucial infrastructure of the aid practice. The entire group of Info Maite was added to the new chat to populate "Attack" which immediately became the backbone of Superbergamo.

Excerpt 2

06/03/20, 15:19 - Valentina ❤️ created the group "😌 Attack 😌🤙"

06/03/20, 15:19 - Valentina ❤️ has added the participants at Info Maite chat

06/03/20, 15:20 - Roberto: How beautiful are the spontaneous initiatives 😬

06/03/20, 15:20 - Valentina ❤️: Hello! We have made an announcement in the social media and activate the number. Let's see who is calling! After that, we will coordinate ourselves. Go, go with mask and hands sanitiser

06/03/20, 15:21 - Valentina ❤️: Let's see if there are others willing [to join us]

06/03/20, 15:21 - Maddalena: 🤘

06/03/20, 15:21 - Chiara: 💪💪

06/03/20, 15:21 - Piter: I'm going to get things today

06/03/20, 15:22 - Piter: make us administrators

06/03/20, 15:22 - Valentina ❤️: Piter if you bring me the SIM card I have the mobile phone for the calls

06/03/20, 15:23 - Valentina ❤️: We'll act as a control center like Power Rangers: "There is an elderly woman in the street X who needs you! She needs to pick up the Voltaren at the pharmacy!!!! Go go goo"

(Extract from Attack chat).

The new WhatsApp chat "Attack" gathered together the volunteers orientated toward a common goal, and also contributed to the generation of a shared sense of identity and imagination. As the excerpt shows, Valentina is promoting the idea of activating a control center to remotely coordinate the action of several volunteers willing to intervene. A coordination center able to organize the intervention of several superheroes (like power rangers) distributed across the neighborhood and the city willing to help people in need. The name attributed to the chat "Attack" invokes the motto of a group of superheroes who attack the monsters who are threatening the fragile population. The image of "superheroes" helps to create a shared cognitive comprehension of the situation and elicit an affective state, a sense of mission that framed and gave fuel to the collective action. Moreover, the new chat was the channel where communications about the groceries ran from, and through which the aid practice's practical details were further negotiated.

The initial idea of the service configuration appeared quite simple: Valentina would collect every request by phone and ask by "Attack" chat the availability of a volunteer for each delivery. However, the group soon realized that adjustments were required to manage the flow of the conversations within the group. Nevertheless, in this phase, the Attack chat played a crucial role in the creation of the group. Before "Attack" the people willing to set up and play an active role in the service was only a small group. However, during the same afternoon, the chat generated further traction with volunteers who did not know the association Maite but wanted to participate in the initiative having seen the communication on Facebook. At this point, the Superbergamo group—although this name emerged only later— surfaced. As can be seen from Piter's next comment, the chat Info Maite, running in parallel with the rhythm of interactions in Facebook, increased the interest from volunteers willing to join the initiative in impressive numbers, which surprised Maite's management team.

Excerpt 3

[…]
06/03/20, 15:24 - Piter: let's get it started and then let's figure out how to do it
06/03/20, 15:24 - Gioacchino: let's see, come on
06/03/20, 15:25 - Piter: Frankly, I wasn't expecting 200 interactions in 30 minutes
06/03/20, 15:25 - Gioacchino: like a Facebook gang bang
(Extract from Info Maite chat)

In just a few hours the Maite team had discussed the initiative's practicalities, opened a WhatsApp chat "Attack", and generated a common course of action toward helping as many people as possible in the city of Bergamo and the wider province. Indeed, the interesting element was the initiative's rapid impact. Initially conceived as an extension to the help that neighbors and acquaintances in a locality might give to each other, the initial message posted on Facebook prompted the generation of a help service that was very different. While the physical announcements posted on the walls on in the upper town attracted many calls from the public living in that area, the post on Facebook

(reposted around eight hundred times) reached a significantly greater audience.

While the paper announcements were posted within the local area, the Facebook post made the announcement visible to thousands of people living within and outside the city of Bergamo. In a Latourian sense, it is clear that in contrast to the paper announcements, Facebook post acted as a mediator, changing the very nature of the initiative and influencing the group. People commented on the initiative, and also asked to join it. It is possible to see this particular shift manifesting itself when the new chat "Attack" becomes (at 15.39) conceptualized as an initiative not limited to the upper town.

Excerpt 4

[…]
06/03/20, 15:37 - Valentina ❤️: The group has just been born, members are being added as soon as we are, we give information on what to do 💪
06/03/20, 15:39 - Piter: we take into account the fact that we have decided NOT to indicate a specific territory. Mainly upper town. But we understand as requests arrive.
06/03/20, 15:40 - Piter: Because it is true that many are from the upper city and the Maite as well, but if someone is from other areas, they can also take care of it... like Giorgio down city center, Maddalena area Moterosso, Roberto Loreto neighborhood, etc. etc.
06/03/20, 15:40 - Piter: we'll understand it little by little.
06/03/20, 15:41 - Valentina ❤️: In the meantime, thanks to everyone for the availability!!! ❤️
(Extract from Attack chat, emphasis in the original.)

The excerpts show how the Maite team gained the confidence that they could rely on several volunteers from the public. This created the space to imagine a more ambitious enterprise for the entire city and potentially something greater than that. Thus, the constitution and distributional capacity of the group, generated by Facebook and supported by the WhatsApp chat Attack, become crucial to the ability of the group to cover a significantly more expansive area of the city.

When we say that Facebook and WhatsApp played a role in shaping the practice, we are not making a deterministic claim. Rather, we are accounting for how social media—like all the other human and non-human actors—encourages, allows, permits, renders possible, blocks, prevents, or forbids action that might constitute the practice of help. In addition, we are interested in showing the chain of mediators (including Facebook and WhatsApp group chats) that make things, do other things, than what could have been foreseen (Latour, 2005). The example of how the scope of the area served by the group was widened, is informative in this respect, illustrating how Facebook played a significant role.

The capacity to keep the definition of the new practice open (by whom, from whom, and where), while the service was in its initial stages, was one of the key constructive features of Superbergamo. This characteristic emerged from the interaction

with Facebook and some of the features of the WhatsApp chat facility. As people joining the Attack chat were located in a different part of the city and province, the new entity (Superbergamo) remained open, fluctuant and unfixed, as did the aid practice. This was also apparent in the distribution of roles, and that way, "who does what" was defined and redefined as the activity progressed. As the following excerpt illustrates, the distribution of the areas of intervention was initially negotiated in the chat:

Excerpt 5

[...] 06/03/20, 15:50 - Valentina 🖤 has added Eleonora
06/03/20, 15:53 - Claudio: I honestly have difficulties for Città Alta
06/03/20, 15:53 - Claudio: I'm from Borgo Palazzo, I make myself available for this area + city center
06/03/20, 15:54 - Gioacchino: welcome to Sofia and Emma!! we see that phone calls arrive. In case it helps, I can also cover Santa Caterina and Redona neighborhoods as I go through them.
06/03/20, 15:54 - Valentina ❤️: We are from different areas, based on where you are more comfortable you make yourself available. Thanks!
06/03/20, 15:55 - Piter: If you want, print and stick in your area that you know you can cover
06/03/20, 15:55 - Valentina ❤️ has added Luca
06/03/20, 15:57 - Claudio: Perfect. Thanks for the clarification Piter!
06/03/20, 15:58 - Piter: particular news for a particular situation. If you have ways of making those who can serve them turn around, go ahead and do it. Here is the text [image of the text of the announcement (see excerpt 1)]
06/03/20, 15:58 - Valentina ❤️: It will work like this: based on the call, we will write here who needs, what and where, and the first available person, with mask and hands sanitiser, goes.
(Extract from Attack chat)

The first thing to note here, is how the group emerged and coalesced around the idea of future action. The collective action is thus both a result of the group, and simultaneously the driving force that created the group itself. The creation of the group, within the WhatsApp chat "Attack" and the design of the aid practice are two elements (or rather two perspectives) of the same entanglement that emerged from the inscriptions used by the Maite team to launch the idea of the service: Info Maite chat, Facebook posts, and Attack group chat. It is the technological infrastructure (the chats info Maite and Attack, and Facebook posts) which sustains the group's initial communication and goes on to shape both the practice and the group of volunteers willing to participate. This is what allows the service to acquire the particular form that it did.

Using Group Chats to Coordinate Activities a Distance

Superbergamo involved almost 300 volunteers all of whom were coordinated only by a few tools and rules. When the activity began on 6th of March, a single phone number received requests from the population and allocated—using Attack chat—deliveries to dozens (later hundreds) of volunteer riders. Riders worked autonomously, picking up groceries based on the information received by Valentina (and others who took a turn on the phone) and delivering them to the elderly.

Excerpt 6

[...] 10/03/20, 09:27 - Call center: * Tomorrow morning * who can go to get a prescription from a doctor and take medicine at the pharmacy for an elderly lady in Saint Bernardino street?
10/03/20, 09:29 - Nicola: Me
10/03/20, 09:30 - Valentina ❤️: I'll give you info in private
(Extract from Attack chat)

During the initial days, the coordination of the delivery worked as previously announced in the WhatsApp chat "Attack". After each phone call was received, Valentina sent a message to the chat "Attack" with basic information about the service and the area of the delivery (using the phone number of the call center). It followed a dyadic WhatsApp interaction with the specific details of the delivery by Valentina with the first rider who volunteered for the delivery. After receiving the precise details, the rider-volunteer then carried out the task and messaged Valentina when the pick-up was accomplished communicating the expense. Using the call center phone, Valentina would then call back the user, usually an older adult, communicating the name of the rider and the money she/he needs to prepare.

The phases of the task, characterized by the confirmation of the pickup, the communication of the rider's name, and the amount of money the caller has to prepare allowed the delivery, which was all undertaken with the overarching remit to reduce the physical exchanges with the elderly to the minimum. The aid practice was based on one phone number, a call center receptionist (Valentina), some volunteers, a group WhatsApp chat (Attack), a dyadic channel of interaction (using WhatsApp), sanitisers, masks, and permissions to circulate during the lockdown provided by the local authorities. The only additional permission required was the appropriate documentation to authorize proxy collection of medical prescriptions by volunteers.

However, this simple organization quickly faced several problems. On the 7th and the 10th of March, two of the local newspapers wrote about the initiative and published the phone number for the service. As a result, requests for help dramatically increased, and so did the volunteers who joined the chat Attack. Thus, in a very short time, the service grew exponentially. As Valentina said in an interview: "As soon as the news of the service got around, we got to a point where the phone never stopped ringing. Literally from when it turned on in the morning to when it turned off in the evening".

With the continuous arrival of new members, the Attack chat became challenging to manage, and the coordination of the volunteers available for the deliveries became especially critical. In addition, the messages in the chat were so many that it was difficult to allocate and manage the deliveries. In an attempt to limit the confusion, the WhatsApp chat became more structured, incorporating different levels of use. With a few changes in the

TABLE 1 | Examples of the details in the Excel file. The call center operator fills the pink area while the logistics operator fills the green. All the names, addresses, and numbers are fictional.

CALL CENTER OPERATOR						LOGISTICS OPERATOR		
Telephone	Source	Name	Town	Address	Service	Rider	Date	Amount
+39 *** *******	Phone call	Rossi Maria	Bergamo	Via Quarenghi 66	Groceries	Luca	1/4/2020	28,71 €
+39 *** *******	Phone call	Bianchi Giacomo	Bergamo	Via Donizzetti 84	Pharmacy	Serena	1/4/2020	105,99 €
+39 *** *******	WhatsApp	Verdi Giovanni	Bergamo	Piazza Sant'Anna 57	Groceries	Marco	1/4/2020	47,65 €

settings, the "Attack" group chat shifted from a many-to-many group chat model, to one where replies became specific rather than general responses to everyone.

Excerpt 7

[...] 10/03/20, 20:15 - Piter: Hi. As a matter of practical management of the group, we only set messages from administrators. We are more than 50 and we risk losing the important things. Therefore [the practice will run as follow]:
1- @call center phone number asks for availability
2- privately answer @ call center [offering your availability]
3- Any questions * not related to the service * ask me privately.
Let's try this. Having many groups is a problem for the call center.
[Extract from Attack chat]

The new settings worked well for a few days. All human and non-human actors were aligned in a stabilized network that provided the practice of delivering groceries and other needs for the elderly. Nevertheless, the increased calls constituted a considerable amount of work for the volunteer operator at the call center. Indeed, despite the new rules and chat settings, the call center (promptly organized in daily shifts) was overwhelmed by requests and the consequent activities required to coordinate the practice of aid. The network produced a stable practice, but the centralization of coordination tasks in the hand of a single volunteer who was required to physically manage a single, publicly available phone, began to shows significant limitations.

After a few days of serious difficulties, a new configuration was developed to distribute the workloads of the call center more effectively. The old, stabilized practice was reconfigured to further distribute the coordination activity. To this end, other actors join the network. A new phone number was activated, and a new role for another volunteer was created. Thanks to an Excel document shared in Google Drive, the coordination center was divided into two sections: the original call center operator received the calls from the public, while a new telephone (with the corresponding role of "logistics operator") began to manage all dyadic communications with the volunteers (**Table 1**).

With the new configuration, the call center operator received the request, and instead of writing it in the Attack chat, she/he puts the details in a shared excel file (pink cells).

Another volunteer, the logistics operator, read the requests in Excel and communicated with the volunteers. Thus, the

logistics operator inputs a few details in Attack chat including the area of delivery. The first availability received by a volunteer is then published in the Attack chat to show the allocation of the shipping.

Excerpt 9

[...] 01/04/20, 08:39 – Logistics call center: grocery Serassi street?
01/04/20, 08:47 – Logistics call center: Silvia
01/04/20, 09:01 – Logistics call center: grocery Malpensata neighbor?
01/04/20, 09:08 – Logistics call center: Luciano
01/04/20, 09:43 – Logistics call center: grocery Broseta street area?
01/04/20, 09:44 – Logistics call center: Rachele
01/04/20, 09:46 – Logistics call center: grocery Montegrappa street?
01/04/20, 09:49 – Logistics call center: Matteo
01/04/20, 09:53 – Logistics call center: pharmacy near Borgo Santa Caterina? [Extract from Attack chat].

After allocating the shipping, the logistic operator activated a dyadic communication with the volunteer with the necessary details. Subsequently to the pickup, the logistics operator filled the purple part of the spreadsheet, allowing the call center operator to communicate to the user that the shipping is on its way, the name of the volunteer involved, and the invoice amount.

The new, and more complex, network that involved additional human and non-human actors sustained a new aid practice by being able to respond to unforeseen pressures and continue to provide an essential service. With the reorganization of the call center, a new coordination tool in the form of a shared Excel file, allowed the call center to be split into specialized tasks so as to manage the different flow of interactions (external by the call center operator and internal by the logistics operator) more effectively and permit the service to grow.

A new network of actors made by two phone numbers, two human operators, the Excel file, the real time-sharing document service, the "Attack" WhatsApp chat, the WhatsApp for the dyadic interactions and the 300 volunteers who participated in the shipping, gave rise to a new sociomaterial practice that was able to manage the high numbers of calls without "wearing out" the human actor.

CONCLUSIONS

The case of Superbergamo shows the importance of social media and group chat apps in spontaneous practices of aid organized by volunteers during a crisis. The events that unfolded will reverberate with various streams of literature that focus on social media, and other communication technologies, in considering public responses to emergency situations (see Palen and Hughes, 2018). In addition, our reflection about the case may also be relevant for scholars interested in the role of group chat apps in coordinating actions in crisis response. Furthermore, using ANT, our analysis suggests a more nuanced level of complexity concerning the role of technology in aid practices. Our analysis shows how social media and other communication technologies do not always play a fixed role within an aid practice. Instead, they are part of a heterogenous network that enables and/or supports the aid action, commonly by changing their role in relation to other network's modifications. This means that group chat apps and social media do not have specific fixed roles, rather they embody potentialities that can allow, encourage, prevent, afford, influence or change a course of action.

The analysis of Superbergamo illustrates how the different roles played by group chats and social media change and realign themselves to the unpredictable variations of other elements in the network. For example, we highlighted the specific configurations of relationships between human and non-human actors that combined to facilitate the emergence of the group. The Facebook post worked to attract the volunteers, but only the features of "Attack" as a group chat provided the infrastructure for the group to gather and begin to act. Moreover, the chat "Attack" worked well in allowing the initial gathering but revealed the logistical problems in supporting the allocation of the deliveries. When growing, the group chat needed a different setting (from the initial many to many message structures). Thus, in this case, different settings of the same group chat app changed the way the technology participated in the network, preventing or allowing different uses, thus producing a refinement of the different roles in the practice. Splitting how the flux of interactions were managed into two different roles (call center and logistic operator) meant the inclusion of new actors (a new phone and phone number, a new volunteer role, an excel file, a platform for sharing the updates of the sheet—Google drive), which changed the aid practice. In this respect, every human and non-human actor within the network allows, renders possible, permits, sustains, influences and significantly, can change over time, depending on modifications that occur in the network. For example, "Attack"

as many to many group-chat was highly efficient with just a few participants but struggled to cope with a population of more than fifty volunteers.

We also noted how the same inscription—the initial announcement—when posted around the city and the local neighborhood elicited a very different type of response when the same inscription was posted on Facebook. The consequence of this was the necessity for a change to the scope of the service. Following Latour (1999, 2005) and Hennion (2003), we can enrich the discussion about the role technology plays in crisis response, by introducing the concept of mediation. Mediators are not mere carriers of work; they enrich, transform, and create it. For example, a musical instrument mediates as well as constitutes music. The activity is continuously transformed and re-created through each passage of mediation. Hence, the importance of mapping the chain of the mediations behind a practice, in this case an aid practice, in respect of which we have highlighted how the aid practice, and the group itself, were the emerging products of a particular configuration of a network of human and non-human actors and their relationships.

Our consideration of this case shows the importance of using a situated analysis for the study of groups. We believe that the theoretical and methodological tools offered by Actor-Network Theory offer the opportunity to study groups in situations to better explain each actor's role in the practice. Conceiving the organization of collective action as that which emerges *in situ* demands a reconstruction of the dynamics of interactions to see what each actor brings to the process, and how the practice changes according to the modification of the network.

DATA AVAILABILITY STATEMENT

The datasets presented in this article are not readily available because of privacy reasons.

ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

Both authors listed have made a substantial, direct, and intellectual contribution to the work and approved it for publication.

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