Philosophical perspectives on qualitative psychological and social science research

Edited by
Paul M. W. Hackett, Gillie Gabay and Christopher Hayre

Published in
Frontiers in Psychology

About Frontiers

Frontiers is more than just an open access publisher of scholarly articles: it is a pioneering approach to the world of academia, radically improving the way scholarly research is managed. The grand vision of Frontiers is a world where all people have an equal opportunity to seek, share and generate knowledge. Frontiers provides immediate and permanent online open access to all its publications, but this alone is not enough to realize our grand goals.

Frontiers journal series

The Frontiers journal series is a multi-tier and interdisciplinary set of open-access, online journals, promising a paradigm shift from the current review, selection and dissemination processes in academic publishing. All Frontiers journals are driven by researchers for researchers; therefore, they constitute a service to the scholarly community. At the same time, the *Frontiers journal series* operates on a revolutionary invention, the tiered publishing system, initially addressing specific communities of scholars, and gradually climbing up to broader public understanding, thus serving the interests of the lay society, too.

Dedication to quality

Each Frontiers article is a landmark of the highest quality, thanks to genuinely collaborative interactions between authors and review editors, who include some of the world's best academicians. Research must be certified by peers before entering a stream of knowledge that may eventually reach the public - and shape society; therefore, Frontiers only applies the most rigorous and unbiased reviews. Frontiers revolutionizes research publishing by freely delivering the most outstanding research, evaluated with no bias from both the academic and social point of view. By applying the most advanced information technologies, Frontiers is catapulting scholarly publishing into a new generation.

What are Frontiers Research Topics?

Frontiers Research Topics are very popular trademarks of the *Frontiers journals series*: they are collections of at least ten articles, all centered on a particular subject. With their unique mix of varied contributions from Original Research to Review Articles, Frontiers Research Topics unify the most influential researchers, the latest key findings and historical advances in a hot research area.

Find out more on how to host your own Frontiers Research Topic or contribute to one as an author by contacting the Frontiers editorial office: frontiersin.org/about/contact

Philosophical perspectives on qualitative psychological and social science research

Topic editors

Paul M. W. Hackett — University of Suffolk, United Kingdom
Gillie Gabay — Achva Academic College, Israel
Christopher Hayre — Charles Sturt University, Australia

Citation

Table of contents

Editorial: Philosophical perspectives on qualitative psychological and social science research

Gillie Gabay[1]*, Paul M. W. Hackett[2,3,4]* and Christopher Hayre[5]

[1]Achva Academic College, Arugot, Israel, [2]University of Wales Trinity Saint David, Carmarthen, United Kingdom, [3]School of Communication, University of Suffolk, Ipswich, United Kingdom, [4]Nnamdi Azikiwe University, Awka, Nigeria, [5]University of Exeter, Exeter, United Kingdom

Editorial on the Research Topic
Philosophical perspectives on qualitative psychological and social science research

We have written this editorial commentary as an endpoint to what we consider to be a successful Research Topic: *"Philosophical perspectives on qualitative psychological and social science research."* Our first impetus in proposing the topic was to examine a plethora of perspectives of research within psychology and social sciences. Issues associated with philosophical perspectives on qualitative psychological and social science research related to the nature of the data, its collection, the types of inquiries, the form of questions, the rigor and other issues associated with information analysis, the positionality of the researcher, and the processes required to yield meaningful, trustworthy results, as well as reflexivity. Our second guiding intention was to adopt a broad philosophical approach, one of many that a researcher may consider, to allow for the exploration of the nature of the research process itself and how this process influences the development of knowledge from research findings across a broad range of approaches and methodologies.

A key feature of this Research Topic is how various methodologies contribute to the current knowledge and inform the literature of psychology and social science research. The authors of this Research Topic have presented fascinating, diverse, theoretical concepts, methodologies, and philosophies, carrying similarities and differences among them as expressions of their research philosophy.

Highlights from the article collection

In this editorial, we do not simply want to repeat the abstracts that can be found for each contribution; rather, we have provided a brief reflection of some of the numerous highlights that are present in the articles included in this Research Topic. We first wish to mention the breadth of perspectives of the articles included in the Research Topic, which is demonstrated in many ways. For example, articles on this topic embody many different ways

to approach qualitative social science research, namely, facet theory,[1] bricolage,[2] life stories, and psychological phenomenology.[3] Furthermore, the inquiries are of varying designs such as cross-sectional, longitudinal, intervention studies, and a review. These articles highlight individual, communal, organizational, and contextual factors that affect the daily lives of children and adults from Canada, Chile, England, Israel, Germany, and South China. The highlights of the seven articles provide a sense of their themes and novel contributions.

Gordley-Smith reviews Hackett's book on the fundamentals of facet theory and mapping sentences. Hackett expanded facet theory from quantitative methods into qualitative approaches. The mapping sentences[4] reviewed the time period from the field of avian cognitive behavior (Hackett, 2019) and prison officers' occupational stress (Small and Hackett, 2023) to the Black Lives Matter movement (Hackett and Schwarzenbach, 2020). Furthermore, adopting facet theory and the mapping sentence, Rabenu and Shkoler opened a hatch to their ongoing research into the area of consumer psychology research and the marketing of higher education. The authors delved into concepts under investigation and defined them systematically, comprehensively, and parsimoniously.

López-Montero et al. followed the trend that supports the term "life story" instead of "life history" to investigate human experiences. Li and Liu also investigated human experiences by comparing structures using psychological phenomenology within pedagogic neoliberalism.

Ben-Asher presented the virtue of the Bricolage (see text footnote 2), following the recommendation to regard the bricolage methodology as an analytical alternative to methodological templates. This approach has the potential to improve the way researchers understand, formulate, and implement methodological choices in their research (Pratt et al., 2022).

Martínez-Pernía et al. studied the empathic experience of pain using an experimental phenomenological method by analyzing videos of sportspersons suffering physical accidents while practicing extreme sports.

They demonstrated how phenomenological data (see text footnote 3) may contribute to comprehending empathy for pain in social neuroscience. The authors also addressed the phenomenological aspect of the enactive approach to the three dimensions of an embodiment of human consciousness, especially the intersubjective dimension. Finally, Fisher and Refael Fanyo's study (quantitative) examined how the level of communal affiliation affects the perceived authority of elementary school teachers and the involvement of parents.

After briefly considering what we feel are the highlights of the Research Topic, we have in the following section commented on how we believe this Research Topic contributes to the field of research.

Contribution of the Research Topic to the field of research

Articles in this Research Topic are from researchers from around the globe. The inclusion of culturally diverse participants and researchers enriches psychology and social science research. The different perspectives of the researchers and their philosophies provide new methodological insights for the sake of both scientific knowledge and for applied purposes.

As for specific contributions, the two articles on facet theory illustrated that declarative mapping sentences may stimulate cumulative knowledge development and create space for knowledge emergence. Further, Hackett demonstrated how Facet theory and the mapping sentence offer a potentially constructive philosophical basis for understanding daily existence. Rabenu and Shkoler demonstrated how facet theory can be used to define new concepts in a systematic, comprehensive, and yet parsimonious manner.

Since life stories in qualitative methods were thus far studied using a multiplicity of techniques, lacking a clear delimitation, López-Montero et al. unraveled the possible confusion that may be present due to this delimitation and reviewed techniques to study human experiences and innovatively apply bibliometrics to show how the centrality of knowledge transferred from psychology (Neumann, 2015). In addition, studying life stories, Li and Liu used phenomenological psychology (see text footnote 3) to reach the typical essence based on structures derived from each case that can be compared with results from similar studies.

Ben-Asher article on Bricolage, which involves combining resources for a new purpose, illustrated how practices were creatively designed to fit the research, acknowledging that there are many possible ways of conducting high-quality qualitative research.

Martínez-Pernía et al. extended the social cognition research which has been traditionally conducted through self-report, behavioral, and neuroimaging measures to first-person methods based on the phenomenological experience (Giorgi and Palmisano, 2017).

Finally, Fisher and Rafael Fayol's study carries practice implications for formulating policies to improve the school-parent relationship and strengthen the teacher's authority.

---

1 Facet theory is a multi-dimensional research approach from within social science research (Canter, 1985; Hackett, 2021). Facet theory was originally a purely quantitative methodology that considered the totality of the research project from research design, data collection and analysis, and report writing. More recently, it has been extended into the realm of qualitative research.

2 Bricolage is a qualitative critical research approach that considers research phenomena from multiple theoretical points of view. It is a multi-perspectival, multi-theoretical, and multi-methodological approach that has its roots in practices that are eclectic and employ an emergent design. Moreover, bricolage is characterized by its flexibility and plurality.

3 Psychological phenomenology is a psychological research approach that employs phenomenological, hermeneutic, and existential philosophies in its attempts to elucidate the structures of meaning and the lived experience of research participants in a sensical manner.

4 Mapping sentences are the major components of facet theory. A mapping sentence is a sentence written in ordinary prose that contains a clear specification of a research project, including participants, content variables and/or areas of research interest, and pertinent background characteristics. In quantitative research, the mapping sentence also contains a specification of the outcome measures, but this is not present in qualitative research that uses a declarative mapping sentence (Hackett, 2020; Hackett and Li, 2022).

Concluding thoughts and looking forward

The original goal set by the editors of this Research Topic was to foster an interdisciplinary exchange of some of the research methodologies and philosophies that are employed by researchers to comprehend various phenomena, events, and states of affairs to allow the creation of new knowledge. The breadth of the studies in this Research Topic, including studies by researchers from the fields of education, marketing, consumer psychology, neuroscience, social cognition, and psychology, exceeded our expectations.

The variety of perspectives and the use of diverse methodologies and philosophies are vital to working across fields in the thriving, rich field of psychology and social sciences research. Future studies may continue to develop additional ways to conduct their research using various techniques from within different disciplines and by applying different methodologies. Furthermore, continued international collaborations can establish new methodologies which may lead to further development in these disciplines, based on multidisciplinary/cross-disciplinary and multi-cultural/cross-cultural evidence. Thus, this Research Topic presents contemporary scholarship which provides evidence that illustrates what can be learned from a plethora of studies focusing on the philosophical bases and methods employed in research conducted in psychology and the social sciences.

Author contributions

GG wrote the initial draft of this editorial. PH made a significant contribution to the editorial. CH edited and contributed to the editorial. All authors contributed to the article and approved the submitted version.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

Canter, D. (1985). *Facet Theory: Approaches to Social Research*. New York: Springer Verlag.

Giorgi, S., and Palmisano, S. (2017). Sober intoxication: Institutional contradictions and identity work in the everyday life of four religious communities in Italy. *Organizat. Stud.* 38, 795–819. doi: 10.1177/0170840616685355

Hackett, P. (2019). *The Complexity of Bird Behavior: A facet Theory Approach*. Cham: Springer.

Hackett, P. M. W. (2020). *Declarative Mapping Sentences in Qualitative Research: Theoretical, Linguistic, and Applied Usages*. London: Routledge.

Hackett, P. M. W. (2021). *Facet Theory and the Mapping Sentence: Evolving Philosophy, Use and Declarative Applications, (second, revised and enlarged edition)*. Basingstoke: Palgrave McMillan Publishers.

Hackett, P. M. W., and Li, C. (2022). *Using Declarative Mapping Sentences in Psychological Research: Applying Facet Theory in Multi-Componential Critical Analyses of Female Representation in Science Fiction Film and Television*. London: Routledge.

Hackett, P. M. W., and Schwarzenbach, J. B. (2020). "Black lives matter: birdwatching in central park and the murder of george floyd," in *Handbook of Ethnography in Healthcare Research*, eds Hackett, P. M. W., and Hayre, C. (London: Routledge), 513–521.

Neumann, DL, Chan, RC, Boyle, GJ, Wang, Y, and Westbury, HR. (2015). Measures of empathy: Self-report, behavioral, and neuroscientific approaches. *Measur. Personal. Soc. Psychologic. Construct*. 1, 257–289. doi: 10.1016/B978-0-12-386915-9.00010-3

Pratt, M. G., Sonenshein, S., and Feldman, M. S. (2022). Moving beyond templates: a bricolage approach to conducting trustworthy qualitative research. *Organization. Res. Methods*. 25, 211–238. doi: 10.1177/1094428120927466

Small, L., and Hackett, P. M. W. (2023). *Offender Rehabilitation Programmes: The Role of the Prison Officer*. London: Routledge.

Parents' Perceptions of Teachers' Authority and Parental Involvement: The Impact of Communality

Yael Fisher[1]* and Ravit Refael Fanyo[2]

[1] *Hemdat Academic College, Netivot, Israel,* [2] *Achva Academic College, Arugot, Israel*

This study aimed to examine how the level of communality (communal affiliation) affects parents' perception of children attending public elementary schools, the concept of teacher authority, and the concept of parental involvement. The study population consisted of 300 parents living in various parts of Israel who agreed to complete a self-reporting anonymous questionnaire. The questionnaire comprised three subsections, two of which were based on previous studies: Scale of parents' perception of "parental involvement," which included 44 items, Cronbach's alpha value was 0.90.; The Scale of parents' perceptions of the concept of "Teacher's Authority," which included 25 items, Cronbach's alpha value was 0.79; and one was composed primarily for the current study, the Scale of parents' perception of "Communality Level" which included 19 items, Cronbach's alpha value was 0.88. The findings were analyzed using structural equation models (SEM). Applying these measures to the current study rendered the following results: RMSEA = 0.007, TLI = 0.995, CFI = 0.99, NFI = 0.904, df = 16, χ^2 = 16.266, p = 0.435. Hence, the value of 1.01 ($\frac{\chi^2}{df}$) < 3, the TLI and CFI > 0.95. The research findings indicated that a high level of communality (communal affiliation) among parents predicted high levels of perceived teachers' authority (β = 0.27) and parental involvement (β = 0.30). By contrast, it was also found that living in the same residential characteristics as the teachers predicted low levels of both perceived teacher authority (β = −0.18) and parental involvement (β = −0.20). As regards the theoretical aspects, it adds a new layer to educational research about the variables that affect perceptions of teacher authority, an issue that has received little attention in the research literature. In terms of its practical applications, the model can help education systems in general and schools, in particular, to formulate policies and take steps to improve the ever-important relationship between the school and the parents. Furthermore, the model clarifies our understanding of and ways to strengthen the teacher's authority.

Keywords: teachers' authority, parental involvement, communality, elementary schools, SEM

A REVIEW OF THE LITERATURE

The Teacher's Authority

"Authority" refers to the likelihood that one will be obeyed by others voluntarily. It indicates the right of such a person to give commands and teach; it also depends significantly on the legitimacy granted by others to the authority figure. In other words, authority is the connection between commands and obedience, which is based on the leader's legitimacy and the voluntary obedience

of the followers. This relationship between the two parties is grounded in a moral order, including common goals, values, beliefs, and norms (Chafi et al., 2016).

Authority is affected by ethnicity, social status, and political and cultural contexts (Pace, 2003). The attitude toward authority is a cultural characteristic and indicates how members of a particular culture emphasize equality vs. hierarchy. Members of a society with a low degree of obedience to authority are typically independent, free, and aspire to equality between the power holders and the others. In cultures with a high degree of obedience to authority, members are typically conformists and recognize the legitimacy of inequality and the implicit struggle between power holders and those without (Tubin and Leese, 2013).

In education, authority refers to the relationship between teachers and students as a hierarchical relationship between unequal parties who participate in the school-based educational endeavor, wherein one party (the authority figure) determines a range of actions or knowledge for the other party (the abider), who may follow through or refuse to act as indicated by the authority figure. This relationship runs the gamut between making demands on students and creating emotional ties with them to encourage learning. Teachers must convince students to cooperate, and students must agree and be prepared *to* receive what is taught. This relationship includes elements of freedom, power, and legitimacy, which students afford their teachers and which teachers view as inherent *to* their role. These elements can be interlaced in various ways, and their manifestations depend on the character of the school (Pace, 2003; Pace and Hemmings, 2007; Goodman, 2010).

Educational authority is based on teachers' legitimacy and legal role. It is there a legitimate right to educate and teach. It is their responsibility and that of the school to educate students to benefit the schools and society in general.

Furthermore, teachers' authority is based on their knowledge and expertise in the field they teach, their ability to dictate the pace of learning in the classroom, their evaluation of the students, and their ability to maintain discipline. Their authority is also related to their personal life experience, their experience in teaching, their expertise in additional fields, and their belonging to a prestigious, influential, and respected (Wenren, 2014).

Some consider the characteristics of teachers' authority similar to those of parental authority. An authoritative teacher, just like an authoritative parent, combines a high degree of care for one's students, which is expressed in a warm relationship, along with high academic demands and expectations from one's students (Dever and Karabenick, 2011; Risanger Sjursø et al., 2019).

In recent decades, the teacher's authority in the classroom has begun to deteriorate, especially in modern Western societies. In Israel, the deterioration in teachers' authority was greatly affected by one of the noticeable characteristics of Israeli society, namely, a measured rejection of formal authority. As agents of socialization, schools constitute an arena into which these cultural values are implanted (Tubin and Leese, 2013; Noy, 2014; Omer and Maimon, 2019).

Moreover, teachers have lost their authority as knowledge sources. In an era characterized by high accessibility and multiple ways to obtain information, the teacher is no longer a unique source of power on knowledge and information (Raviv et al., 2003). Likewise, integrating electronic and communication technologies into computer-based education, whether in the classroom or through distance learning, further eroded familiar forms of teachers' authority. Furthermore, Students' technological literacy is much higher than their teachers. As a result, students tend to question the authority of their teachers.

We cannot ignore the fact that in the Western world in general and in Israel, parents' increased involvement in the education system and their attitudes toward teachers contribute to the further erosion of teachers' status and authority. In contrast to teachers' total support in the past, legitimate criticism can quickly become inappropriate intervention and completely shatter Students' perception of the teacher's authority and status. Some parents do not consider teachers a pedagogical authority or someone to consult with. More often than not, they share these sentiments with their children (Israeli National Program of Education, 2005; Ben-Peretz, 2009; Gilat and Vangarovitz, 2018). Likewise, written and broadcast media often paint teachers negatively (Noy, 2014).

The perception of teachers' authority is different in countries in the Far East, such as China, South Korea, and Hong Kong. There, the culture is authority-oriented with a clear hierarchical structure, and there is a well-defined hierarchy between teachers and students. Two golden rules guide students in these cultures: the obligation to respect the teacher and the teacher's knowledge and the truth being taught. Undermining or criticizing a teacher's ability is perceived as impolite and unacceptable behavior (Chan and Chan, 2005; Lee and Kim, 2017).

Nowadays, researchers agree that education without authority leads to negative results. It has been shown that children educated in a framework devoid of authority had a low threshold for frustration and a poor self-image; they dropped out of the educational framework and were exposed to numerous risks (Omer, 2018). The other side of this equation demonstrated that teachers' authority positively affected students. As authority figures, the teachers had high expectations and demands of students while exhibiting high warmth and care toward them. In these cases, students demonstrated a higher degree of interest in their studies, attained better academic achievements, and demonstrated lower levels of violence and bullying (Dever and Karabenick, 2011; Risanger Sjursø et al., 2019). Hence, it is not surprising that there has been a growing discourse on rehabilitating teachers' authority.

Some scholars claim that in the postmodern era, we cannot expect that teachers' authority will be restored to them by their position; instead, its rehabilitation can be obtained via other sources and using different approaches in the classroom (Sharmer, 2005; Omer, 2018). One way to restore educational authority is to ensure that students view their teachers as role models to be imitated and seek to internalize the values they represent. To this end, teachers need to be appreciated by their students as skilled professionals who set reasonable and well-founded limits instead of as an outside force that seeks to impose its ways on them. In the dialogue that takes place between

teachers and students as they attempt to clarify disagreements and address reservations, students will have access to their teachers' thoughts and views and thus will be able to appreciate their attitudes and internalize the values and norms underlying the instructions and limits conveyed by their teachers. Likewise, acting as personal role models, practicing and demonstrating the values they wish to inculcate in their students is a path that will help restore and strengthen their authority in the classroom (Amit, 2005).

The professional literature suggests building trust as an alternative to authority. The culture of trust views teachers and students as shareholders instead of the approach according to which the students are the teachers' subjects. In the context of trust, the two parties are mutually dependent and rely on each other to attain their respective goals. When a mutual agreement is viewed by both parties, they find it easier to establish positive interactions and relationships. Building trust between teachers and students can be attained by engaging in joint learning and developing a discursive culture. They will gain in-depth knowledge and understanding of each other (Sharmer, 2005).

Another approach considers the decline in teachers' authority in the context of knowledge authority and addresses the reconstruction of authority from this respect. The teacher's role should help the students attain knowledge on their terms and based on their unique abilities. This pedagogical approach emphasizes that education in this day and age is not limited to transferring knowledge or retaining knowledge. Instead, education no means offering students the opportunity to develop their skills and apply and organize knowledge using effective strategies. Thus, classroom studies should be based on dialogical teaching, guidance, and provision of resources and support for the learners to advance their ability to study independently and prepare them to meet the challenges of the current day and age. In this manner, the teacher's role can be reformulated and redefined to correspond to today's Western society (Levi-Feldman, 2020).

Parental Involvement

In recent decades, the concept of "parental involvement" has been the subject of widespread attention from educators, educational researchers, policymakers, and parents and parent organizations in Israel and throughout the world. Despite the numerous definitions of this concept, there is a broad acceptance that it defines the reciprocal relationships between parents and the educational institution and parents' investment in various resources related to their children's education. Researchers have characterized parental involvement through multiple actions and activities, which can be active or passive, and manifest on two separate planes. One such plane is the organizational level, i.e., parents' activities within the school, which are directly related to the school, such as formulating a school policy, communicating and meeting with teachers, and participating in school activities and workshops. A second plane refers to the level of the individual child, that is, joint activities that parents engage in along with their children within the school and which are related to learning processes, for example listening to children read out loud or supervising homework preparation

(Friedman and Fisher, 2002; Hornby and Lafaele, 2011; Ice and Hoover-Dempsey, 2011; Wilder, 2014; Fisher, 2016).

In Israel, parental involvement developed and was perceived differently from one decade to the next. In the 1990s, there was an additional change in the concept, and the idea of parental involvement became prominent. This process resulted from changes in Israeli society and the transference of power from the central government to the parents and the community (Machter, 2001; Fisher and Friedman, 2009; Fisher, 2010).

Parents have different reasons for becoming involved in their children's schools and study processes. Studies have shown that parents of children of all ages perceived school involvement as part of their role as parents and the responsibility for their children's education. An additional reason is parents' self-efficacy, as they consider themselves capable of helping and advancing their children's studies. Also, children's requests and wishes motivated parents to become involved in an attempt to address their children's needs. A school that welcomes parental involvement also encourages this type of behavior. In Israel, it was found that parental involvement is also the outcome of the financial involvement of parents in funding educational programs. As a result, parents felt that they have the right to act as partners in the more crucial decisions (Barger et al., 2019).

Furthermore, a strengthening of the democratic spirit in society over the *years* emphasized the freedom of individuals *to* select a particular worldview and the educational approach desired for their children. The student contributed *to* the perception that parents should be allowed *to* determine the type of education their children receive at school. *Moreover*, the erosion in teachers' status and the lack of trust felt by the public and parents *toward* the education system led parents *to* become more involved in their children's schools (Hoover-Dempsey et al., 2010; Friedman, 2011; Murray et al., 2014).

Other factors that may either encourage parents to intervene in their children's schools or prevent parents from becoming involved include their awareness of and identification with the school. Identifying with the school's importance and agreeing with its goals and mission, viewing the school as a place to acquire education and knowledge an equal opportunity is a pleasant place, engaging, and challenging, devoid of disciplinary problems. A safe place for the learners –these are all factors that affect the degree of parents' involvement in the schools. Parents who identify strongly with these aspects will likely approve of the school's values and norms and hence opt to become involved and active. By contrast, parents with a low degree of identification with the school are apt to reject the values and norms conveyed by the school to their children and take an oppositional stance. Another factor is parents' awareness of the organizational culture of the school. Parental sensitivity to the dynamics at the school affect the degree of parental involvement in the children's schools; parents' awareness and concern about topics such as curricular contents and teaching approaches, the school's function as an organization, the relationships between teachers and students, and among the students themselves, as well as issues of violence and discipline, create a desire to be informed and, hence, to get involved. A high degree of awareness means expressing interest and paying attention to what goes on at school; the absence of

awareness means apathy and ignorance (Friedman and Fisher, 2002; Fisher and Friedman, 2009).

Another factor that influences parental involvement in schools is related to the family's place of residence. It was found that parents whose children attended rural schools were more involved in their children's schools than were parents of children who attended city schools. Moreover, parental involvement in rural areas may be perceived as more natural. The structure of rural communities, their size, parents' affiliation and relationships with other residents within the community, and their social networks may strengthen the parents' attachment to the school and their involvement. For the most part, the teachers and school principals in rural communities are community members, and people know them from this residential context. As a result, the school staff members typically share the same values and norms as those upheld by their Students' families; they know their families and understand children's apprehensions and difficulties. A better understanding helps for better relationships between the parents and the school and motivates parents to become involved. However, prior acquaintance with Students' families can also lead to prejudices about particular students and become obstacles to parental involvement (Caplan, 1995; Bauch, 2001; Hornby and Witte, 2010; Lasater, 2019).

Notwithstanding the multiple reasons parents have for becoming involved in their children's schools, many factors cause parents to avoid becoming involved in the schools or their children's studies. Such impediments include parents' income and socioeconomic status, life circumstances, and parental availability dictated by job requirements, the number of children, or other familial obligations (Murray et al., 2014; Barg, 2019). Additional obstacles identified through research were negative past experiences with an educational institution and parents' poor sense of self-efficacy regarding their capacity to be helpful. Parents' country of origin, language, culture, and ethnicity has been identified as obstacles to parental involvement in school. Furthermore, factors related to the student, the individual child, can prevent parental involvement. The child's age, disciplinary problems at school, disagreements between parents and teachers about addressing the child's needs, whether related to learning disabilities or exceptional talents, can impair the relationship between the parties (Hornby and Lafaele, 2011).

Community and Communality

"Community" as a concept has numerous definitions and conveys various nuanced meanings. The topic has been studied in the context of anthropology, sociology, and psychology. Despite the multiplicity of definitions, scholars referred to the concept as relating to a group of people whose members have common interests and are involved in social and collective circles (Etzioni, 2000; Lehavi, 2006; Sadan, 2009). The concept of community differentiates between non-territorial and territorial communities. The former describes geographically dispersed groups whose members live among people who do not belong to the same community, for example, a business community, an ethnic community, an academic community, and an online community. The territorial community refers to a community with geographic boundaries, such as a neighborhood in a city or a small town where the population leads a communal lifestyle, conducting joint activities and sharing traditions (Theodori, 2005; Sadan, 2009).

In the current research literature, a "community" is described as a social system that maintains communication and reciprocity in most areas of life. It can be found in any form of settlement. A community is characterized by its social capital, which indicates a complex system of emotional relationships among individuals, defined based on one-to-one interactions and dynamics and complicated connections involving several people.

Another characteristic of a community is its territorial dimension, which enables face-to-face interactions and affects the quality of the relationships, the level of trust, the interchange, and the type of relationships among its members. Community members have an internal collective awareness that distinguishes them from their surroundings. They share values, norms, history, identity, and a commitment to a particular culture while addressing the shared day-to-day concerns. Notwithstanding, the new communities are pluralistic and advocate individualism and freedom combined with mutual responsibility and group commitment (Etzioni, 2000; Theodori, 2005; Lehavi, 2010; Shadmi-Wortman, 2017).

Lehavi (2010) added to the concept of community the term "gating," which refers to the existence of at least one of two components: a formal system for determining who will be allowed to become members of the group and occasionally to decide who may be permitted to leave the group, and a physical boundary that prevents unwanted entities from entering the communal territory and its organizations.

The level of communality is a characteristic that indicates the essence of the community and the psychological aspect of living in this framework. Researchers have claimed that communality is measured in terms of human capital and is related to having a shared sense of identity unique interpersonal relationships among the community members and is affected by the level of trust and reciprocal relations among community members. In other words, it is measured in terms of the willingness of the individuals to act for the benefit of others, their desire to establish close relationships with other members of the community and involve them in their lives (Shadmi-Wortman, 2017). McMillan and Chavis (1986) identified several components of communality: socialization—the degree to which members of the community have a sense of belonging, understand the boundaries of the community, trust in and are willing to invest personally in the community; effect—the degree of cohesiveness in the community, which manifests in the effect that the individual has on the community and the impact the group has on the individuals and their actions; need fulfillment—the degree to which the community helps its members address personal and group needs; a shared emotional connection (Talò et al., 2014).

Studies have found that a high level of communality provides people living in the community with social and psychological resources that positively affect the individual living in it. The community contributes to an increase in the quality of life, improves the personal wellbeing and life satisfaction, helps cope with the stress of life, and even affects the quality of parenting of people in the community (Simons et al., 1997; Talò et al., 2014).

Israel's territorial communities vary in size and functions, and a different collection of characteristics and contents constitutes its communality in any society. We find the traditional kibbutz on one end of the spectrum, which formed an entire community where the group carried out all functions within the exact geographic boundaries. Since 2001, the traditional definition of the kibbutz has changed; it is now referred to as the renewed kibbutz, i.e., in this framework, the property is shared by the group, work is attained on an individual basis, and production, consumerism, and education are shared equally.

In the kibbutz community, solidarity among members is a defining characteristic. At one end of the spectrum of communal life in Israel, one finds the communities where all the necessary life functions occur outside of the community's geographic perimeter. The community serves as the geographic home, where members can be found at night and on weekends, so that essentially, the community serves as a framework for joint cultural events. Thus, addressing the number of functions within the community is the primary way to influence the degree and quality of communality (Lehavi, 2006; Shadmi-Wortman, 2017; Israeli Central Bureau of Statistics, 2020).

Another communal framework is called the "Moshav," where production and marketing are other functions shared by its members and take place within the geographic confines of the community; however, consumption is managed on an individual basis in these communities. Yet another communal framework in Israel is a community settlement, and the settlement is a new type of rural/suburban population. The collaborative aspect is unrelated to work or finances but only living within a close-knit community ("communal settlements"). Some communal settlements function as a cooperative with no rights to agricultural lands. Yet, the members cooperate and are responsible for such functions related to production, consumption, municipality, and society (Lehavi, 2010; Israeli Central Bureau of Statistics, 2020).

In contrast to these communal frameworks, urban populations are characterized by individuality and personal freedom, the absence of kinship or any other emotional or close-knit relationship among the population members, and economic reciprocity. In recent decades, however, some neighborhoods have established themselves as communities to improve their quality of life, address safety issues, protect property value, and improve services to the neighborhood (Lehavi, 2006).

Study Goals, Questions, and Hypotheses

The study aimed to the effect of the level of communality on the way parents of children enrolled in government-funded elementary schools perceive the concepts of teacher authority and parental involvement. From this goal, the following questions were derived:

(1) Will a relationship be found between the level of communality (communal affiliation) expressed by parents' residential characteristics (living in different community frameworks) and their perceptions of parental involvement?

(2) Will a relationship be found between the level of communality (communal affiliation) expressed by parents' residential characteristics (living in different community frameworks) and their perceptions of teacher authority?

The research literature does not indicate that the issue of the relationships between level of communality (communal affiliation) and perceptions of teacher authority and parental involvement has been investigated; hence, many hypotheses presented in the research model (see **Figure 1**) are exploratory.

The Research Hypotheses

(1) The parents' level of communality will predict their perception of both teachers' authority and parental involvement (see H7 and H8 in **Figure 1**). This hypothesis is exploratory because the issue has yet to be studied.

(2) Parents' background variables will predict their perceived level of communality (see H1). This hypothesis is exploratory because the issue has never been studied.

(3) The residential characteristics will predict parents' perceived level of communality (see H1). This hypothesis is exploratory because the issue has never been studied.

(4) Parents' background variables will predict their perceptions of teacher's authority (see H3). In a study by Adetto (2012) a relationship was found between a parent's age and the parent's perception of teacher authority [$F_{(2, 84)} = 5.767$; $p < 0.01$]. Younger parents ($M = 4.13$) perceived teachers' authority to be stronger than did either middle-aged parents ($M = 3.66$), [$t(85) = -2.978$: $P < 0.01$] or parents over age 55 ($M = 3.47$), [$t(85) = -3.834$; $P < 0.01$].

(5) Parents' background variables will predict their perceptions of parental involvement (see H4). In the study by Fisher and Friedman (2009), a relationship was found between the level of parents at the involvement and their gender [$F_{(1, 1,228)} = 7.01$; $p < 0.01$], whereby women ($M = 2.72$) were more involved than men ($M = 2.63$). Another finding from the study was a relationship between parents' level of active involvement and their level of education [$F_{(2, 1,266)} = 6.88$; $p < 0.01$], whereby parents with a higher level of education were found to be more active ($M = 1.24$) than were either parents with a low level ($M = 0.94$) [$t(1,264) = 2.81$; $p < 0.B01$] or those with an intermediate level ($M = 0.98$) [$t(1,264) = -3.01$; $p < 0.01$] level of education.

(6) The residential characteristics will predict parents' perception of teachers' authority (see H5). This hypothesis is exploratory because the issue has never been studied.

(7) The residential characteristics will predict parents' perception of parental involvement (see H6). Although this was not directly studied regarding parental involvement, in Friedman and Fisher (2002) study, a relationship was found between parents' residential framework and the extent to which they were able to identify with the school's pedagogies, such that urban parents $M = 2.91$ agreed with the school's pedagogical approach more strongly than did rural parents ($M = 2.68$) [$F_{(1, 197)} = 2.82$; $p < 0.05$].
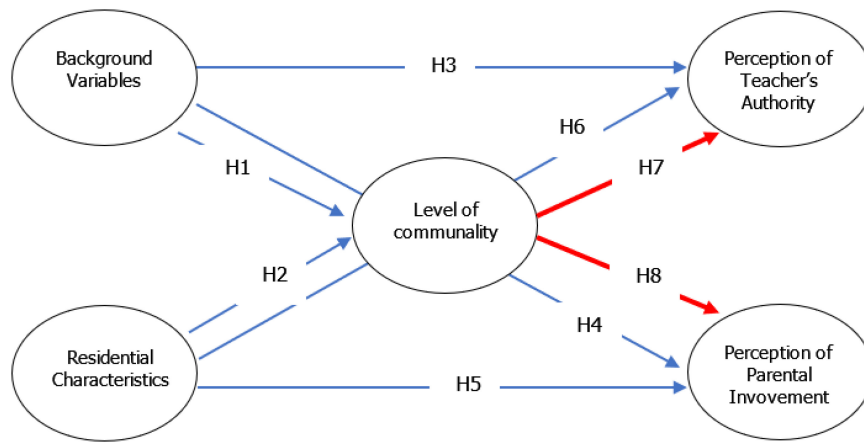
FIGURE 1 | Conceptual framework.

As noted in the current study, agreeing with the school's academic and pedagogical goals and mission is an essential element in parents' perception of parental involvement.

METHODOLOGY AND METHODS

Sample

The study population comprised 300 parents of children attending public elementary schools in grades one through six.

Participants' Characteristics

The majority of teachers, 83.3% ($n = 250$), were female and 16.7% ($n = 50$) were male; In total, 24% ($n = 72$) of the parents were between ages 30 and 39, 69% (207) were between the ages of 40 and 49, 7% (21) were of age 50 or older; 43.3% (130) of the parents held an undergraduate degree, 39.3% (118) held a Master's degree, 4.7% (14) had a Ph.D. degree, and 12.7% (38) of the participants marked their education as "other."; 4.3% (13) of the parents were unemployed (homemakers or retirees), 2.3% (7) were seeking employment, 13.3% (40) were business owners or freelancers, and 80% (240) were salaried employees; 2.3% (7) of the parents had one child, 22.7% (68) had two children, 54.7% (164) had three children, 17.7% (53) had four children, and 2.7% (8) of the parents did not indicate the number of children they have; 8.7% (26) of the participants' children were in first grade, 14% (42) had a child in second grade, 15.3% (46) of the parents had a child in third grade, 23% (69) had a child in fourth grade, 21.3% (64) had a child in fifth grade, and 17.7% (53) had a child in the sixth grade; 10.3% (31) of the participants were living in communal settlements, 14.3% (43) were living on a Moshav, 36% (108) resided in cities, and 39.3 (118) were living on a kibbutz; 28.7% (86) of the participants stated that they lived in the same communal settlement where their child's teacher lived, 71.3% (214) indicated that they did not live in the same communal settlement as their child's teacher; 55.7 (167) stated that they and the child's teacher lived in places governed by the same Regional Council and 44.3% (133) indicated that they did not.

Instruments

The research instrument used in the current study was an anonymous, self-reporting questionnaire that included three subsections. Responses on the three parts were ranked on a Likert Scale ranging from 1 = "completely disagree" to 5 = "strongly agree." The subsection about participants' background variables included nine items: gender, age, education, employment, number of children, grade level of the relevant child, and information about their residential framework.

The first subsection was titled "Attitudes questionnaire regarding parents' relationship with their child's school" (Fisher, 2011), and it contains 44 questions that create a scale of parental involvement ($\alpha = 0.90$). The original questionnaire investigated four variables: improving the school's resources ($\alpha = 0.80$), monitoring school processes ($\alpha = 0.85$), the school's pedagogy ($\alpha = 0.92$), and the school's welfare ($\alpha = 0.70$). The second subsection of the questionnaire was titled "Questionnaire regarding perceptions of the teacher's authority" (Adetto, 2012), "which contained 27 statements that create a scale of perceptions of teacher's authority" ($\alpha = 0.75$). The third subsection of the questionnaire was titled "questionnaire regarding the level of communality of the settlement/neighborhood." It was formulated for the current study based on a questionnaire constructed by the Eshchar Company.[1] This subsection comprises 19 statements that create a scale of communality attributed to a given neighborhood or settlement. The two main variables extracted from the data collected in this subsection were the local authority's role vis-à-vis its population ($\alpha = 0.84$) and the participants' degree of communal involvement ($\alpha = 0.82$). The list of questionnaire items is shown in **Table 1**.

Data Collection and Analysis

The statistical analyses included the distribution of the responses overall; item analysis and correlation; item-total correlation

---

[1] A company with expertise in providing social, community, and welfare services. There is no statistical information regarding this scale. Some of the statements were borrowed from it and others were added, to create the current version.

TABLE 1 | The scale of parents' perception of communality level.

Item no.	Item	Factor I	Factor II
Factor 1: The local authority's roles			
(Eigenvalue = 6.48; Explained Variance = 34.13%; α = 0.84; 8 items)			
88	Residential order and cleanliness	**0.789**	0.080
87	An institution that can address the residents' problems	**0.704**	0.177
85	The common interests between the residents of the locality / neighborhood	**0.699**	0.151
89	Trustworthy leadership	**0.683**	0.177
82	Personal safety of residents	**0.635**	0.083
84	Residents' obedience of laws and regulations	**0.632**	0.221
90	Residents' sense of communality and belonging	**0.538**	0.367
83	Residents' ability to exert influence in the neighborhood/settlement	**0.478**	0.369
Factor 2. : Involvement of residents in the community			
(Eigenvalue = 1.78; Explained Variance = 9.35%; α = 0.82; 11 items)			
73	Engagement in volunteer work for the benefit of the community	0.155	**0.779**
72	Involvement in shared communal activities	0.009	**0.778**
80	Involvement in the neighborhood/settlement's local council	0.299	**0.641**
77	Holding informal gatherings	0.277	**0.615**
79	Offering each other mutual assistance	0.389	**0.566**
76	Being proud of the neighborhood/settlement	0.167	**0.551**
78	Existence of community social networks	0.139	**0.492**
81	Willingness to pay for shared communal activities	0.359	**0.475**
86	All the residents know each other	0.412	**0.442**
75	Publication of a local newsletter	0.027	**0.441**
74	Taking personal responsibility for the neighborhood/settlement's cleanliness	0.356	**0.387**

to exclude items that might be biased or irrelevant to the Scale; and structural equation modeling (SEM), which allows for an examination of complex systems that include numerous variables and relationships among them. Also, the SPSS 21 software and Amos software programs were used to analyze structural equations, which included confirmatory factor analysis (CFA), exploratory factor analysis (EFA), and path analysis. This approach renders models that are more precise than those achieved using traditional variance analysis or multivariable regressions and thus allows for better insight into the causal relationships and the size of the effect of the model's variables (Ullman and Bentler, 2013).

The Research Procedure

The research was conducted throughout the 2020–2021 academic year. In the first stage, the research instrument was formulated as a combination of two scales, namely, parental involvement and parental authority, which had been constructed for earlier studies. The communality scale was based on the Eshchar Company's Construction, which had yet to be used in research. In the second stage, the questionnaires were distributed to a select sample. Initially, the plan was to distribute printed and online questionnaires using social media. Still, with the Corona

pandemic outbreak and the college's closure in March 2020, questionnaires were distributed solely online through social media and parent groups from various towns and settlements. The questionnaires and data gathering were distributed between March and November 2020. Statistical analyses were conducted in December 2020 and January 2021. The research report was written between February and May 2021.

Adhering to the Rules of Ethics

This study used an anonymous self-reported questionnaire. No identifying data were collected, and the preliminary letter informed potential participants that they were in no way obligated to complete the questionnaire or to provide identifying details. All data were collected solely for the current study and were not shared with any party outside the research team members. The findings are published in a manner that does not disclose participants' identities.

RESULTS

The Parental Involvement Scale

For the parental involvement scale, which included 44 items, Cronbach's alpha value was 0.90. The Scale rendered four variables, thus matching the structure of the original Scale (Fisher, 2011). Internal reliability testing excluded one item from the original Scale (item 3: "freedom to choose the school for child's enrollment"). **Table 2** presents the distribution of items per variable and the loading for each item.

The Teacher Authority Scale

For the parents' perceptions of teacher authority scale, which included 25 items, Cronbach's alpha value was 0.79. Internal reliability testing led to the exclusion of two items from the original Adetto (2012) scale (item number 57: "teachers should always let students decide for themselves without offering too much guidance"; item 62: "teachers should never think that students must obey rules and norms of behavior only because an authority figure instructed them to do so"). The Scale rendered two main variables, as shown in **Table 3**.

The Structural Equation Model

The hypothesis system and the approximate model presented were tested using AMOS software's structural equation analysis (SEM). Structural equations are the most appropriate analysis method for examining a complex phenomenon and analyzing a system of multivariate relationships, as it is presented graphically in one standard model. This method has advantages over other methods since it allows simultaneous examination of regression equations taking into account measurement errors. An overall evaluation of the model was performed to assess the validity of the theoretical model. The degree of suitability of the general theoretical model for the empirical model was examined (Ullman and Bentler, 2013).

Applying these measures to the current study rendered the following results: RMSEA = 0.007, TLI = 0.995, CFI = 0.99, NFI = 0.904, df = 16, χ^2 = 16.266, p = 0.435. Hence, the

TABLE 2 | The scale of parents' perception of "parental involvement."

Item no.	Item content	Factor 1	Factor 2	Factor 3	Factor 4
Factor 1. Monitoring of processes at school *(Eigenvalue = 8.86; Explained Variance = 20.14%; α = 0.87; 15 items)*					
23	Hiring and firing of school principals	**0.808**	0.052	−0.069	0.005
22	Hiring and firing of school teachers	**0.805**	0.052	−0.047	0.058
24	Assigning teachers to the various classes	**0.729**	0.029	−0.093	0.121
21	Presenting a critique of the curricula to the school management team	**0.653**	0.112	0.258	0.053
26	Criticizing of parents in general	**0.611**	−0.059	0.118	0.253
20	Developing curricula	**0.593**	0.181	0.293	−0.092
19	Representation on pedagogical committees	**0.560**	0.159	0.310	−0.089
36	Sharing in decision making	**0.534**	0.014	0.422	−0.176
10	Expressing an opinion regarding Students' workload	**0.507**	0.071	0.157	0.169
8	Visiting the classroom during school hours	**0.496**	0.165	0.145	0.108
9	Visiting the school on a weekly basis	**0.480**	0.228	0.073	0.054
35	Holding meetings with the principal regarding school-wide issues	**0.430**	0.217	0.397	−0.247
44	Maintaining weekly contact with the homeroom teacher	**0.403**	0.153	0.122	0.312
33	Awareness of academic achievement levels of their child's class	**0.394**	−0.192	0.258	0.197
25	Intervening in case of inappropriate teacher behavior	**0.387**	0.108	0.246	0.206
Factor 2. Supporting school's resources *Eigenvalue = 4.86; Explained Variance = 11.03%; α = 0.87; 13 items)*					
14	Responsibility for collecting funds for class activities	0.088	**0.740**	−0.016	0.046
5	Organizing fairs	0.054	**0.729**	−0.062	0.171
2	Participating in the school PTA	0.083	**0.689**	−0.117	0.048
12	Organizing school-wide activities	0.116	**0.676**	0.208	−0.227
6	Assisting in preparing class parties	−0.079	**0.653**	0.040	0.251
1	Participating on the class-level PTA	0.086	**0.642**	−0.216	0.163
16	Responsibility for collecting funds for school-wide activities	0.112	**0.640**	0.020	−0.161
11	Conducting a special lesson in the child's class	0.043	**0.616**	0.239	−0.160
18	Initiating informal activities	0.152	**0.607**	0.324	−0.133
17	Providing hands-on assistance in the classroom or school	0.065	**0.577**	0.215	0.091
13	Adopting a new immigrant student attending the school	0.071	**0.557**	0.026	−0.043
4	Accompanying the class of field trips	−0.056	**0.519**	−0.030	0.317
15	Funding enrichment programs and special projects	0.211	**0.438**	0.131	0.032
Factor 3. Awareness of school-related pedagogical processes *(Eigenvalue = 3.66; Explained Variance = 8.31%; α = 0.85; 7 items)*					
29	Familiarity with the types of social activities that take place in the classroom and in the school	0.014	0.132	**0.756**	0.157
30	Knowledge of the curricula	0.182	0.072	**0.719**	0.193
28	Familiarity with the school's teaching staff and homeroom teachers	−0.023	0.140	**0.681**	0.314
32	Awareness of violence-related problems	0.135	−0.031	**0.673**	0.308
27	Understanding the social dynamics in the child's classroom	0.204	0.042	**0.609**	0.275
34	Awareness of decisions made by the teaching staff	0.206	−0.052	**0.596**	0.166
31	Awareness of the population components I the child's class	0.213	0.060	**0.563**	0.139
Factor 4. Participation in school-related pedagogical processes *(Eigenvalue = 3.66; Explained Variance = 5.6%; α = 0.85; 9 items)*					
40	Assistance in preparing for exams	−0.001	0.088	0.204	**0.772**
38	Reviewing notebooks	0.072	−0.011	0.171	**0.729**
37	Assistance with homework preparation	−0.039	0.149	0.221	**0.700**
43	Reviewing exams that have been graded	0.158	0.018	0.205	**0.658**
39	Involvement in addressing discipline-related problems	0.173	−0.172	0.263	**0.594**
42	Involvement when child appeals a grade	0.374	−0.025	0.010	**0.529**
41	Involvement in student-teacher disagreements	0.341	−0.036	0.047	**0.451**
7	Attending parent-teacher meetings	−0.252	0.107	0.144	**0.301**

TABLE 3 | The scale of parents' perceptions of the concept of "teacher's authority."

Item no.	Item content	Factor I	Factor II
Factor 1. Teacher's active listening and empathy			
(Eigenvalue = 4.22; Explained Variance = 24.8%; α = 0.70; 14 items)			
48	Exercise self-criticism to identify possible mistakes	**0.658**	−0.155
50	Always be consistent in reaction to their Students' behaviors and actions	**0.591**	
53	Guide their Students' behaviors and actions and yet be ready to listen and discuss their Students' ideas.	**0.585**	
64	Always inculcate values and help their students internalize them	**0.569**	0.153
49	Always practice transparency in their actions toward students and the school community	**0.548**	
51	Always be prepared to reconsider a class decision and admit if they made a mistake or accidentally offended a student	**0.546**	
68	Provide their Students' with clear behavioral guidelines but also understand and accept that there will be disagreements	**0.521**	0.275
46	Set clear guidelines for in-class behavior	**0.504**	0.199
47	Set a personal example in the language spoken and in their day-to-day behavior Act as a role model in terms of their daily language use and behaviors	**0.494**	−0.127
71	Use a soft voice but convey a determined message in their communications with students	**0.443**	0.173
51	Know what is expected of them and be prepared to fulfill these expectations respectfully	**0.428**	0.192
66	Always convey information about the world truthfully and objectively	**0.373**	0.351
70	Must look after their students even if the students are not cooperative	**0.329**	0.164
55	Always consider their Students' when making decisions, but they need not change their decisions to please the students	**0.250**	0.147
Factor 2. Behavior and disciplinary issues			
(Eigenvalue = 1.78; Explained Variance = 10.4%; α = 0.72; 11 items)			
65	Convey a determined message when communicating with students, use a firm tone of voice, and set clear boundaries	0.131	**0.712**
56	Always see to it that students act as instructed without questioning or discussing the instruction	−0.121	**0.695**
54	Always keep a formal distance with students to maintain their authority		**0.579**
61	Consistently enforce their rules and penalize those who do not abide by these rules		**0.573**
67	Always influence and direct Students' behaviors, actions, and aspirations in the classroom	0.261	**0.512**
59	Always be held responsible for directing and guiding their Students' behavior	0.283	**0.448**
69	Resolutely enforce the rules they have set for their class	0.341	**0.392**
63	Allow students to make decisions about classroom rules as often as the teachers do.		**0.371**
45	Always be available to address their Students' questions, requests, and problems	0.271	**0.323**
58	Always supervise and care for their students, not necessarily as equals		**0.300**
60	Always enable students to express their views and perspectives and allow them to make independent decisions	0.158	**0.180**

value of 1.01 $(\frac{x^2}{df}) < 3$, the TLI and CFI > 0.95, NSI > 0.9, and the RMSEA < 0.1. These measures indicate a good fit between the theoretical and the observed models. Furthermore, these results confirmed the study hypotheses regarding the relationship between the perceived level of communality and the perceived level of parental involvement and the relationship between parents' perceived level of communality and their perceived level of teacher authority. The resulting path coefficients of the proposed research model are shown in **Figure 2**.

DISCUSSION

This study aimed to examine how the level of communality (communal affiliation) affects parents' perception of children attending public elementary schools, the concept of teacher authority, and the concept of parental involvement.

These issues rendered two main research questions: the first concerned the potential correlation between the degree of communal affiliation of parents residing in different types of residential frameworks and their perceptions of parental involvement, whereas the second question concerned the

potential correlation between the degree of communal affiliation of parents residing in different types of residential frameworks and their perceptions of teachers' authority.

It is important to note that this literature research began with the outbreak of the COVID-19 pandemic. At this time, Israeli society was experiencing uncertainty, and schools had been closed for weeks and even months, such that all study was done remotely. In this emerging reality, it was feared that distance learning and the absence of students from the schools would also distance the parents from the daily school-related activities and thus would affect the study's outcomes. However, these concerns were allayed once parents' responses were received and the data were analyzed.

The analysis revealed that parents perceived parental involvement as containing the following four components: monitoring of processes at school, supporting school resources, awareness of pedagogical methods within the school, and active participation in these processes. These findings support the definition of parental involvement as developed by Fisher (2016).

According to the current study's findings, parents conceptualized teachers' authority in terms of teachers' empathy and listening and their behavior toward and discipline required
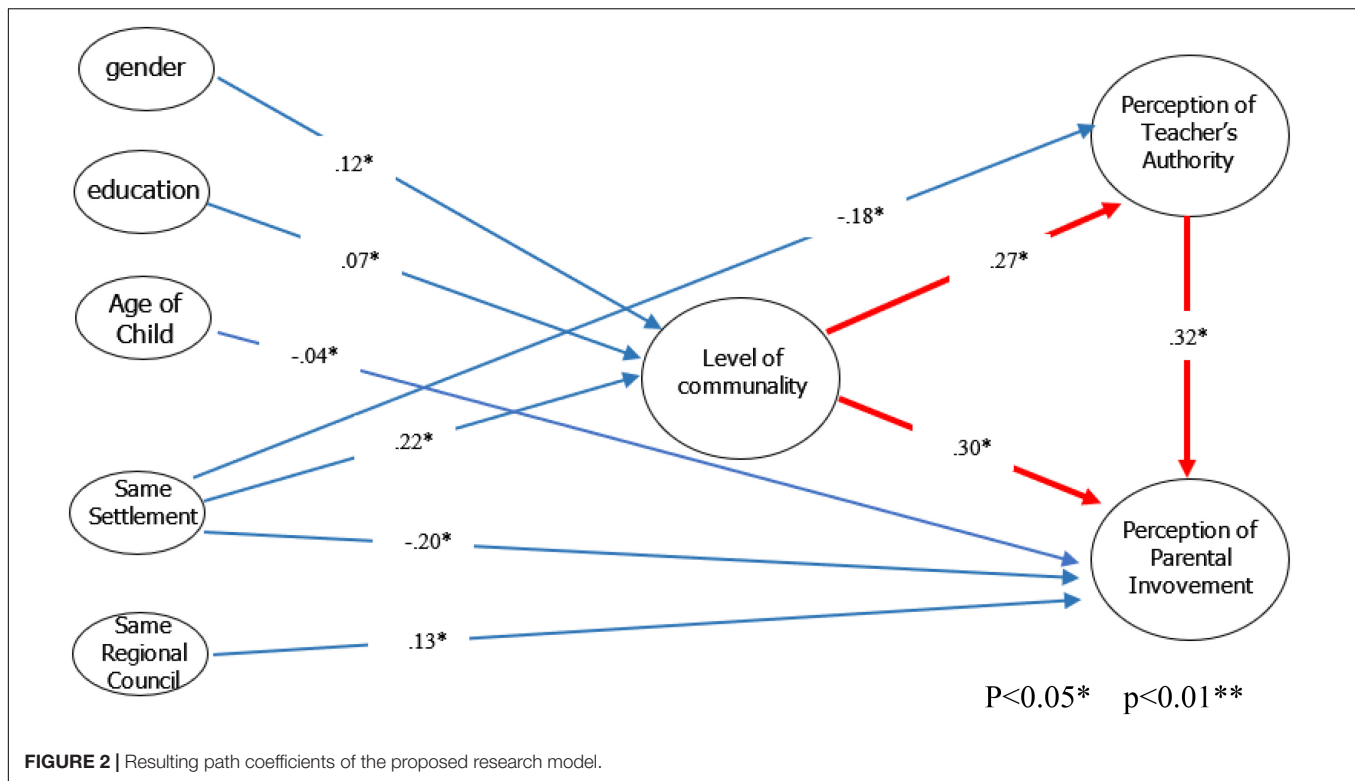
FIGURE 2 | Resulting path coefficients of the proposed research model.

from the students. According to the parents, teachers' authority manifests in role modeling, setting clear rules and regulations for in-class behavior, and teachers' admission of their own mistakes. Likewise, demonstrating consistency, understanding, and acceptance of Students' expressions of disagreement while inculcating moral values was viewed as teachers' manifestation of authority. These components correspond to those identified in Adetto (2012) definition and recommendations summarized in professional literature reviews regarding the rehabilitation of teachers' authority (Amit, 2005; Omer, 2018).

The communality scale was composed for the current study and was based on a yet untested questionnaire devised by the Eshchar Company. Accordingly, the concept of communality comprised two factors: the local authority's functions to benefit the population and the population's involvement in the community.

Although the three scales were based on scales composed nearly a decade ago, they were nonetheless relevant to the spirit of the times. Moreover, they remained valid and consistent even in a period characterized by emergency conditions and a sense of uncertainty.

The central issue in this research was the ability to predict parental involvement and teachers' authority by referring to the degree of parents' sense of communality. As the analysis of the structured equations indicated, there was a good fit between the model proposed initially and the actual findings. All of the study hypotheses were confirmed.

A significant finding that emerged from the structural equation analysis was a strong relationship between parents'

perception of teachers' authority and their perception of parental involvement. A high score on teachers' authority predicted a high score on parental involvement ($\beta = 0.32$). This finding is surprising, given that studies have shown that what led parents to become involved in their children's schools was the deterioration in teachers' status and the erosion of parents' trust in the teachers (Friedman, 2011). Perhaps, during the Covid-19 pandemic, many parents, particularly with children at the elementary school level, were at home with their children, witnessed the teachers' performance, and became active partners. Parental involvement was welcomed by both the teachers and the school in general. Having the opportunity to observe the teachers' work, its complexities personally, and the significant amount of knowledge it requires led parents to appreciate teachers' degree of professionalism and, as a result, develop positive relationships with them. Consequently, parents who viewed teachers as authoritative figures were more likely to see their involvement as positive (Ice and Hoover-Dempsey, 2011; Adi-Rokach and Greenstein, 2016; Blass, 2020).

Is this a positive change in the relationship between parents and teachers? Perhaps it is related to the ever-growing discussion in Israel and worldwide about the significance of teachers' and parents' authority in children's lives. Parents are beginning to understand that a high degree of teacher authority could benefit their children, contribute to their education, improve their academic achievements, and reduce violence and bullying in the classroom. Hence, parents wish to become involved and help teachers attain these educational goals (Amit, 2009; Dever and Karabenick, 2011; Risanger Sjursø et al., 2019).

The result revealed a relationship between background variables and the level of perceived communality in one's residential framework (H1). Findings indicated that women perceived communality to be higher than did the men ($\beta = 0.12$). Similar conclusions have been found in other studies conducted in Israel and worldwide. Women are more active in the community and fulfill socially significant roles within the community compared to men (Sadan, 2009).

It is interesting to note that this trend has not changed. While it may be interesting to consider why women feel a stronger sense of communality, answering the question is beyond the scope of the current study. However, it may be worth noting that often women are more available than men to spend time with their children in the afternoon hours, which in turn makes them want to feel attached to their community. This topic is important and merits greater attention. It was also found that a higher level of parents' education predicted a higher level of perceived communality ($\beta = 0.07$). It is possible that people with a higher level of education are more frequently recruited to participate in various activities in the community and perhaps even hold key positions in the community, which in turn strengthens their sense of communality (Shadmi-Wortman, 2017). It is also possible that people with a higher level of education feel a stronger sense of self-efficacy and are more able to contribute to and become involved in the community, which is the source of their perceived communality.

The absence of a correlation between the type of residential framework and participants' sense of communality was surprising (H2). We expected to find that living in smaller residential frameworks, where residents typically engage in various community activities, would correlate with a higher level of perceived communality. Have the kibbutz and the Moshav lost their most conspicuous communal features and became more adjusted to the larger metropolitans' alienation? It isn't easy to ascertain whether this is the case; however, it was found that living in the same town or community where their children's teachers live predicted a high level of perceived communality ($\beta = 0.22$). This finding, more than the finding regarding the type of residential framework, reflects the definition of community and communality as presented in the literature review section, according to which a sense of communality can be experienced in any type of settlement. It is the measure of territorial communality that is significant. It enables more interpersonal, face-to-face interactions, which affects the quality of the relationships, and the levels of trust and reciprocity among the residential members. Members of a community have an internal awareness of the collective, distinguishing them from those outside the community (Etzioni, 2000; Theodori, 2005; Lehavi, 2010; Shadmi-Wortman, 2017). It is possible that the traditional sense of communality has been altered over the years, given the changes in Israeli society and perhaps also because of the privatization of the kibbutz framework. Hence, one's sense of communality no longer depends solely on the type of residential framework where one resides; thus, the concept has expanded to reflect the changes that occurred in Israeli society.

Another hypothesis confirmed by the findings was that parents' background variables would predict their perception of parental involvement (H4). Furthermore, a negative correlation was found between the age of the children and the parent's perception of parental involvement ($\beta = 0.04$), such that the higher the child's age, the lower the level of perceived parental involvement. Other studies have found similar finding, which explained that the older the children are, the less they wish to see their parents involved in their school and the more independent they seek to be, and in the same vein, the parents no longer feel that the children need them to be strongly involved in the school (Friedman, 2011; Hornby and Lafaele, 2011). There was no correlation between other background variables and parental involvement or teachers' authority.

Other interesting findings that emerged and addressed the primary research questions were the strong correlations found between parents' level of communality and their perceptions of the concepts of teachers' authority (H7) and parental involvement (H8). Specifically, it was found that a high level of communality predicted a high level of perceived teachers' authority ($\beta = 0.27$) and a high level of parental involvement ($\beta = 0.30$) among the parents. According to the professional literature, a high degree of communality indicates a high level of trust and mutuality among community members and other significant institutions and representative community figures. In this context, the teachers and the school represent the latter (Shadmi-Wortman, 2017).

The attempt to explain the correlation between high levels of communality and parents' high level of involvement is based on the model of "Potential parental involvement," introduced by Friedman and Fisher (2002). According to this model, identification and involvement with the school are predictors of parental involvement. It may be assumed that parents with a strong sense of communality would also identify strongly with the school. Parents who see the school as playing an essential role in the life of the community are likely to identify with the school's goals, be more aware of the school's activities, demonstrate a more positive acceptance of the school's values and norms, and as a result, have a strong sense of parental involvement.

Another hypothesis examined in this study was that parents' type of residential framework would predict their perceptions of parental involvement (H6). Although parental involvement did not correlate with parents' residential kind of framework, residing in the same neighborhood or settlement as their children's teachers predicted parents' perceived low levels of parental involvement ($\beta = 0.20$). This finding could be explained by the situation that living in the same geographic community offers the conditions for an in-depth familiarity between parents and teachers beyond the formal relationships at school and, consequently, increase parents' trust in the teachers. The stronger their trust in the teachers is, the less they need to be actively involved in the school (Shechtman and Busharian, 2015).

It is also possible that the sense of togetherness that comes from living in the same neighborhood or settlement makes parents feel that their involvement in the school is redundant. As there is plenty of room for informal interaction between the parents and teachers, for example, in the form of "sidewalk discussions" about the children and the school, the parents see no need for further involvement and hence perceive the

level of parental involvement below. The flip side of the same coin is that a prior relationship between teachers and families of students can be a source of teachers' prejudice about the students, which prevents parents from becoming involved (Caplan, 1995). Relying on a reference from almost two decades ago can corroborate similar cases belonging to the fields of social psychology.

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

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 from the patients/participants or patients/participants legal guardian/next of kin was not required to participate in this study in accordance with the national legislation and the institutional requirements.

AUTHOR CONTRIBUTIONS

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

REFERENCES

Adetto, S. (2012). *How Students Perceive Parental and Teachers' Authority. Thesis Submitted for a Master's Degree in Educational Administration.* Ph.D. thesis. Arugot: Achva Academic College.

Adi-Rokach, A., and Greenstein, Y. (2016). *Relationships Between Teachers and Teachers at School: Referring to Types of Human Capital to Examine Parental Involvement in School. A Research Report Submitted to the Chief Scientist of the Ministry of Education* (in Hebrew). Jerusalem: Chief Scientist of the Ministry of Education.

Amit, C. (2005). "Being an influential teacher," in *The Field of Education Surviving the Test of Time*, Vol. 2, ed. A. Paldi (Zikhron Ya'akov: Teachers Association of Israel), 337–350.

Amit, C. (2009). Rowing in the same boat. *Hed Hachinuch* 83, 78–81.

Barg, K. (2019). Why are middle-class parents more involved in school than working-class parents? *Res. Soc. Stratif. Mobil.* 59, 14–24. doi: 10.1016/j.rssm. 2018.12.002

Barger, M. M., Kim, E. M., Kuncel, N. R., and Pomerantz, E. M. (2019). The relation between parents' involvement in children's schooling and children's adjustment: a meta-analysis. *Psychol. Bull.* 145, 855–890. doi: 10.1037/bul0000201

Bauch, P. A. (2001). School-community partnerships in rural schools: leadership, renewal, and a sense of place. *Peabody J. Educ.* 76, 204–221. doi: 10.1207/ S15327930pje7602_9

Ben-Peretz, M. (2009). *The Teacher's Status: New Directions. A Position Paper.* Haifa: The University of Haifa.

Blass, N. (2020). "Opportunities and threats to the education system as a result of the Corona crisis: an overview," in *A Report on the State of Affairs in Israel: Society, Economy, and Policy in 2020*, ed. A. Weiss (Jerusalem: The Taub Center for Social Policy Research in Israel), 337–361.

Caplan, J. G. (1995). *Parent Involvement 101: A Guide for Rural Educators. Rural School Development Outreach Project.* Washington, DC: North Central Regional Educational Laboratory.

Chafi, M. E., Elkhouzai, E., and Ouchouid, J. (2016). Teacher excessive pedagogical authority in Moroccan primary classroom. *Am. J. Educ. Res.* 4, 134–146.

Chan, K. L., and Chan, C. L. W. (2005). Chinese culture, social work education and research. *Int. Soc. Work* 48, 381–389. doi: 10.1177/0020872805053461

Dever, B. V., and Karabenick, S. A. (2011). Is authoritative teaching beneficial for all students? A multi-level model of the effects of teaching style on interest and achievement. *Sch. Psychol. Q.* 26, 131–144. doi: 10.1037/a0022985

Etzioni, A. (2000). Creating good communities and good societies. *Contemp. Sociol.* 29, 188–195. doi: 10.2307/2654943

Fisher, Y. (2010). *Going about it Another Way: Stories of Successful Cooperation Between Parents and Schools* (in Hebrew). Tel Aviv: MOFET Institute.

Fisher, Y. (2011). "Parental involvement," in *New Horizons for Facet Theory: Interdisciplinary Collaboration Searching for Structure in Content Spaces and Measurement*, eds Y. Fisher and I. A. Friedman (Tel-Aviv: FTA Publication), 145–153.

Fisher, Y. (2016). Multi-dimensional perception of parental involvement. *Univers. J. Educ. Res.* 4, 457–463. doi: 10.13189/ujer.2016.040220

Fisher, Y., and Friedman, Y. (2009). Parents and school: reciprocal relations and involvement (in Hebrew). *Dapim* 47, 11–40.

Friedman, Y. (2011). The relationship between school and parents in Israel. *Iyunim Beminhal Uvechinuch* 32, 237–267.

Friedman, Y., and Fisher, Y. (2002). Identification and awareness: pillars of parental involvement in the school's endeavors (in Hebrew). *Iyunim Be-irgun Yve-minhal Hachinuch* 26, 6–33.

Gilat, Y., and Vangarovitz, N. (2018). The status of teachers in today's Israeli society. *Dapim* 68, 11–27.

Goodman, J. (2010). Student authority: antidote to alienation. *Theory Res. Educ.* 8, 227–247. doi: 10.1177/1477878510381626

Hoover-Dempsey, K. V., Whitaker, M. C., and Ice, C. L. (2010). "Motivation and commitment to family-school partnerships," in *Handbook of School-Family Partnerships*, eds S. L. Christenson and A. L. Reschly (London: Routledge), 30–60.

Hornby, G., and Lafaele, R. (2011). Barriers to parental involvement in education: an explanatory model. *Educ. Rev.* 63, 37–52. doi: 10.1080/00131911.2010. 488049

Hornby, G., and Witte, C. (2010). Parent involvement in rural elementary schools in New Zealand: a survey. *J. Child Fam. Stud.* 19, 771–777. doi: 10.1007/s10826-010-9368-5

Ice, C. L., and Hoover-Dempsey, K. (2011). Linking parental motivations for involvement and student proximal achievement outcomes in homeschooling and public schooling settings. *Educ. Urban Soc.* 43, 339–369. doi: 10.1177/ 0013124510380418

Israeli Central Bureau of Statistics (2020). *Towns and Settlements in Israel – Files From 2003 to 2019.* Givat Shaul: Israeli Central Bureau of Statistics.

Israeli National Program of Education (2005). *The National Mission for Advancing Education in Israel.* Jerusalem: Israel Ministry of Education.

Lasater, K. (2019). Developing authentic family-school partnerships in a rural high school: results of a longitudinal action research study. *Sch. Commun. J.* 29, 157–182.

Lee, J.-A., and Kim, C.-J. (2017). Teaching and learning science in authoritative classrooms: teachers' power and students' approval in Korean elementary classrooms. *Res. Sci. Educ.* 49, 1367–1393. doi: 10.1007/s11165-017-9659-6

Lehavi, A. (2006). New residential communities in Israel – between privatization and separation. *Din U Dvarim* 2, 63–140.

Lehavi, A. (2010). "Introduction: communities in Israel on the continuum between urban and rural (in Hebrew)," in *Fenced Communities*, ed. A. Lehavi (Tel Aviv: Nevo publications), 9–38.

Levi-Feldman, A. (2020). From teacher to tutor – the best teacher for the twenty-first century (in Hebrew). *Opinion* 16, 69–73.

Machter, A. (2001). Motivations for parental involvement in community-based schools in Israel. *Hachihuch U Svivo* 23, 241–258.

McMillan, D. W., and Chavis, D. M. (1986). Sense of community: a definition and theory. *J. Commun. Psychol.* 14:23. doi: 10.1002/1520-6629(198601)14:1<6:: AID-JCOP2290140103>3.0.CO;2-I

Murray, K. W., Finigan-Carr, N., Jones, V., Copeland-Linder, N., Haynie, D. L., and Cheng, T. L. (2014). Barriers and facilitators to school-based parent involvement for parents of urban public middle school students. *SAGE Open* 4, 1–12. doi: 10.1177/2158244014558030

Noy, B. (2014). *Whose Child is This? Parents' Relationship with Their Children's School*. Tel Aviv-Yafo: MOFET Institute.

Omer, C. (2018). *Teachers Today– From Survival to Commitment* (in Hebrew). Ben-Shmen: Modan Publications.

Omer, C., and Maimon, T. (2019). *Courageous Teachers: From Survival to Commitment. From Hebrew Psychology*. Available online at: https://www.hebpsy.net/articles.asp?id=3809 (accessed May 17, 2021).

Pace, J. (2003). Revisiting classroom authority: theory and ideology meet practice. *Teach. Coll. Rec.* 105, 1559–1585. doi: 10.1111/1467-9620.00300

Pace, J. L., and Hemmings, A. (2007). Understanding authority in classrooms: a review of theory, ideology, and research. *Rev. Educ. Res.* 77, 4–27. doi: 10.3102/003465430298489

Raviv, A., Bar-Tal, D., Raviv, A., Biran, B., and Sela, Z. (2003). Teachers' epistemic authority: perceptions of students and teachers. *Soc. Psychol. Educ.* 6, 17–42. doi: 10.1023/A:1021724727505

Risanger Sjursø, I., Fandrem, H., O'Higgins Norman, J., and Roland, E. (2019). Teacher authority in long-lasting cases of bullying: a qualitative study from Norway and Ireland. *Int. J. Environ. Res. Public Health* 16, 1–9. doi: 10.3390/ijerph16071163

Sadan, A. (2009). *Community Work and Methods for Creating Social Change*. Bnei-Brak: Hakibbutz Hameuchad publication.

Shadmi-Wortman, S. (2017). "School as a community building block," in *A Partnership: About the Relationship Between Parents and Schools* (Jerusalem: Avnei Rosha Institute), 62–68.

Sharmer, E. (2005). Trust as an alternative to the crumbling authority of teachers – part B. *Hagut Mechkarim Behagut Hachinuch Hayehudi* 7, 127–160.

Shechtman, T., and Busharian, E. (eds) (2015). *Between Parents and Teachers in High School Education – The State of Affairs and Recommendations. The Initiative for Practical Research in Education*. Jerusalem: The Israel Academy of Sciences.

Simons, R. L., Johnson, C., Conger, R. D., and Lorenz, F. O. (1997). Linking community context to quality of parenting: a study of rural families. *Rural Sociol.* 62, 207–230. doi: 10.1111/j.1549-0831.1997.tb00651.x

Talò, C., Mannarini, T., and Rochira, A. (2014). Sense of community and community participation: a meta-analytic review. *Soc. Indic. Res.* 117, 1–28. doi: 10.1007/s11205-013-0347-2

Theodori, G. L. (2005). Community and community development in resource-based areas: operational definitions rooted in an interactional perspective. *Soc. Nat. Resour.* 18, 661–669. doi: 10.1080/08941920590959640

Tubin, D., and Leese, N. (2013). "Threatening but not acting – practices of control and authority in elementary schools," in *The Classroom and the School From Close-Up: Ethnographic Studies on Education*, eds B. Alpert and S. Shlasky (Tel Aviv-Yafo: MOFET Institute), 272–305.

Ullman, J. B., and Bentler, P. B. (2013). "Structural equation modeling, chapter 23," in *Handbook of Psychology*, 2nd Edn, ed. I. B. Weiner (New York, NY: John Wiley & Sons, Inc), 661–690. doi: 10.1002/9781118133880.hop202023

Wenren, X. (2014). The construction of the teacher's authority in pedagogic discourse. *Eng. Lang. Teach.* 7, 96–108. doi: 10.5539/elt.v7n6p96

Wilder, S. (2014). Effects of parental involvement on academic achievement: a meta-synthesis. *Educ. Rev.* 66, 377–397. doi: 10.1080/00131911.2013.780009

Check for updates

A Phenomenological Psychology Study of University Teachers' Lived Experience of Being Pedagogical in Neoliberalism

Yulong Li[1] and Xiaojing Liu[2*]

[1] School of Education, University of Glasgow, Glasgow, United Kingdom, [2] Center for Educational Science and Technology, Beijing Normal University, Beijing, China

Against a background of promoting the industrialization of higher education in Macau due to COVID-19's damage to the territory's major industry—gambling, the present study adopted phenomenological psychology to explore teachers' lived experience of being pedagogical in a university with a neoliberal vision and mission. Using a general structure, the findings revealed that teachers encountered challenges being pedagogical. These challenges emerged not only due to the university's corporate management, but more importantly because of a shift in perceptions—where students became like customers and teachers became self-interested—which made pedagogical relationships difficult to establish. Furthermore, teachers were found to develop negative emotions when their pedagogical actions or intentions conflicted with neoliberalism. The findings suggest that pedagogy in higher education is being challenged and transformed.

Keywords: phenomenological psychology, pedagogical tact, lived experience, casino capitalism, neoliberalism

INTRODUCTION

Susan Strange (1997, p. 1) created the term, "casino capitalism," to convey how the economic system in the Western world has been operating like a casino: "Some of the players—banks especially—play with very large stakes. There are also many quite small operators. There are tipsters, too, selling advice, and peddlers of systems to the gullible." Strange (1997) used the term metaphorically, but in Macau, casino capitalism has a literal meaning. On the 20th of December 1999, Macau's sovereignty was handed from the Portuguese over to the People's Republic of China (PRC) and it has been a Special Administrative Region (SAR) of the PRC ever since. Following the leadership of Beijing, the Macau SAR government has adopted a unique economic strategy of decolonization accelerating the gaming industry by breaking up the former Macau Tourism and Entertainment society's exclusive monopoly on gaming and opening it up to international and regional casino companies (Shi and Liu, 2014).

The gaming industry in Macau has increased the newly founded SAR government's credibility among the Macanese (Lo, 2009) because the casino hotels and amusement parks on the Cotai Strip, built on reclaimed land, fulfilled the local people's long held expectations of modernization (Shi and Liu, 2014) making the city appear more modern. The gaming industry also quickly made Macau one of the wealthiest economies in the world per capita (Sheng, 2016), although as the major employer and the biggest taxpayer, the gaming industry caused Macau to become excessively reliant on it (Lo, 2009; Sheng, 2016). Shi and Liu (2014) revealed that the process of decolonization in Macau is intertwined with neoliberalism. Together with the expansion of casinos, consumerism began to

permeate the mentality of local people, particularly the younger generation (Shi and Liu, 2014). Giroux (2014) claimed that casino capitalism can bring about a gambler mindset of chasing self-interests and pursuing extreme individualism. As a result, many Macanese began to admire and seek luxurious products and lifestyles and thus chose to work in casinos for handsome salaries (Shi and Liu, 2014). Meanwhile, scholars noted an increase in the number of students dropping out of school to work in casinos which was coupled with teacher attrition (Morrison, 2009; Yu, 2015; Wu and Vong, 2017). Commenting on this situation, Shi and Liu (2014, p. 930) observed that everybody's "daily experiences, emotions and desires [were] associated with the expansion of the gambling sectors." Thus, triggered by casino capitalism, neoliberalism became entrenched into Macanese society.

By monopolizing Macau's economy, the gaming industry has made the city vulnerable to shocks to tourism (Lo, 2009), as most punters come from outside Macau. Since 2020, COVID-19 has been disastrous for Macau's gaming industry and in turn many citizens' job security; however, the virus roused the SAR government to look for ways to diversify the economy. Unfortunately, over the years, the gaming industry had absorbed many school leavers resulting in a shortage of local talent with higher educational qualifications to support the city's sustainable development (Lau and Yuen, 2014). Reflecting on the situation, Ho Iat Seng, the Chief Executive of the SAR government, in the Macau Policy Address 2021, announced the city would promote the industrialization of higher education (Lin, 2021). In this way, the industrialization of higher education in Macau may force local universities to become more business- and market-oriented to improve their bottom lines (Liu, 2021).

While this transition may relieve Macau's over reliance on the gaming industry, it may inevitably have some side effects on local higher educational institutes as neoliberal reforms have brought to universities elsewhere. Long before the 2021 Policy Address, many pre-tertiary schools in Macau had implemented neoliberal changes, and a few local scholars have revealed how teaching, management, courses, and teacher identity have been impacted (see Huang and Vong, 2016, 2018; Huang, 2018). Although the voices of Macanese educators who have spoken out against neoliberalism have mostly been drowned out by those who are enthusiastic about educational marketization, fortunately, the studies of the former have revealed that the neoliberal discourse has not completely occupied education in Macau (Huang and Vong, 2016, 2018), reserving some space for negotiation and reflection. Nevertheless, there are few studies on Macanese university teachers' experiences and perceptions of neoliberalism; accordingly, the present study is not only exploratory but also reflective in the face of the enthusiasm for the industrialization of higher education.

LITERATURE REVIEW

Neoliberalism

Neoliberalism, as a contemporary school of thought and an antidote to the crisis that threatens late capitalism, was originally conceptualized by the Mont Pelerin Society, composed of scholars like Friedrich von Hayek, Milton Friedman, and Karl Popper in the 1940s (Harvey, 2005). They inherited thoughts from traditional liberalism and neoclassic economics, firmly believing in private property and free, competitive markets as the protectors of freedom of thought and expression; meanwhile, they warned that arbitrary power is expanding and invading such freedom in the West (Harvey, 2005). After WWII, while recuperating from the war, many countries kept their national strategies aligned with Keynesian ideals, meaning state power should guarantee "full employment, economic growth, and the welfare of its citizens, and that state power should be freely deployed, alongside of or, if necessary, intervening in or even substituting for market processes to achieve these ends" (Harvey, 2005, p. 10). Undeniably, Keynesian policies sustained domestic stability and economic growth in many Western countries from the 1950s to 1960s; however, this mode later caused economic stagnation and financial crises (Harvey, 2005). Neoliberalism was considered an alternative strategy, while the actual practice of it began in the 1970s when many countries, such as the UK, the US, Sweden, India, Chile, turned to neoliberalism, and even China did so after its opening-up policy was introduced in 1978 (Harvey, 2005). Harvey (2005, p. 23) summarized how neoliberalism evolved as an alternative to the Keynesian approach:

> This entails confronting trade union power, attacking all forms of social solidarity that hindered competitive flexibility, dismantling or rolling back the commitments of the welfare state, the privatization of public enterprises, reducing taxes, encouraging entrepreneurial initiatives, and creating a favorable business climate to induce a strong inflow of foreign investment.

Simply speaking, neoliberalism restricts the intervention of government into many societal aspects, while allowing corporate values and competitive market principles into all public domains. Indeed, neoliberalism to some extent solves the problem of economic stagnancy; however, it can also sabotage public goods, for example, higher education (Giroux, 2002). In this way, universities become like companies, and its products are not actual items but knowledge economy-driven technologies, skills and designs (Olssen and Peters, 2005) and highly skilled labor (Becker, 2006). Neoliberalism has brought corporate values like marketization into universities, and it has also transplanted corporate management techniques, like managerialism, standardization, accountability, and performativity into tertiary education (Giroux, 2002; Olssen and Peters, 2005; Apple, 2006; Ball, 2016). In the neoliberal environment, university teachers also face increasing career instability (Enslin and Hedge, 2019), hierarchical auditing supervision (Olssen and Peters, 2005), decreasing of tenured positions (Giroux, 2002), and eroded authority in faculty decisions, which has created extra work for them (Seeber and Berg, 2016).

Pedagogy in the Time of Neoliberalism

The meaning of education is inevitably influenced by neoliberalism. Van Manen (1991) expressed his concern that pedagogy itself is also threatened by neoliberalism, which standardizes many aspects of classroom teaching, reducing the

skills, competence, and professionalism of instructors. This uncertain situation requires teachers to reflect but also to be ready to criticize (Van Manen, 1991, 2015). Pedagogy is a lived experience of adults; it is "both the tactful ethical practice of our actions as well as the doubting, questioning, and reflecting on our actions and practices" (Van Manen, 2015, p. 33). Adults who are pedagogical are those who are always reflecting about distinguishing what is good for their children to facilitate their "positive being and becoming" (Van Manen, 1991, p. 18). Van Manen (1991, p. 5) stressed pedagogically oriented teachers should be students' "in loco parentis," offering care, guidance, and protection to students just as their parents did or even exceeding what their parents did. Teachers need pedagogical tact to become in loco parentis; they should intuitively understand their students; they should know how and when to give guidance while not being hypocritical and selfish (Van Manen, 1991). Pedagogical tact can only be obtained through praxis, as it comes only from teachers' continuous reflection-in-action, rather than following fixed instructions in planned situations (Van Manen, 1991). Preserving the tradition of pedagogy is beneficial to students and society in the long run because people's pedagogical narratives can be passed along over generations. Van Manen (2015) found that the pedagogical moments people experience unconsciously influence them for the rest of their lives. Pedagogy should be a stronghold that adults build to safeguard what is valued, i.e., childhood, love, and ethics, against external powers like neoliberalism (Sandvik, 2020). However, neoliberalism poses challenges to teachers. Generally, phenomena embedded in neoliberalism can damage university teachers' pedagogical relationship and obligation toward their students. Accordingly, knowing how teachers in a neoliberal university perceive or perform pedagogy appears warranted.

The University's Neoliberal Agenda

The university we focus on in this study is a private institution. Although it has never publicly acknowledged its neoliberal goals, the university's owners have decided on a corporate way of management. Echoing the Macau Policy Address 2021, the university released a new vision and mission i.e., to provide services for the region, to nurture application-oriented talent, to increase student recruitment, and to operate under the disciplines of under market-oriented principals. Thus, the language it uses to describe its vision and mission represents its evolving neoliberal nature (see Allatt and Tett, 2018), which therefore, presents a suitable venue for investigating Macanese university teachers' lived experience in neoliberalism.

Studies in Macau have investigated how primary school teachers (e.g., Huang and Vong, 2016) and middle school teachers (e.g., Huang and Vong, 2018) have resisted neoliberalism in their teaching practices. Despite the prevalence of neoliberalism in their respective working contexts, these studies have shown that the neoliberal discourse in education remains incomplete reserving space for teachers to resist. Such space also becomes a rationale for us to position our study. Further, unlike the present study, their research followed the tradition of post-structuralism rather than a phenomenological psychology approach. Therefore, the present study aims to

answer: What are the university teachers' lived experience of being pedagogical in neoliberalism?

RESEARCH METHODOLOGY

Because the present study concerns ordinary people's directly lived mundane life in context (Englander and Morley, 2021), we chose phenomenological psychology as the research methodology to uncover university teachers' lived experience in neoliberalism. Phenomenological psychology was founded by Giorgi (1970) in the 1970s based on his critical reflection of the positivist-led modern psychology, which Giorgi (in Englander and Morley, 2021) critiqued because it was inadequate for studying human behavior. Beginning from Husserl's (1977) transcendental phenomenological philosophy, Giorgi (1970) combined psychological attitudes into Husserl's philosophical phenomenological process of description, reduction, and essence (Giorgi et al., 2017).

Regarding the modified process of description, phenomenological psychology permits a third person, or research participant, to use naive or non-phenomenological language to describe their lived experience (Giorgi et al., 2017), which is distinct from many other phenomenological methods, like those in Van Manen (1990), which obtains data by cultivating the research participants to produce their first person's text. The modified reduction in phenomenological psychology avoids restraining research participants' subjective consciousness, as this methodology promotes humans as "being in the world" (Giorgi et al., 2017, p. 181), who have direct consciousness about their lived world (Englander and Morley, 2021). Unlike philosophical phenomenology, which aims at universal essence, phenomenological psychology can reach the typical essence based on structures derived from each case that can be compared with results from similar studies (Giorgi et al., 2017). Thus, in planning the research, we followed the five step data analysis model of Giorgi et al. (2017):

(1) "Initial reading for a sense of the whole"; (2) "Adopting the phenomenological psychological attitude"; (3) "Dividing data onto meaning units"; (4) "Transformation of everyday expression to psychological meaning"; and (5) "Returning to the whole and moving toward the general structure" (Englander and Morley, 2021, p. 7–12).

We also sought important suggestions from Englander and Morley (2021) while conducting the analysis.

We invited five teachers for semi-structure interviews to discuss their pedagogical stories. Although written anecdotes are often used in phenomenological research (Van Manen, 1990), we chose to interview them because research participants tend to produce more description than written ones (Giorgi et al., 2017). Phenomenological psychology's focus on people's lived world reminded us to choose a data collection protocol that fits with the participants' daily customs (Englander and Morley, 2021), and as the teacher participants in this research were used to delivering lectures and providing verbal explanations, we thought the interview would be more suitable

and natural. After we made appointments with them, we sent the discussion items to them along with informed-consent forms to ensure they were aware of the topics and the voice-recording. As universities in Macau had resumed face-to-face teaching during the time of the interviews, all the participants were interviewed in person with face masks on. All the interviews were conducted in Mandarin Chinese, the working language of the fieldwork university. The second author, fluent in English and Chinese, transcribed the interviews verbatim and translated them into English. However, only four interviews remained for use as one interview was discarded because it did not contain adequate content for our purposes. According to Giorgi et al. (2017, p. 183), "inadequate ones [descriptions] [that] do not yield significant outcomes … are usually discarded."

The lead author read the translated documents thoroughly and reflexively to have an initial understanding. He then took a phenomenological stance to highlight the meaning units for each participant. After changing the first person to the third person in each meaning unit of the transcripts, he pasted the near-original language of each meaning unit in succession in the 1st column of a table, according to the methods advised by the experts, i.e., psychological reduction (Englander and Morley, 2021). In doing so, the lead author finished the psychological epoche of the participants' descriptions by putting his own interpretations in parentheses (Englander and Morley, 2021). Then the second author reviewed the descriptions mirroring the meaning units in the 1st column. We then added another two columns (2nd and 3rd) in parallel with the first column to, respectively, refer to our phenomenological and further elucidation of the meaning units. Englander and Morley (2021) pointed out that the 2nd and 3rd columns are for researchers to elucidate rather than to pamper the psychological meaning from the 1st column to help the participants' everyday consciousness emerging into generalisable psychological relevance. Although Giorgi et al. and his colleagues suggested only two tiers, i.e., columns (e.g., Giorgi et al., 2017), we are more in favor of what Englander and Morley (2021) advised, that is, to extend the two-tier column into three or even more for the sake of crystallizing the lead author's analysis process because the second author in the present study needed to review and validate them. **Table 1** shows an excerpt of the whole table (see Appendix in **Supplementary Material**) as an example.

After the second author's validation, the lead author transformed and organized all the elucidated psychological aspects from the 2nd and 3rd columns and developed situated structures (Englander and Morley, 2021) for each participant. Separating situated structures is factitive in reaching to the psychologically generalisable essence in the later general structure (Englander and Morley, 2021). Finally, after the two authors discussed, the lead author used an eidetic reduction attitude to discard the language which potentially disturbed the rigor of the general structure to make it internally cohesive, interdependent, and easy to demonstrate the psychologically generalisable essence of the participants' lived experience (Giorgi et al., 2017; Englander and Morley, 2021).

FINDINGS

Situated Structures of the Participants

P1 worried that the situation in the world today is causing students to be more utilitarian, demotivating them, and making them inactive or perfunctory in their studies. Out of her ethos as a teacher, P1 explained that it is important to intervene and challenge the students by raising her course requirements. Although she sometimes explains her good intentions to her students and attempts to lead them to think more about their future, the students often misunderstand her. However, what makes P1 upset is that her university deploys a student-evaluating-teaching system (SET), through which some students write negative feedback on her teaching in retaliation for her pedagogical intervention. The SET system has created a conundrum for her. On the one hand, she wants to provide a good education for her students, which sometimes requires being strict, but on the other hand, if she receives too much negative feedback (as a result of her strictness), her annual review result may be unsatisfactory. Eventually P1 felt that her predicament sabotaged her relationship with the students, not to mention her teaching and wellbeing. Further, the university provided little support for her, and this coupled with a heavy workload led to her being burnt out. Her experience also made her question the real meaning of higher education in her institute.

P2 believed being strict to students is important for their learning. She enjoys giving advice to students as her way of being pedagogical. However, both of her pedagogical postures encountered challenges. P2's university has a stringent set of guidelines regarding teachers' classroom performance using the SET system, which means it is easy to incur students' complaints or negative evaluation if P2 irritates them. P2 shared that she once received negative and disingenuous comments from her students. From then on, she stopped being strict and instead turned to pleasing students, although she is aware that this spoiled them. For fear of being criticized by students and out of a mindset of being unsatisfied toward the university's way of disciplining, P2 now only gives advice to students who voluntarily approach her for help after class rather than devoting the time and effort that she used to provide to all her students.

P3, once part-time, and now a full-time teacher at the university, used to enjoy teaching, and spending time on teaching preparation believing that students benefited from his classes. However, after becoming full-time, he has had to cope with more assigned errands and meetings with colleagues. However, he believes he became disillusioned when the university standardized and quantified every teachers' performance and workload; he questioned whether it is possible to compare instructors with various backgrounds who teach different disciplines. He began to worry and became distracted from advancing his teaching craft. P3 claimed that when he stopped reading as part of his teaching preparation, he stopped updating his lessons and became bored using his old materials while teaching. He also noted that he spent less time on students after becoming full-time, as he wanted to leave more time for himself.

P4 believed the best education for university students is to develop their thinking, which is at the core of their work so he

TABLE 1 | An example of psychological reduction in the three-column table, Meaning Units equals MU, and P1 means Participant 1.

Column 1: The participants' natural expressions	Column 2: The researchers' phenomenological psychological elucidation	Column 3: The researchers' further elucidation
MU 1 of P1: P1 has such a heavy workload, and there are so many students; therefore, she often feels very tired.	P1 often feels fatigue as she faces a big workload and large numbers of students.	The teaching load and large class size makes P1 fatigued.
MU2 of P1: P1 thinks she is a teacher, and she has a close relationship with students over a period of time, such as a semester. But this kind of evaluation (students judging teachers' teaching) is harmful to the relationship.	P1 believes that student evaluation of teaching (SET) sabotages what should have been a close teacher and student relationship.	P1 thinks students evaluating teachers becomes a barrier in her relationship with students.

kept this ethos both inside and outside of his classes. However, his heavy teaching load was so burdensome he could barely keep up with his teaching duties leaving no time for deep thinking. As a result, P4 felt he could not fully prepare his lectures, which he thought was letting his students down. P4 also mentioned that students have too many lessons to spare enough energy to learn in-depth in their chosen field. P4 felt that he was failing to provide a good quality education to his students, and sometimes he was burned out with no interest in teaching. Thus, based on his situation, P4 questioned whether his university management understood the true nature of higher education.

General Structure

In the environment of neoliberalism, it has become more difficult for teachers to fulfill their pedagogical commitments because their pedagogical intentions are challenged by neoliberal management techniques. These techniques include SET scores that quantify teachers' performance and sometimes lead to disciplinary action. The neoliberal approach also fails to recognize or support teachers' unquantifiable contributions such as when they tutor individual students. Furthermore, teachers' pedagogical commitments also face challenges from the various entities of neoliberal discourse. These include students who are nurtured to act and think like consumers, refusing to establish a pedagogical teacher-student relationship. They also include academic colleagues who fully buy into the neoliberal discourse and enjoy competing with each other. Sometimes the entity is the university itself, which acts like an enterprise, bringing industrial production principles into higher education. Facing the tension created between pedagogical intentions and neoliberalism, teachers become fatigued, hesitant, passive, insincere, self-blaming, and anxious, which leads to job burnout.

DISCUSSION

As shown in the general structure, the teachers all found it difficult to be pedagogical in the neoliberal environment, which echoes the neoliberal challenges confronted by Swedish teachers in Rinne's (2020) study. From the general structure, it is apparent that some of the teachers' challenges were a result of the university's corporate management, i.e., SET scores and strict discipline. Ball (2016) observed similar managerial techniques at schools steeped in neoliberalism. Some teachers in

the structure also suffered from overwork, i.e., heavy teaching loads and increased student numbers, while other teachers felt they had little time for reading, thinking, research, and updating lessons. Echoing these impediments, Giroux (2002) noted how neoliberalised universities in the US irresponsibly increased enrollment and class size to boost the universities' bottom lines with little concern about the possible shortage of full time faculty or the maintenance of teaching quality. Regarding teachers' reduced time for reading and thinking, Seeber and Berg (2016) observed that research involves thinking, and university teachers not only need enough time, but more importantly they should not be controlled by time. However, when teachers are faced with increasing demands from their university, they often feel pressed for time to conduct research, which leaves them without the mood to fully prepare their lectures or build up a rapport with students (Seeber and Berg, 2016), which is similar to the teachers' experience in the present study. Dufour (2014) noted that thinking, as the basis of research, requires time and silence, and if teachers' time to think and conduct research is denied, their university's research prospects may decline.

Management style may only be a symptom, however. What lies underneath is the ontological change of the university from being a public good to a corporation; the management style described by the teachers in this study resembles what is found in industry. Aronowitz (2000) labeled this corporate approach to higher education the "university knowledge factory" while Li et al. (2021) call it a "human capital incubator." This change of the university's nature alters stakeholders' relationships placing pedagogy as the lowest priority. Teachers' pedagogical commitments are replaced by bullet points of practice listed in contracts, and teachers' responsibility to students are now temporary and conditional (Seeber and Berg, 2016). As shown in the general structure, some of the participant teachers chose to neglect their students and resist cooperating with colleagues and management in favor of having more time for themselves. In doing so, Enslin and Hedge (2019) found teachers acted as individualistic entrepreneurs, busy with exhibiting, promoting, and pitching their excellence and cutting-edge academic achievements while competing with colleagues. They also found teachers in such a corporate environment may develop a perfunctory attitude toward teaching and their students (Enslin and Hedge, 2019). Students' changing identity has also become a challenge. Some of the teachers expressed concerns about having

difficulty to build relationships with students who were like cunning customers. For example, Doherty (2007) and Seeber and Berg (2016) found students are nurtured as clients in neoliberal universities. Saunders and Kolek (2017) showed that some students in US universities identified themselves as consumers. The teachers in the study also had negative feelings when their pedagogical intentions or behavior clashed with neoliberalism, which resulted in fatigue, anxiety, self-blame, and job burnout. Like many other teachers in and beyond Macau, neoliberalism has been emotionally damaging (e.g., Huang and Vong, 2016, 2018; Dugas et al., 2018, 2020; Li and Liu, 2020; Li et al., 2021). As Van Manen (1991) observed over three decades ago, pedagogy is threatened by neoliberalism and clearly it continues to be.

CONCLUSION

Against the background of COVID-19 and the gaming industry in Macau, this study aims to provide perspective on higher education's accelerating industrialization in Macau. By exploring some university teachers' lived experience of being pedagogical using phenomenological psychology, the study produces a general structure that shows teachers challenges in being pedagogical in a neoliberal environment. These challenges are not only from the university's corporate management, but equally importantly from the change where students view themselves as customers which has led teachers to become self-interested impeding pedagogical relationships with students. Teachers also

experienced negative emotions when their pedagogical actions or intentions conflicted with the neoliberalism. This result is consistent with many other studies that report changes that have occurred in education in and beyond Macau upon the arrival of neoliberalism. Thus, it is hoped that the study can draw attention to how industrialization is changing the face of Macau's higher education.

DATA AVAILABILITY STATEMENT

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

ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Beijing Normal University. The patients/participants provided their written informed consent to participate in this study.

AUTHOR CONTRIBUTIONS

YL was responsible for theoretical conceptualisation, phenomenological analysis and essay writing. XL was responsible for data collection, revision, interview translation and project application and management.

FUNDING

SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: https://www.frontiersin.org/articles/10.3389/fpsyg.2022.895635/full#supplementary-material

REFERENCES

Allatt, G., and Tett, L. (2018). Adult literacy practitioners and employability skills: resisting neo-liberalism? *J. Educ. Policy* 34, 577–594. doi: 10.1080/02680939.2018.1493144

Apple, M. W. (2006). *Educating the "Right" Way: Markets, Standards, God, and Inequality*. New York, NY; London: Routledge.

Aronowitz, S. (2000). *The Knowledge Factory: Dismantling the Corporate University and Creating True Higher Learning*. Boston: Beacon Press.

Ball, S. J. (2016). Neoliberal education? Confronting the slouching beast. *Policy Futures Educ.* 14, 1046–1059. doi: 10.1177/1478210316664259

Becker, G. S. (2006). The age of human capital. In H. Lauder, P. Brown, J. Dillabough, A. H. Halsey (eds.) *Education, Globalisation & Social Change*. Oxford, UK: Oxford University Press.

Doherty, R. A. (2007). Education, neoliberalism and the consumer citizen: after the golden age of egalitarian reform. *Crit. Stud. Educ.* 48, 269–288. doi: 10.1080/17508480701494275

Dufour, D. R. (2014). *Le délire occidental: et ses effets actuels dans la vie quotidienne: travail, loisirs, amour*. [Western delirium: and its current effects in everyday life: work, leisure, love.] Paris: Éditions Les Liens qui libèrent.

Dugas, D., Stich, A. E., Harris, L. N., and Summers, K. H. (2020). 'I'm being pulled in too many different directions': academic identity tensions at regional public universities in challenging economic times. *Stud. High. Educ.* 45, 312–326. doi: 10.1080/03075079.2018.1522625

Dugas, D., Summers, K. H., Harris, L. N., and Stich, A. E. (2018). Shrinking budgets, growing demands: Neoliberalism and academic identity tension at regional public universities. *AERA Open* 4:2332858418757736. doi: 10.1177/2332858418757736

Englander, M., and Morley, J. (2021). Phenomenological psychology and qualitative research. *Phenomenol. Cogn. Sci.* 1–29. doi: 10.1007/s11097-021-09781-8

Enslin, P., and Hedge, N. (2019). Academic friendship in dark times. *Ethics Educ.* 14, 383–398. doi: 10.1080/17449642.2019.1660457

Giorgi, A. (1970). *Psychology as a Human Science: A Phenomenologically Based Approach*. Harper andRow.

Giorgi, A., Giorgi, B., and Morley, J. (2017). "The descriptive phenomenological psychological method," in *The SAGE Handbook of Qualitative Research in Psychology*, eds C. Willig and W. S. Rogers (New York, NY: SAGE), 176–192. doi: 10.4135/9781526405555.n11

Giroux, H. (2002). Neoliberalism, corporate culture, and the promise of higher education: the university as a democratic public sphere. *Harv. Educ. Rev.* 72, 425–464. doi: 10.17763/haer.72.4.0515nr62324n71p1

Giroux, H. (2014). *Zombie Politics and Culture in the Age of Casino Capitalism*. New York, NY: Peterlang.

Harvey, D. (2005). *A Brief History of Neoliberalism*. Oxford, UK: Oxford University Press.

Huang, H. (2018). Foucault, Confucius and the in-service learning of experienced teachers in an era of managerialism. *Asia Pac. J. Educ.* 38, 51–61. doi: 10.1080/02188791.2017.1396960

Huang, H., and Vong, S. K. (2016). The confucian educational philosophy and experienced teachers' resistance: a narrative study in Macau. *Front Educ China* 11, 1–22. doi: 10.1007/BF03397100

Huang, H., and Vong, S. K. (2018). Resistance, resilience and re-marginalization: a case study of a visual arts teacher in Macao. *Br. J. Sociol. Educ.* 39, 998–1011. doi: 10.1080/01425692.2018.1454298

Husserl, E. (1977). *Phenomenological Psychology*. The Hague: Martinus Nijhoff Publishers.

Lau, C. M. D., and Yuen, P. K. (2014). The globalisation of public higher education in Macau. *Asia Pac. Educ. Res.* 23, 117–124. doi: 10.1007/s40299-013-0093-x

Li, Y., Feng, Y., and Liu, X. (2021). A study of Chinese university English teachers' subjectivity in a neoliberal EAP policy implementation: from a Foucauldian perspective. *Taboo* 20, 55–74. Available online at: https://digitalscholarship.unlv.edu/taboo/vol20/iss3/4

Li, Y., and Liu, X. (2020). Teaching and resistance at a neo-liberalized University: a teacher's critical reflection and calling for praxis actors in the post-modern professional age. *Open J. Soc. Sci.* 8, 1–12. doi: 10.4236/jss.2020.812001

Lin, Z. J. (2021). "Xulun [Introduction],: in *Research on the Development of Macao's Higher Education Industry*, ed Z. J. Lin (Macau: Macau Innovation and Development Research Association), 1–7.

Liu, J. S. (2021). "Aomen gaodneg jiaoyu chanye de fazhan celue yu lujing [The development strategy and path of Macao's higher education industry]," in *Research on the Development of Macao's Higher Education Industry*, ed Z. J. Lin (Macau: Macau Innovation and Development Research Association), 72–87.

Lo, S. (2009). Casino capitalism and its legitimacy impact on the politico-administrative state in Macau. *J. Curr. Chin. Aff.* 38, 19–47. doi: 10.1177/186810260903800103

Morrison, K. (2009). Higher education students in part-time work in a Chinese city. *Eval. Res. Educ.* 22, 121–144. doi: 10.1080/09500790903499764

Olssen, M., and Peters, M. A. (2005). Neoliberalism, higher education and the knowledge economy: from the free market to knowledge capitalism. *J. Educ. Policy* 20, 313–345. doi: 10.1080/02680930500108718

Rinne, I. (2020). Pedagogic being in a neoliberal school market: developing pedagogical tact through lived experience. *Phenomenol. Pract.* 14, 105–117. doi: 10.29173/pandpr29401

Sandvik, T. (2020). Pedagogy and neoliberalism. *Phenomenol. Pract.* 14, 118–129. doi: 10.29173/pandpr29402

Saunders, D., and Kolek, E. (2017). Neoliberal ideology and college students: developing a customer orientation while in college. *Crit. Educ.* 8, 1–16. doi: 10.14288/ce.v8i8.186175

Seeber, B. K., and Berg, M. (2016). *Slow Professor*. University of Toronto Press.

Sheng, L. (2016). The transformation of island city politics: the case of Macau. *I. Stud. J.* 11, 521–536. doi: 10.24043/isj.365

Shi, W., and Liu, S. D. (2014). Living with casinos: the experience of young dealers in Macau. *J. Youth Stud.* 17, 930–947. doi: 10.1080/13676261.2013.844778

Strange, S. (1997). *Casino Capitalism*. Manchester: Manchester University Press.

Van Manen, M. (1990). *Researching Lived Experience: Human Science for an Action Sensitive Pedagogy*. New York, NY: State University of New York Press.

Van Manen, M. (1991). *The Tact of Teaching: The Meaning of Pedagogical Thoughtfulness*. New York, NY: State University of New York Press.

Van Manen, M. (2015). *Pedagogical Tact: Knowing What to do When You Don't Know What to Do*. California: Left Coast Press.

Wu, J., and Vong, S. K. (2017). Macau higher education expansion in flux: a critical spatial perspective. *Discourse Stud. Cult. Polit. Educ.* 38, 937–954. doi: 10.1080/01596306.2016.1149152

Yu, S. (2015). Becoming a teacher in a gambling city: a case study of two pre-service teachers' motivation for teaching in Macau. *J. Educ. Teach. Int. Res. Pedagogy.* 41, 447–450. doi: 10.1080/02607476.2015.1080431

A systematic and theoretical approach to the marketing of higher education

Edna Rabenu[1]* and Or Shkoler[2]

[1]Tel-Hai College, Tel Hai, Israel, [2]HEC Montréal, Université de Montréal, Montreal, QC, Canada

The aim of this article was to open a hatch to the consumer psychology research through the eyes of Facet Theory. The Facet Theory enables to delve into a concept or an issue under investigation and define it formally, systematically, and comprehensively, but still parsimoniously. In order to better explain its philosophical basis and the principles of this theory, we apply and demonstrate it on the domain of marketing of higher education to students. There are four distinct facets identified in this regard, namely, (A) Achieving Personal Goals, (B) Institution's Marketing Orientation, (C) Secondary Decision Criteria, and (D) Level of Education. Based on those facets and their related respective elements, a suggested definitional directive for the marketing of higher education to students is construed.

Theoretical background

In the current paper, a systematic theoretical approach with an immense potential to guide both quantitative and qualitative research paradigms, namely, the Facet Theory, will be presented. It paves a way in which scholars may formulate and/or probe theories, constructs, and philosophical perspectives by interweaving ideas with reality, terminologies, data/information, phenomenologies, ontologies, mereologies, and epistemologies (e.g., Shye, 1991; Hackett, 2018a). Further, it can be applied in any field of knowledge from education (e.g., Friedman, 2008; Fisher, 2016, 2018; Alt, 2018), psychology (e.g., Rabenu et al., 2015; Rabenu and Tziner, 2016; Hackett, 2019), management and organizational behavior (e.g., Shkoler et al., 2017b), to even birds' behavior (Hackett et al., 2019). The Facet Theory (FT) is limited to neither a specific research paradigm (quantitative vs. qualitative, case studies, etc.) nor a certain knowledge domain, and it can be applied to any. The essence of the Facet Theory analytical approach is funneled into a conceptual entity called a mapping sentence; it offers a meticulous, systematic, and parsimonious definitional framework of any phenomenon under investigation. The current paper focuses on the mapping sentence, giving an exemplary demonstration. Both, the Facet Theory and the mapping sentence, will be elaborated further.

The article is structured as follows: (1) the context of higher education is presented, followed by (2) an explanation about the Facet Theory and the mapping sentence, and finalized with (3) the formulation of a mapping sentence—demonstrated on the marketing of higher education to students. Notably, the paper and the mapping sentence touch the broad domain of higher education and students. However, due to great variability, sensitivity, and complexity within this field, in order to encapsulate all of them, the FT is the prime candidate for the job. To emphasize, the theoretical background relies on the literature of *international students[1]* as their special situation can reflect all students (domestic included), but not vice versa. For instance, in addition to other things, international students also deal with citizenship and residency issues, legal and visa problems, long-distance transportation, unique psychological challenges (e.g., loneliness and discrimination), etc.; these will also be elaborated further, specifically in mapping sentence section. Importantly, consumer psychology harbors marketing as a knowledge field, as the former is multidisciplinary, naturally extending itself *via*: (1) sociology, (2) psychology, (3) social–psychology, (4) economics and marketing, and (5) anthropology (Loudon and Della Bitta, 1993; Chen, 2008; Kotler and Armstrong, 2014; Kotler and Keller, 2016; Jansson-Boyd, 2019; Rabenu and Shkoler, 2020b). This highlights the complexity of the field and promotes the use of the Facet Theory as an indispensable tool to simplify, but formally define, that field.

Marketing of higher education

Higher education is often considered a marketable service (e.g., Shkoler and Rabenu, 2020b). Therefore, marketing higher education to students falls under the umbrella domain of consumer psychology (see Hackett, 2018b; Shkoler and Rabenu, 2020b). To elaborate, the decision-making process to "purchase" higher education by students necessitates complex psychological and cognitive processes. Academic institutions need to understand these processes, and by using intelligent marketing to attract prospective students, they can influence their decision making and tilt or support their choices accordingly (Shkoler and Rabenu, 2020b).

Knight (2011), for example, contemplated that education is regarded as a tradable service, birthing new commercial possibilities in cross-border education. On top of that, recruiting (international) students can be considered as a "key migration industry" (Beech, 2018, p. 622).

---

[1] An international student is defined as "an individual whose primary goal is the acquisition of (some form of) higher education in a country in which he or she has *no* permanent residential status and *no* local citizenship, regardless of the studying method" (Shkoler and Rabenu, 2020a, p. 19).

Marketing higher education to students is challenging as it involves a complex arena with many actors/players: (1) the students; (2) academic institutions; (3) governments; (4) the economic systems (globally and locally); and more (see Beine et al., 2014; Beech, 2018). In this paper, there is a focus on two of the above:

The students are the potential *consumers/customers* of higher education, which is why it is of paramount importance to understand their motivations, needs, and expectations (e.g., Prugsamatz et al., 2006; Bunce et al., 2017; Nafari et al., 2017; Shkoler and Rabenu, 2022). By identifying their expectations, meeting them, or even exceeding them altogether, this has the potential to support marketing efforts of higher education institutions (e.g., Prugsamatz et al., 2006; Woodall et al., 2014; Nixon et al., 2018), inducing and increasing customer value (e.g., Chen, 2008).

The academic institutions are the *providers* of higher education, with exceedingly increasing competition among them (Beech, 2018, p. 622). There are several reasons for these institutions (as well as countries) to be courting students, in general, and international students, in particular: tuition fees (as an income source), support for research, potential skilled/talented workers in future, diversity (e.g., cultural and demographic), networks, and more (for further reading, see Shkoler and Rabenu, 2022). As such, these academic institutions must be aware of and try to actively discover prospective students' needs, motivations, preferences, and wants (see Appendix 2 in Shkoler and Rabenu, 2022), resulting in the application of the prospective student to the institution, in order to ensure sustainable higher education.

Facet theory

Research, particularly in the social sciences, usually involves complex phenomena, variables, and processes (e.g., Friedman, 2008; Tziner, 2018; Roazzi and Souza, 2019). To illustrate, it is not trivial to understand and define complex concepts such as values, intelligence, motivation, and attitudes. While striving to achieve high-quality research and in order to conceptualize these concepts, we need to expose their intricate components and their interrelationships. It is obvious that poor conceptual definition of content domains impinges the generation and accumulation of knowledge and impairs, for example, the replicability of research (Tziner, 2018).

In this article, we suggest using Facet Theory as a venerable and systematic paradigm for conceptualizing complex phenomena (e.g., Shkoler et al., 2017b). As a demonstrative example, an application of this theory is done on the marketing of higher education to students.

The Facet Theory is a method that facilitates and fosters formal definitions of components of a problem or the issue under investigation (Guttman, 1957), and hence,

it allows for the depiction of a complex interplay of variables (Guttman and Greenbaum, 1998; Hackett, 2014; Roazzi and Souza, 2019; Solomon(Ed.)., 2021). In FT, the universe of observations is formally defined. Additionally, FT weaves this by testing hypotheses (about the relationship between the definitional framework and the structure of the empirically oriented observations) (Elizur, 1984). To elaborate, FT provides both the definitional system of the universe of observations and the rationale for hypotheses of a research both quantitative (Levy, 1985; For further reading, see Guttman and Greenbaum, 1998; Roazzi and Souza, 2019; Solomon(Ed.)., 2021) and qualitative (e.g., Hackett, 2016, 2021a). However, FT has invaluable contribution to the definition of concepts, based on using mapping sentence as the definitional framework, regardless of whether it is applied in followed-up quantitative research or not (e.g., Schlesinger, 1991; Hackett, 2016, see ahead). In any case, adopting the FT entails that the researcher will most probably jungle multiple variables simultaneously, that is—until the creation of their combined formulation into harmonious and meaningful declaration of the domain of research. However, utilizing FT can be challenging and quite uncommon (Hackett, 2021a, p. X).

Simply put, a *facet* is articulated as a group of common characteristics/traits, and this group represents semantic components of a desired context field (Yaniv, 2011). More specifically, a facet is "a classification of item domains of a given content universe according to some rule" (Elizur, 1984, p. 380). These common traits are dubbed as *elements* (of a facet). A set of finely defined facets (and their respective elements) comprise the essence of FT—the mapping sentence.

Definitional framework and the mapping sentence

The definitional framework for formally defining a content universe is called a "mapping sentence." It is the basic tool offered by the FT (e.g., Guttman, 1957; Canter, 1985; Borg and Shye, 1995). It serves as a guide and a beacon for: (1) first formulating hypotheses; then (2) creating structured assumptions; then (3) constructing systematic measures; then (4) planning and collecting observations; and finally (5) analyzing the data (e.g., Levy, 2005); it is the heart of the FT approach (Hackett, 2014, p. 67).

Moreover, after to Levy (1985, p. 60), a mapping sentence, which defines a universe of observations for a selected theory, has the following three main components: (1) the target population (to be classified), (2) the spectrum of variables (constituting the criteria for the classifications), and (3) the category range for each variable (see also Shye, 1991). The mapping sentence includes these three kinds of sets. It combines several exclusive *facets* (categories that classify variables under a specific and unifying rule), which define the content universe of the domain or area of the study. Every facet may contain multiple *elements* ("sub-categories"), with a minimum of two elements per facet, which also must fit the facet's rule. The facets are connected between them by text, while all are delineated by a common range (e.g., Elizur, 1984; Shye, 1991; Tziner, 2018). By way of illustration, a mapping sentence "looks" and reads like an ordinary sentence.

In essence, there are two kinds of mapping sentences, namely, *empirical* (also named "general") *and theoretical* (also named "declarative") (Schlesinger, 1991; Hackett, 2016, 2021a). More specifically, empirical mapping sentence may lead to the creation of a research measure (operationalization) and research hypotheses followed by either support or falsifying of hypotheses (see, e.g., parental involvement perception by Fisher, 2016; (re)defining workaholism by Shkoler et al., 2017b; and defining coping with stress by Rabenu et al., 2015).

With regard to the theoretical mapping sentence, however, Hackett (2016, 2021a) argues for the utility of use of the mapping sentence as a standalone philosophically coherent approach when attempting to understand the phenomenological human experience. Further, he perceived mapping sentence as a tool to investigate the hermeneutical consistency of research, forming a precise, though flexible, framework in philosophical and qualitative psychological research (Hackett, 2016, p. 5; see also Schlesinger, 1991). This mapping sentence can lead to the definition of very complex concepts without necessitating a follow-up empirical research (see, e.g., Rabenu and Tziner, 2016—defining resilience; Rabenu and Hackett, 2017—defining work discrimination).

It is important to emphasize that one of the main contributions and properties of the mapping sentence, by and large, is its ability to provide a comprehensive definition of a phenomenon, in a parsimonious manner (e.g., Shkoler et al., 2017b). For further reading, we recommend reading Hackett (2018a) and Tziner (2018).

Of note, in this article the focus is on a theoretical mapping sentence in the qualitative sense; the declarative mapping sentence will be elaborated on further. Hackett (2016, 2018a, 2019, 2021a,b) defined the declarative mapping sentence (DMS), as "...a specification of the research domain of interest in terms of the domain's important components that have appeared in the literature along with the sub-types or elements of each facet, joined in a sensical manner to express a hypothesis regarding the experiential nature of the research domain" (Hackett, 2021b, p. 2). Therefore, from a qualitative point of view, the DMS is a proposition that serves as a solid surface for developing research instruments to gather information (up-bottom). However, the DMS can also serve researchers in the opposite direction, namely, bottom-up. In this case, such as in the grounded theory approach (Glaser and Strauss, 1967), the researchers document what happens in the field, analyze the collected data, and may

use the DMS as a tool for systematic thinking which will assist them in building their theoretical background and arguments, while the facets serve as themes themselves (Hackett, 2021b). Also, as opposed to the *empirical* mapping sentence, the DMS need not include the commonly used "range facet," but rather ends in a qualitative outcome (by the declarative nature of the mapping sentence) (Hackett, 2021a,b,c).

In this article, we construct and present a theoretical mapping sentence that we believe represents the content of the marketing higher education to students, for the goal of demonstrating the DMS is the exemplary demonstration in the current article as this issue includes, *inter alia*, subjective experience and perceptions of the prospective students which better fit the qualitative research approach, both phenomenologically and epistemologically; qualitative research explores phenomena that are difficult to quantify by measurement or mathematics (e.g., beliefs, experiences, and knowledge) (Brod et al., 2014).

Formulating the mapping sentence

We capitalize on vast literature of the drivers and reasons that individuals seek higher education internationally (Facet A), different marketing approaches (e.g., the 4Ps; Borden, 1964; McCarthy, 1964. For further reading, see Kotler, 1999) that academic institutions may use to suit their needs (Facet B), understanding of the plethora of constraints that these students need to cope with (Facet C), in tandem with the level of education pursued (Facet D). As such, one of the main goals of the current paper was to offer a systematic theoretical framework for marketing higher education to students (as mentioned in "Theoretical Background" section, the examples and content broadly touch students, but specifically on international prospectives). To this end, we utilize the Facet Theory analytical approach to formulate a comprehensive yet parsimonious mapping sentence (i.e., systematic definition), as directions for higher education institutions and marketing personnel. The suggested formulated mapping sentence is depicted in **Figure 1**, and each of its components is elaborated further.

Facet A: Achieving personal goals

As opposed to regular travelers or tourists, international students *actively pursue* higher education abroad (e.g., King and Gardiner, 2015). Notwithstanding, these students seek higher education for three main reasons, but, ultimately, all of them revolve around enhancing the concept of the self and in other words enhancing the (1) human capital, (2) financial capital, and/or (3) psychological capital.

Element a1: Human capital

This is the knowledge, skills, and abilities of an individual, usually measured by the (highest) level of education and by the practical "know-how" experience (e.g., Luthans and Youssef, 2004; Luthans et al., 2004; Felício et al., 2014). Prospective students often seek out "the best" education possible for them, and sometimes, this can only be found in foreign countries (Findlay et al., 2012). Thus, acquiring higher(est) levels of education is a venerable approach to increase one's human capital (e.g., Bourdieu, 1986; Findlay et al., 2012), as it may be a "distinguishing identity marker" (Findlay et al., 2012, p. 128; Lomer et al., 2018; e.g., higher social status, prestige, and reputation; Bourdieu, 1986). Lastly, as this is active (i.e., by choice) enhancement of human capital, there is another aspect to that—passive (i.e., absorption) enhancement—for example, by learning a new language or culture in the destination country (e.g., Cubillo et al., 2006; Yang, 2007; Varghese, 2008; Hyams-Ssekasi et al., 2014; Tan, 2015; Wu et al., 2015; Lewis, 2016; Nathan, 2017; Huong and Cong, 2018).

Element a2: Financial capital

Evidently, individuals with higher/better education often earn higher wages in return and, hence, experience less unemployment (Card, 1999, p. 1802. See also Becker, 1964). In essence and economic terms, there is a consideration of costs–benefits when individuals decide to migrate abroad (González et al., 2011), and international students often seek to increase their employability and financial status in future (Beine et al., 2014; Huong and Cong, 2018) and have more career opportunities (Cubillo et al., 2006; Yang, 2007; Lewis, 2016).

Element a3: Psychological capital

It is defined as a positive psychological state of an individual characterized by: self-efficacy, optimism, hope, resilience, gratitude, flow, courage, creativity, forgiveness, authenticity, emotional intelligence, and more (Luthans et al., 2015). It "involves investing in the actual self to reap the return of becoming a possible self" (Avolio and Luthans, 2006, p. 147; see also Luthans et al., 2004). Hence, prospective students believe that it is possible to develop and augment this capital *via* higher education in a foreign country (as previously mentioned, this is usually considered as superior to obtaining this kind of capital in their home country). They seek, therefore, psychological growth (Yakunina et al., 2013) through improving their: self-efficacy, independence, personal pride, acceptance of ambiguity, experience of a different culture or even teaching methods, discovering new places, etc., (e.g., Mazzarol and Soutar, 2002; Cubillo et al., 2006; Yang, 2007;

Academic institutions' marketing efforts, to attract prospective students, should be directed to

A   **Achieving Personal Goals**

fulfil the latter's attainment of   { a1 human capital   in correspondence to the
                                      a2 financial capital
                                      a3 psychological capital }

B   **Institution's Marketing Orientation**

{ b1 price   marketing approach of the institution, based on
  b2 product
  b3 place
  b4 promotion }

C   **Secondary Decision Criteria**

{ c1 formal/legal requirements
  c2 social resources
  c3 psychological resources
  c4 financial reserves
  c5 demographical status
  c6 transportation accessibility
  c7 home-destination countries' affiliations/ties
  c8 language familiarities/barriers
  c9 recommendations or criticisms }

D   **Level of Education**

considerations, as directed by a/an   { d1 undergraduate   level of education, resulting in the
                                         d2 graduate
                                         d3 postgraduate }

application of the prospective student to the institution.

FIGURE 1
Mapping sentence of marketing higher education to students.

Varghese, 2008; Jianvittayakit and Dimanche, 2010; Tan, 2015; Lewis, 2016; Nathan, 2017; Huong and Cong, 2018). Lastly, it is important to note that hedonistic desires are a part of the psychological capital (i.e., pleasure fulfillment and sensuous gratification; Schwartz, 2012). Meaning, students choose to study abroad also for reasons such as traveling opportunities, liberal sex, local drinking culture, and living without (m)any commitments (e.g., Yang, 2007; Jianvittayakit and Dimanche, 2010; Nghia, 2015; Lewis, 2016; Nathan, 2017; Huong and Cong, 2018).

Facet B: Institution's marketing orientation

Regardless of what motivation is driving the prospective students, higher education institutions worldwide have different marketing strategies, education offered, and competitive advantages. As such, approaching a prospective student can be delicate, as they seek different things, and the institution will need to (re)consider its marketing and branding

positions(e.g., Ivy, 2008; Khilukha et al., 2020; Lim et al., 2020). Commonly used in a marketing mix, the 4Ps model remains very prominent (Borden, 1964; McCarthy, 1964; see also Kotler, 1999) and entails the following four main marketing foci (approaches): (1) price, (2) product, (3) place, and (4) promotion.

Element b1: Price

It is defined as everything (tangible/intangible) given by the buyer/acquirer (in terms of money, time, and effort given) to obtain a product; it tackles the *customer cost* aspect of the exchange (Kotler, 1999; Yudelson, 1999). For higher education, an institution (university/college) wishing to position itself in this approach may want to emphasize the benefits it offers regarding the charged fees for enrollment (e.g., tuition fees, flexibility in paying them, flexibility of the tuition approach, etc.) (Ivy, 2008; Lim et al., 2020).

Element b2: Product

It is defined as the clear benefits the user will obtain from the purchase/exchange through time; it tackles the *customer solution* aspect of the exchange (Kotler, 1999; Yudelson, 1999). For higher education, an institution may wish to emphasize, for example, aspects related to the curriculum of the degrees and diplomas it offers (e.g., range of choice of majors and electives). Additionally, the institution can highlight other incentives which may add special value to the degree (e.g., total number of credits for the degree, availability of on-campus accommodation, exchange opportunities for international students, students' racial diversity, more liberal environments, residential requirements of the diploma/degree, the size of classes, etc.). In addition, the image of the university/college can also be capitalized on (e.g., academic reputation of the faculty/staff, institution's reputation *via* press reviews and leading league tables, the online website's content, and sophistication of the institution in demonstrating the reputation of each of its schools, prestige, status, and more) (Ivy, 2008; Lim et al., 2020).

Element b3: Place

It is defined as the consideration of where the product is made available and how it is, *de facto*, displayed; it tackles the *convenience* aspect of the exchange (Kotler, 1999; Yudelson, 1999). For higher education, an institution may wish to emphasize the attractiveness of the place it is situated in (e.g., a "cool" city, a lavish country, proximity to public transportation

and ease of transit, availability of shuttles to the institution, traveling/touristic opportunities, liberal culture, proximity to nature/vistas, can registration be made online in addition to on-site? is information about the programs made available online? etc.) [for further reading, see Rabenu and Shkoler (2020a)].

Element b4: Promotion

It is defined as all of the information transmitted among parties in the exchange/purchase, and the *communication*, of the exchange, to the consumers that they "need" this specific product (Kotler, 1999; Yudelson, 1999). For higher education, an institution may wish to employ standard mass advertising, done through the traditional media for the communication of the information about its brand, offerings, degrees, and other important aspects of the product—to target markets (e.g., publicity and public relations, press advertising, electronic and online media, etc.) (Ivy, 2008; Lim et al., 2020).

Facet C: Secondary decision criteria

Motivation alone (i.e., Facet A) is usually an insufficient drive force. There are secondary decision criteria that may either push or hamper (support and enhance vs. constrain and inhibit) the prospective student toward their final decision to study abroad. There are quite several such conditioning/moderating [e.g., Appendix in Shkoler et al. (2017a)] factors, each with a different effect and impact on the decision: (1) formal/legal requirements, (2) social resources, (3) psychological resources, (4) financial reserves, (5) demographic status, (6) transportation accessibility, (7) home–destination countries' affiliations/ties, (8) language familiarities/barriers, and (9) recommendations or criticisms. Each element will be elaborated succinctly: when favorable—they will support the decision; when not—they will inhibit it.

Element c1: Formal/legal requirements

Examples are higher education difficulties at home [such as fees, admission and difficulty of gaining entry, and (un)availability of programs]; impact of legal procedures in the destination country (such as immigration, legislation, and visa); and facilitated admissions in the destination institute (such as recognition of previous qualifications, certificates and/or diplomas, and easier processes) (e.g., Becker and Kolster, 2012; Ahmad et al., 2016; Huong and Cong, 2018).

Element c2: Social resources

Social networks and relationships are in either the home or destination countries that can potentially provide financial, emotional, and/or physical support for the prospective student, such as family or friends (Mazzarol and Soutar, 2002; Li and Bray, 2007; Yang, 2007; Becker and Kolster, 2012; Beine et al., 2014; Nghia, 2015; Tan, 2015; Lewis, 2016; Tantivorakulchai, 2018).

Element c3: Psychological resources

Relocating to another country is usually accompanied with varying levels of uncertainty, challenges, and difficulties (e.g., hostility, bias, stress, loneliness, and more; Sawir et al., 2008; Rienties and Nolan, 2014; Lee, 2015; Poyrazli, 2015; Yan and Pei, 2018). Personal characteristics (e.g., self-efficacy and resilience) that can support the migration are essential for a better assimilation in the destination country, stress coping, and adaptation (Kosic et al., 2004; Chen, 2007, 2008; Wang, 2009; Ramelli et al., 2013; Yakunina et al., 2013; Mak et al., 2015; Meshulam and Harpaz, 2015; Kashima et al., 2017).

Element c4: Financial reserves

International higher education is often expensive (Rabenu and Shkoler, 2020a). Tuition fees, other studying costs, and living costs impinge the capacity for self-sustenance, and, therefore, the monetary reserves one has can definitely aid in relocating (e.g., Becker and Kolster, 2012; Beine et al., 2014; Lewis, 2016; Huong and Cong, 2018).

Element c5: Demographical status

Simply put, the marital and sociodemographic status of the prospective student may have profound impacts on the decision to relocate (e.g., parenthood, marriage, etc.; Baldridge et al., 2006). Relocating an entire household is much more difficult than migrating on one's own, both logistically and bureaucratically.

Element c6: Transportation accessibility

Nowadays, various transportation modes and widespread routes have improved the accessibility to universities and colleges around the world (Lee, 2015). Additionally, this is based on the: (1) *availability* of transportation inside and/or between countries; (2) *costs* of the transportation; and (3) importance of the *geographical proximity* between home and destination

countries (e.g., Becker and Kolster, 2012; Beine et al., 2014; Tan, 2015; Ahmad et al., 2016; Huong and Cong, 2018).

Element c7: Affiliations/ties between home and destination countries

The relationship between countries is an important aspect in relocating. Sharing sociohistorical and cultural similarities can encourage students to migrate from their home country to another country boasting similar characteristics (e.g., Argentinians and Colombians moving to Spain; Lasanowski, 2011). This is based on many considerations, such as religious, economic, political, linguistic, cultural, historical, and colonial (e.g., Cubillo et al., 2006; Bolsmann and Miller, 2008; Varghese, 2008; Kishun, 2011; Becker and Kolster, 2012; Nathan, 2017; Huong and Cong, 2018).

Element c8: Language familiarities/barriers

Language has a cardinal role as a key mobility motivator (Misra et al., 2003; Andrade, 2006; Lasanowski, 2011). Language barriers, on the contrary, also hamper learning, communication, understanding of academic tasks and assessments, and technical necessary language (e.g., in laws, psychology, business administration, marketing, and more) and, ultimately, may impair academic writing and achievements (Andrade, 2006; Cubillo et al., 2006; Yang, 2007; Varghese, 2008; Wilkins et al., 2012; Beine et al., 2014; Wu et al., 2015; Lewis, 2016; Cowley and Hyams-Ssekasi, 2018).

Element c9: Recommendations or criticisms

Trustworthy significant others and other sources (e.g., family, agents, sponsors, friends and peers, ex-students, professors and teachers, etc.) can support or impinge on a decision to study abroad by either giving a recommendation or providing criticisms (Mazzarol and Soutar, 2002; Cubillo et al., 2006; Maringe and Carter, 2007; Hildén, 2011; Jon et al., 2014; Huong and Cong, 2018; Santos et al., 2018). Notably, personal experience (e.g., alumni) is perceived to be highly trustworthy and is held in greater regard than random suggestions.

Facet D: Level of education

Beyond basic motivation (i.e., Facet A), the level of education, that is the degree sought after, is, by definition, an integral and axial part of the decision to study abroad. To illustrate, graduate students (pursuing a *research* degree)

usually differ from other students (seeking a *professional* degree) and from *undergraduates*. For example, Mpinganjira (2009) has found that *undergraduates* were driven by seeking more experience and career opportunities. On the contrary, *postgraduate* students were (de)motivated by the (un)availability of courses at their home country (notably, neither group was affected by the entry and/or admission technicalities). Furthermore, graduates seek to acquire higher education internationally for the purpose of gaining higher-quality education (Kim et al., 2018). As such, three main education levels are critical in deciding how to market higher education to international students, as in each case, the baseline motivations, incentives, and drives to choose a certain program (and where) are quite different from one another: (1) undergraduate, (2) graduate, and (3) postgraduate.

Element d1: Undergraduate

Seek to acquire an undergraduate (bachelor's, B.A.) degree.

Element d2: Graduate

Seek to acquire a graduate (master's, M.A.) degree.

Element d3: Postgraduate

Seek to acquire a postgraduate (doctorate, Ph.D.) degree.

These were the concrete and substantive facets, which leave a common outlining facet to be introduced—the range facet.

Discussion

The current article had two main goals. The first is to present the Facet Theory as a recommended methodology when defining concepts (new or otherwise) in a systematic and comprehensive manner. This is done with the utilization of the mapping sentence as the directive of the definition, and one of the main tools FT offers the researcher. The second is to demonstrate an application of the FT *via* a definition to a specific domain—marketing higher education to students. As was illustrated and elaborated, the (theoretical/declarative) MS allowed for setting an organized (formally and systematically) and well-planned definition that encompasses the comprehensive content world in the specific domain previously mentioned. This definition may be used in follow-up research in construction of qualitative tools and methods that will rely on the MS, in order to collect information from the informants—prospective student candidates. On the contrary, qualitative researchers who have already collected

these data from students about their experience with the marketing of higher education programs are encouraged to use the MS in this article as a solid theoretical basis to their thematic analysis when the facets are used as themes.

Limitations

The literature is aware, however, that there are researchers who might view the systematic and methodic framing of the MS as rendering the phenomenological richness as superficial and shallow. Nevertheless, the rich description of feelings and lived experiences that may arise from any research field does not contradict the MS, but can build, support, or use it (Shye, 1991).

In addition, we stress that the MS in the current paper is conditioned by the culture of the prospective student just as well as by the culture of the academic institutions (i.e., different cultures exhibit distinguished needs, motivations, aspirations, and wants; e.g., human capital, etc.). Because we used "Western point of view," the generalizability of the MS is somewhat diminished.

Lastly, the current MS was construed without consultation with experts in the field, thus reducing its content validity[2]. Traditionally, exploring such validity is qualitative in nature (Hinton and Platt, 2018). To elaborate, the researcher ought to approach around 5–10 subject matter experts (SMEs)—individuals within the relevant field, versed in the relevant practitioner and/or academic knowledge (see, e.g., Hinton and Platt, 2018, p. 71). These experts are, for example, marketing managers, academic program managers, student services administration, researchers in higher education and education management, and others. These experts are tasked with (1) making judgment to the degree to which each individual element in the MS is relevant and content-valid to the framework of the MS itself (i.e., marketing higher education to students) and (2) evaluating the MS in its entirety, as a whole entity (see Brod et al., 2014; Hinton and Platt, 2018). These methods are reactive in essence, and as such, we also suggest a more proactive approach to establishing content validity in this regard. It would be very beneficial to create a workshop in which SMEs will be educated in brief in the FT and, specifically, on how to construct and design an MS. Following this, they will be asked to generate an MS, and then, we will assess and compare the alignment and convergency of their MS and ours, making necessary adaptations and amendments as required.

---

2 *Content validity*: "derived during concept elicitation, is the measurement property that assesses whether items are comprehensive and adequately reflect the… perspective for the population of interest" (Brod et al., 2014, p. 5257) and it is "a measure of the degree to which the items within a scale *appear* to measure the construct of interest, as judged by subject matter experts" (Hinton and Platt, 2018, p. 61; italics are in the original article).

Future recommendations

Although the current paper was philosophical and qualitative in nature, due to the complexity of the field (i.e., consumer psychology and marketing) it is encouraged to use a mixed-method research approach to unveil "more sides of the same coin" (e.g., Shkoler, 2018); both methods may synergize to produce a more refined mapping sentence and a better understanding of the field.

The MS (**Figure 1**) can be used as a compass and directive for academic institutions to compile their own marketing mix to attract students to their ranks. To this end, academic institutions may design a survey that is based on the different elements comprising the MS (**Figure 1**), thus helping them by better understanding the students' motivations, experiences, expectations, needs, and aspirations. An example for such a tool which focuses on the motivations of students, particularly, can be seen in Shkoler and Rabenu (2022). Example items from the Initial/Basic Prospective (International) Students Needs Survey include: (1) for Facet A (Achieving Personal Goals): "I am interested in achieving personal goals, to increase my **human** capital (such as knowledge and skills): _____" or "I am interested in achieving personal goals, to increase my **psychological** capital (such as self-confidence and resilience): _____"; (2) for Facet C (Secondary Decision Criteria): "The extent of your social resources (such as family, friends, and acquaintances): _____" or "Language barriers or familiarity (the extent of familiarity with the local language in speech, reading and writing): _____." For further reading, see Appendix 2 in Shkoler and Rabenu (2022).

The current paper is of a basic research design and is conceptual in essence, based on purely academic literature. It is philosophical and not applied. As such, it is highly recommended to confirm the MS's viability and credibility by subject matter experts and/or relevant personnel (see also "Limitations" section). All in all, based on the MS, we may suggest few channels for applied actions that can be either specific or generic and can be taken in most institutions, for example (1) using digital marketing in social media to increase informal ranking of the institution (e.g., element c9); (2) raising awareness in the marketing departments for the complexity and sensitivity surrounding marketing higher education to students in the increasingly competitive academic world; (3) gauging the effectiveness of current

marketing mix and actions to attract students, making changes as required; (4) monitoring student retention post factum according to specific criteria (e.g., based on Facet C in the MS; **Figure 1**); and more.

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.

Author contributions

ER: conceptualization, writing, original draft, and reviewing and editing. OS: writing, reviewing, editing, and visualization. Both authors approved the manuscript for publication.

Acknowledgments

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

Ahmad, S. Z., Buchanan, F. R., and Ahmad, N. (2016). Examination of students' selection criteria for international education. *Int. J. Educ. Manag.* 30, 1088–1103. doi: 10.1108/IJEM-11-2014-0145

Alt, D. (2018). Students' perceived constructivist learning environment: Empirical examples of the comparison between facet theory with smallest space analysis and confirmatory factor analysis. *Eur. J. Psychol. Assess.* 34, 432–443. doi: 10.1027/1015-5759/a000358

Andrade, M. S. (2006). International students in english-speaking universities: Adjustment factors. *J. Res. Int. Educ.* 5, 131–154. doi: 10.1177/1475240906065589

Avolio, B. J., and Luthans, F. (2006). *The high impact leader: Moments matter in accelerating authentic leadership development*. New York, NY: McGraw-Hill.

Baldridge, D. C., Eddleston, K. A., and Veiga, J. F. (2006). Saying no to being uprooted: The impact of family and gender on willingness to relocate. *J. Occup. Organ. Psychol.* 79, 131–149. doi: 10.1348/096317905X53174

Becker, G. S. (1964). *Human capital: A theoretical and empirical analysis with special reference to education*. New York, NY: Columbia University Press.

Becker, R., and Kolster, P. (2012). *International student recruitment: Policies and developments in selected countries*. The Hague: Nuffic.

Beech, S. E. (2018). Adapting to change in the higher education system: International student mobility as a migration industry. *J. Ethn. Migr. Stud.* 44, 610–625. doi: 10.1080/1369183X.2017.1315515

Beine, M., Noël, R., and Ragot, L. (2014). Determinants of the international mobility of students. *Econ. Educ. Rev.* 41, 40–54. doi: 10.1016/j.econedurev.2014.03.003

Bolsmann, C., and Miller, H. (2008). International student recruitment to universities in England: Discourse, rationales and globalisation. *Glob. Soc. Educ.* 6, 75–88. doi: 10.1080/14767720701855634

Borden, N. H. (1964). The concept of the marketing mix. *J. Advert. Res.* 4, 2–7.

Bourdieu, P. (1986). "The forms of capital," in *The handbook of theory and research for the sociology of education*, ed. J. G. Richardson (New York, NY: Greenwood Press), 241–258.

Borg, I., and Shye, S. (1995). *Facet theory: Form and content*. Thousand Oaks, CA: Sage.

Brod, M., Pohlman, B., and Tesler Waldman, L. (2014). "Qualitative research and content validity," in *Encyclopedia of quality of life and well-being research*, ed. A. C. Michalos (Dordrecht: Springer Netherlands), 5257–5265. doi: 10.1007/978-94-007-0753-5_3848

Bunce, L., Baird, A., and Jones, S. E. (2017). The student-as-consumer approach in higher education and its effects on academic performance. *Stud. High. Educ.* 42, 1958–1978. doi: 10.1080/03075079.2015.1127908

Canter, D. (1985). "How to be a facet researcher," in *Facet theory: Approaches to social research*, ed. D. Canter (New York, NY: Springer), 265–275.

Card, D. (1999). "The causal effect of education on earnings," in *Handbook of labor economics*, Vol. 3, eds O. Ashenfelter and D. Card (Amsterdam: Elsevier), 1801–1863.

Chen, L.-H. (2007). Choosing Canadian graduate schools from afar: East Asian students' perspectives. *High. Educ.* 54, 759–780. doi: 10.1007/s10734-006-9022-8

Chen, L.-H. (2008). Internationalization or international marketing? Two frameworks for understanding international students' choice of Canadian universities. *J. Market. High. Educ.* 18, 1–33. doi: 10.1080/08841240802100113

Cowley, P., and Hyams-Ssekasi, D. (2018). Motivation, induction, and challenge: Examining the initial phase of international students' educational sojourn. *J. Int. Stud.* 8, 109–130. doi: 10.5281/zenodo.1101039

Cubillo, J. M., Sánchez, J., and Cerviño, J. (2006). International students' decision-making process. *Int. J. Educ. Manag.* 20, 101–115. doi: 10.1108/09513540610646091

Elizur, D. (1984). Facets of work values: A structural analysis of work outcomes. *J. Appl. Psychol.* 69, 379–389. doi: 10.1037/0021-9010.69.3.379

Felício, J. A., Couto, E., and Caiado, J. (2014). Human capital, social capital and organizational performance. *Manag. Decis.* 52, 350–364. doi: 10.1108/MD-04-2013-0260

Findlay, A. M., King, R., Smith, F. M., Geddes, A., and Skeldon, R. (2012). World class? An investigation of globalisation, difference and international student mobility. *Trans. Inst. Br. Geogr.* 37, 118–131. doi: 10.1111/j.1475-5661.2011.00454.x

Fisher, Y. (2016). Multi-dimensional perception of parental involvement. *Univ. J. Educ. Res.* 4, 457–463.? doi: 10.1080/09638288.2016.1213899

Fisher, Y. (2018). Concealed and unconcealed motives for joining the parent-teacher association: Mapping sentence and smallest space analysis. *Front. Psychol.* 9:1705. doi: 10.3389/fpsyg.2018.01705

Friedman, I. (2008). "Strategy and organizational values at school: Strength, prestige and compliance [in Hebrew]," in *Facet theory: Theory and research in social science*, eds E. Yaniv and D. Elizur (Ramat Gan: Facet Theory Association), 15–45.

Glaser, B. G., and Strauss, A. L. (1967). *The discovery of grounded theory: Strategies for qualitative research*. London: Aldine Publishing Company.?

González, C. R., Mesanza, R. B., and Mariel, P. (2011). The determinants of international student mobility flows: An empirical study on the erasmus programme. *High. Educ.* 62, 413–430. doi: 10.1007/s10734-010-9396-5

Guttman, L. (1957). "Introduction to facet design and analysis," in *Proceedings of the fifteenth international congress of psychology*, (Amsterdam: North Holland publishing Co).

Guttman, R., and Greenbaum, C. W. (1998). Facet theory: Its development and current status. *Eur. Psychol.* 3, 13–36.? doi: 10.1027/1016-9040.3.1.13

Hackett, P. M. W. (2014) *Facet theory and the mapping sentence: Evolving philosophy, use and application*. London: Palgrave Macmillan. doi: 10.1057/9781137345929.0006

Hackett, P. M. W. (2016). Facet theory and the mapping sentence as hermeneutically consistent structured meta-ontology and structured meta-mereology. *Front. Psychol.* 7:471. doi: 10.3389/fpsyg.2016.00471

Hackett, P. M. W. (2018a). "Declarative mapping sentence mereologies: Categories from aristotle to lowe," in *Mereologies, ontologies and facets: The categorical structure of reality*, ed. P. M. W. Hackett (Lexington: Lexington Books), 135–160.

Hackett, P. M. W. (ed.) (2018b). *Quantitative research methods in consumer psychology: Contemporary and data driven approaches*. London: Routledge.

Hackett, P. M. W. (2019). Facet-mapping therapy: The potential of facet theory philosophy and declarative mapping sentences within a therapeutic setting. *Front. Psychol.* 10:1223.? doi: 10.3389/fpsyg.2019.01223

Hackett, P. M. W., Shaw, R. C., Boogert, N. J., and Clayton, N. S. (2019). A facet theory analysis of the structure of cognitive performance in New Zealand robins (*Petroica longipes*). *Int. J. Comp. Psychol.* 32, 1–16.?

Hackett, P. M. W. (2021a). "The declarative mapping sentence and qualitative facet theory research," in *Facet theory and the mapping sentence*, ed. P. M. W. Hackett (London: Palgrave Macmillan), doi: 10.1007/978-3-030-66199-1_4

Hackett, P. M. W. (2021b). A reflexive and adaptable framework for ethnographic and qualitative research: The declarative mapping sentences approach. *Acad. Lett.* 1–5. doi: 10.20935/AL999

Hackett, P. M. W. (2021c). Some questions regarding the properties of the declarative mapping sentence.? *Acad. Lett.* 1–5. doi: 10.20935/AL3577

Hildén, M. (2011). *International students' decision-making process*. Ph.D. thesis. Lappeenranta: Lappeenranta University of Technology.

Hinton, D., and Platt, T. (2018). "Measurement theory and psychological scaling," in *Quantitative research methods in consumer psychology: Contemporary and data driven approaches*, ed. P. M. W. Hackett (London: Routledge), 59–87. doi: 10.4324/9781131564 1577

Huong, T. T., and Cong, L. V. (2018). Motivations of vietnamese students in study abroad: A case of vietnamese graduate students in the Philippines. *Int. Res. Educ.* 6, 14–29. doi: 10.5296/ire.v6i1.12245

Hyams-Ssekasi, D., Mushibwe, C. P., and Caldwell, E. F. (2014). International education in the United Kingdom: The challenges of the golden opportunity for Black-African students. *Sage Open* 4:2158244014562386. doi: 10.1177/2158244014562386

Ivy, J. (2008). A new higher education marketing mix: The 7Ps for MBA marketing. *Int. J. Educ. Manag.* 22, 288–299. doi: 10.1108/09513540810875635

Jansson-Boyd, C. V. (2019). "Quantitative research: Its place in consumer psychology," in *Quantitative research methods in consumer psychology: Contemporary and data driven approaches*, ed. P. M. W. Hackett (London: Routledge), 1–21.

Jianvittayakit, L., and Dimanche, F. (2010). "An investigation of travel motivation as a factor for international students' choice of a foreign university: A Thai case study," in *Proceedings of the 4th international colloquium on tourism and leisure*, Vol. 6, Bangkok.

Jon, J. E., Lee, J. J., and Byun, K. (2014). The emergence of a regional hub: Comparing international student choices and experiences in South Korea. *High. Educ.* 67, 691–710. doi: 10.1007/s10734-013-9674-0

Kashima, E. S., Greiner, T., Sadewo, G., Ampuni, S., Helou, L., Nguyen, V. A., et al. (2017). Open-and closed-mindedness in cross-cultural adaptation: The roles of mindfulness and need for cognitive closure. *Int. J. Intercult. Relat.* 59, 31–42.

Khilukha, O., Lipych, L., Kushnir, M., and Fatenok-Tkachuk, A. (2020). Marketing technologies in higher education for identifying the needs of consumers in lifelong learning. *Int. J. High. Educ.* 9, 298–306.?

Kim, D., Bankart, C. A. S., Jiang, X., and Brazil, A. M. (2018). "Understanding the college choice process of Asian international students," in *Understanding international students from Asia in American universities*, eds Y. Ma and M. Garcia-Murillo (Berlin: Springer), 15–41.

King, B., and Gardiner, S. (2015). Chinese international students: An avant-garde of independent travellers? *Int. J. Tour. Res.* 17, 130–139. doi: 10.1002/jtr. 1971

Kishun, R. (2011). "Student mobility trends in Africa: A baseline analysis of selected African countries," in *International students and global mobility in higher education: National trends and new directions*, eds R. Bhandari and P. Blumenthal (London: Palgrave Macmillan), 143–165.

Kotler, P. (1999). Marketing management: The millennium edition, Vol. 199. Hoboken, NJ: Prentice Hall.?

Kotler, P., and Armstrong, G. (2014). *Principles of marketing*, 15th Edn. London: Pearson Education.

Kotler, P., and Keller, K. L. (2016). *Marketing management: Global edition*, 15th Edn. London: Pearson Education.

Knight, J. (2011). Education hubs: A fad, a brand, an innovation? *J. Stud. Int. Educ.* 15, 221–240. doi: 10.1177/1028315311398046

Kosic, A., Kruglanski, A. W., Pierro, A., and Mannetti, L. (2004). The social cognition of immigrants' acculturation: Effects of the need for closure and the reference group at entry. *J. Pers. Soc. Psychol.* 86, 796–813. doi: 10.1037/0022-3514. 86.6.796

Lasanowski, V. (2011). "Can speak, will travel: The influence of language on global student mobility," in *International students and global mobility in higher education: National trends and new directions*, eds R. Bhandari and P. Blumenthal (London: Palgrave Macmillan), 193–210.

Lee, J. J. (2015). "Engaging international students," in *Student engagement in higher education: Theoretical perspectives and practical approaches for diverse populations*, 2nd Edn, eds S. J. Quaye and S. R. Harper (London: Routledge), 105–120.

Levy, S. (1985). "Lawful roles of facets in social theories," in *Facet theory: Approaches to social research*, ed. D. Canter (Berlin: Springer?), 59–96.

Levy, S. (2005). "Guttman, Louis," in *Encyclopedia of social measurement*, Vol. 2, ed. K. Kempf-Leonard (Amsterdam: Elsevier Inc), 175–188.

Lewis, W. (2016). Study abroad influencing factors: An investigation of socioeconomic status, social, cultural, and personal factors. *Ursidae Undergr. Res. J. Univ. Northern Colorado* 5:6.

Li, M., and Bray, M. (2007). Cross-border flows of students for higher education: Push–pull factors and motivations of mainland Chinese students in Hong Kong and Macau. *High. Educ.* 53, 791–818. doi: 10.1007/s10734-005-5423-3

Lim, W. M., Jee, T. W., and De Run, E. C. (2020). Strategic brand management for higher education institutions with graduate degree programs: Empirical insights from the higher education marketing mix. *J. Strat. Market.* 28, 225–245. doi: 10.1080/0965254X.2018.1496131

Lomer, S., Papatsiba, V., and Naidoo, R. (2018). Constructing a national higher education brand for the UK: Positional competition and promised capitals. *Stud. High. Educ.* 43, 134–153. doi: 10.1080/03075079.2016.1157859

Loudon, D. L., and Della Bitta, A. J. (1993). *Consumer behavior: Concepts and applications*, 4th Edn. New York, NY: McGraw-Hill.

Luthans, F., Luthans, K. W., and Luthans, B. C. (2004). Positive psychological capital: Beyond human and social capital. *Bus. Horiz.* 47, 45–50. doi: 10.1016/j. bushor.2003.11.007

Luthans, F., and Youssef, C. M. (2004). Human, social, and now positive psychological capital management: Investing in people for competitive advantage. *Organ. Dyn.* 33, 143–160. doi: 10.1016/j.orgdyn.2004.01.003

Luthans, F., Youssef-Morgan, C. M., and Avolio, B. J. (2015). *Psychological capital and beyond*. Oxford: Oxford University Press.

Mak, A. S., Bodycott, P., and Ramburuth, P. (2015). Beyond host language proficiency: Coping resources predicting international students' satisfaction. *J. Stud. Int. Educ.* 19, 460–475. doi: 10.1177/102831531558 7109

Maringe, F., and Carter, S. (2007). International students' motivations for studying in UK HE: Insights into the choice and decision making of African students. *Int. J. Educ. Manag.* 21, 459–475. doi: 10.1108/09513540710780000

Mazzarol, T. W., and Soutar, G. N. (2002). "Push–pull" factors influencing international student destination choice. *Int. J. Educ. Manag.* 16, 82–90. doi: 10. 1108/09513540210418403

McCarthy, J. E. (1964). *Basic marketing: A managerial approach*. New York, NY: Irwin.

Meshulam, I., and Harpaz, I. (2015). *Human resource management: The strategic approach [In Hebrew]*. Haifa: Haifa University Press.

Misra, R., Crist, M., and Burant, C. J. (2003). Relationships among life stress, social support, academic stressors, and reactions to stressors of international students in the United States. *Int. J. Stress Manag.* 10, 137–157. doi: 10.1037/1072-5245.10.2.137

Mpinganjira, M. (2009). Comparative analysis of factors influencing the decision to study abroad. *Afr. J. Bus. Manag.* 3, 358–365. doi: 10.5897/AJBM09.117

Nafari, J., Arab, A., and Ghaffari, S. (2017). Through the looking glass: Analysis of factors influencing Iranian students' study abroad motivations and destination choice. *Sage Open* 7, 1–19. doi: 10.1177/215824401771 6711

Nathan, G. (2017). *The OECD expert group on migration SOPEMI annual report: International migration—Israel 2016–2017*. Kfar-Monash: The Institute for Immigration and Social Integration, Ruppin Academic Center.

Nghia, T. L. H. (2015). *Factors influencing prospective international students' motivation for overseas study and selection of host countries and institutions: The case of Vietnamese students. Paper presented at the 26th ISANA international education conference.* Available online at: http://isana.proceedings.com.au/docs/2015/FullPaper-Tran_Le_Huu_Nghia.pdf

Nixon, E., Scullion, R., and Hearn, R. (2018). Her majesty the student: Marketised higher education and the narcissistic (dis)satisfactions of the student-consumer. *Stud. High. Educ.* 43, 927–943. doi: 10.1080/03075079.2016.1196353

Poyrazli, S. (2015). Psychological symptoms and concerns experienced by international students: Outreach implications for counseling centers. *J. Int. Stud.* 5, 306–312.

Prugsamatz, S., Pentecost, R., and Ofstad, L. (2006). The influence of explicit and implicit service promises on Chinese students' expectations of overseas universities. *Asia Pac. J. Market. Log.* 18, 129–145. doi: 10.1108/ 13555850610658273

Rabenu, E., Elizur, D., and Yaniv, E. (2015). "The structure of coping with stress," in *Facet theory: searching for structure in complex social, cultural and psychological phenomena*, eds A. Roazzi, B. C. Souza, and W. Bilsky (Brazil: Editora Universitária/UFPE), 167–182. doi: 10.17879/87219503184

Rabenu, E., and Tziner, A. (2016). Employee resilience: A faceted analytical approach. *Ind. Organ. Psychol.* 9, 480–485. doi: 10.1017/iop.2016.43

Rabenu, E., and Hackett, P. M. (2017). "The philosophical and psychological status of facet theory's mapping sentence as illustrated in a case study of workplace discrimination," in *Proceedings of the 16th international facet theory conference*, Netanya.

Rabenu, E., and Shkoler, O. (2020b). "Recommendations and remedies," in *International student mobility and access to higher education. [Marketing and communication in higher education]*, ed. A. Lowrie (London: Palgrave Macmillan), 127–191. doi: 10.1007/978-3-030-44139-5_5

Rabenu, E., and Shkoler, O. (2020a). "The reasons for international student mobility," in *International student mobility and access to higher education. [Marketing and communication in higher education]*, ed. A. Lowrie (London: Palgrave Macmillan), 61–125. doi: 10.1007/978-3-030-44139-5_3

Ramelli, M., Florack, A., Kosic, A., and Rohmann, A. (2013). Being prepared for acculturation: On the importance of the first months after immigrants enter a new culture. *Int. J. Psychol.* 48, 363–373. doi: 10.1080/00207594.2012.656129

Rienties, B., and Nolan, E. M. (2014). Understanding friendship and learning networks of international and host students using longitudinal social network analysis. *Int. J. Intercult. Relat.* 41, 165–180. doi: 10.1016/j.ijintrel.2013.12.003

Roazzi, A., and Souza, B. C. D. (2019). "Advancing facet theory as the framework of choice to understand complex phenomena in the social and human sciences," in *Psychology in Brazil*, ed. S. H. Koller (Berlin: Springer), 283–309.

Santos, C. L., Rita, P., and Guerreiro, J. (2018). Improving international attractiveness of higher education institutions based on text mining and sentiment analysis. *Int. J. Educ. Manag.* 32, 431–447. doi: 10.1108/IJEM-01-2017-0027

Sawir, E., Marginson, S., Deumert, A., Nyland, C., and Ramia, G. (2008). Loneliness and international students: An Australian study. *J. Stud. Int. Educ.* 12, 148–180. doi: 10.1177/1028315307299699

Schlesinger, I. M. (1991). Extending the use of mapping sentences [in Hebrew]. *Megamot* 3, 331–341.

Schwartz, S. H. (2012). An overview of the schwartz theory of basic values. *Online Read. Psychol. Cult.* 2, 1–20. doi: 10.9707/2307-0919.1116

Shkoler, O. (2018). "Using contemporary quantitative techniques," in *Quantitative research methods in consumer psychology: Contemporary and data driven approaches*, ed. P. M. W. Hackett (London: Routledge), 22–58. doi: 10.4324/9781315641577

Shkoler, O., and Rabenu, E. (2020b). "Marketing standpoints of international students," in *International student mobility and access to higher education.*

[Marketing and communication in higher education], ed. A. Lowrie (London: Palgrave Macmillan), 127–191. doi: 10.1007/978-3-030-44139-5_4

Shkoler, O., and Rabenu, E. (2020a). "Defining international student mobility and higher education," in International student mobility and access to higher Education. [Marketing and communication in higher education], ed. A. Lowrie (London: Palgrave Macmillan), 1–27. doi: 10.1007/978-3-030-44139-5_1

Shkoler, O., and Rabenu, E. (2022). What are the motivations and their boundary conditions that drive students to seek international higher education? Curr. Psychol. 1–5. doi: 10.1007/s12144-022-03619-5

Shkoler, O., Rabenu, E., Vasiliu, C., Sharoni, G., and Tziner, A. (2017b). Organizing the confusion surrounding workaholism: New structure, measure, and validation. Front. Psychol. 8:1803. doi: 10.3389/fpsyg.2017.01803

Shkoler, O., Rabenu, E., and Tziner, A. (2017a). The dimensionality of workaholism and its relations with internal and external factors. J. Work Organ. Psychol. 33, 193–203. doi: 10.1016/j.rpto.2017.09.002

Shye, S. (1991). What is facet theory? Introduction. [in Hebrew]. Megamot 3, 319–330.

Solomon, E. (Ed.). (2021). Facet theory in organizational research. London: Routledge.?

Tan, A. (2015). College choice behaviors of international students. Sage Open 5, 1–14. doi: 10.1177/2158244015618995

Tantivorakulchai, K. (2018). Thai students' destination choice for higher education. AU J. Manag. 12, 31–41.

Varghese, N. V. (2008). Globalization of higher education and cross-border student mobility. Paris: UNESCO, 1–34.

Tziner, A. (2018). "Facet methodology and analysis: Mining the unconquered land in behavioral sciences research," in Mereologies, ontologies and facets: The categorical structure of reality, ed. P. M. W. Hackett (Lexington: Lexington Books), 161–200.

Wang, J. (2009). A study of resiliency characteristics in the adjustment of international graduate students at American universities. J. Stud. Int. Educ. 13, 22–45. doi: 10.1177/1028315307308139

Wilkins, S., Balakrishnan, M. S., and Huisman, J. (2012). Student choice in higher education: Motivations for choosing to study at an international branch campus. J. Stud. Int. Educ. 16, 413–433. doi: 10.1177/1028315311429002

Woodall, T., Hiller, A., and Resnick, S. (2014). Making sense of higher education: Students as consumers and the value of the university experience. Stud. High. Educ. 39, 48–67. doi: 10.1080/03075079.2011.648373

Wu, H. P., Garza, E., and Guzman, N. (2015). International student's challenge and adjustment to college. Educ. Res. Int. 2015:202753. doi: 10.1155/2015/202753

Yakunina, E. S., Weigold, I. K., Weigold, A., Hercegovac, S., and Elsayed, N. (2013). International students' personal and multicultural strengths: Reducing acculturative stress and promoting adjustment. J. Couns. Dev. 91, 216–223. doi: 10.1002/j.1556-6676.2013.00088.x

Yan, L., and Pei, S. (2018). "Home away from home"? How international students handle difficult and negative experiences in American higher education. J. Int. Stud. 8, 453–472. doi: 10.5281/zenodo.1134337

Yang, M. (2007). What attracts mainland Chinese students to Australian higher education. Stud. Learn. Eval. Innov. Dev. 4, 1–12.

Yaniv, E. (2011). Construct clarity in theories of management and organization. Acad. Manag. Rev. 36, 590–592.

Yudelson, J. (1999). Adapting McCarthy's four P's for the twenty-first century. J. Market. Educ. 21, 60–67. doi: 10.1177/0273475399211008

The virtuoso art of bricolage research

Smadar Ben-Asher*

The School of Advanced Studies, Achva Academic College, Arugot, Israel

Introduction

Originally, the term "bricolage" referred to a variety of non-professional occupations carried out in an improvised and amateurish way. It has been used to describe a postmodernist technique of creatively recycling leftover items. The technique can be applied in a variety of fields, including visual art, industrial design, music, architecture, philosophy, and linguistics.

The term was coined in the field of social sciences by Claude Lévi-Strauss (1908–2009), the founder of the structuralist school, considered to be the leading anthropologist of the 20th century. In 1962, Lévi-Strauss presented his concept of "wild thinking" (Levi-Strauss, 1962), based on his travel diary, *Tristes Tropiques* (Lévi-Strauss, 1955), which he wrote in the rainforests of Brazil. In the diary, Lévi-Strauss related his experiences combining deep philosophical thought, prose, and anthropological investigation, all serving as a tool for describing the phenomena he observed. In his opinion, it is precisely the wild thinking, which is not based on ready-made patterns, that allowed him, as a researcher, to explain the world to himself and integrate into it. Lévi-Strauss referred to researchers who present only facts and data as "engineers;" by contrast, to those who make use of different materials as craftsmen or *bricoleurs*. Lévi-Strauss contrasted the concept of the "scientific mind" with "wild thinking." In his opinion, scientists' resort to previous systems of theoretical and practical knowledge when they lack the information needed to complete a picture. The phrase wild thinking legitimizes the researcher's right to freedom of action, without rigid boundaries.

Both the engineer and the bricoleur live in a limited reality because every choice of tools and materials, whether facts or history, is personal and therefore not absolute or universal. Researchers using the bricolage methodology dare to take materials from their immediate environment, "whatever they can lay their hands on," even if these are vastly different, to assemble them and create a new innovative whole. Lévi-Strauss described a "significant bricoleur" as one who is skilled in performing a large number of varied tasks. Unlike the engineer, this researcher is not subject to the availability of raw materials and tools prepared in advance for the project (Levi-Strauss, 1962). Lévi-Strauss described the bricolage methodology as a combination of the researchers' imagination with all the tools of knowledge at their disposal, using a rich repertoire of rituals, meaningful objects, observations, and social practices. To all these are added structured conversations and spontaneous interviews, institutional knowledge, and informal knowledge (Rogers, 2012; Lévi-Strauss, 2014). The concept of savage thinking caused animated disputes between philosophers and social scientists and was challenged by the range of possibilities for observing the world that Lévi-Strauss presented and believed in Lévi-Strauss (1983, 2014).

Support for Lévi-Strauss's view was received in the early 1970s by the philosopher of science Feyerabend (1974) in his book Against Method. Feyerabend claimed that science is a free creation of the human spirit and should not be limited by the general do's and don'ts of scientific research methods. In his opinion, it is not possible to separate fact from theory because there is nothing we know for sure. Feyerabend's starting point is ethical: it is not moral to limit the creativity of human beings. According to him, being a scientist is closely related to the ability of being moral, which requires complete openness and the absence of physical or intellectual coercion.

The research concept proposed by Lévi-Strauss found support in the work of Clifford James Geertz (1926–2006), one of the founders and leaders of symbolic anthropology. Geertz claimed that culture is transmitted in a system of concepts and symbolic forms that suit each society differently. Reality is full of symbols, therefore only a thick description of reality can lead to its understanding (Geertz, 1980). The wide range of interpretive practices that Geertz proposed is largely similar to the bricolage worldview described by Lévi-Strauss. Geertz called for a multi-directional scientific investigation that combines the methodologies of quantitative sciences with qualitative research. According to Geertz, there is no single absolute and correct reality, but different interpretations of reality must be explored through the construction of an experiential memory that will help describe and explain things with their many facets and all their complexity. Geertz (1994) claimed that the idea of many structures of personal and cultural reality is at the basis of the qualitative concept. The multiplicity of points of view demands a holistic approach, therefore it is not possible to expropriate individual variables from the overall context. To understand significant moments in a person's life, it is necessary to reconstruct one's personal experience and reflective understandings, and examine them in the context of cultural and historical texts and products or those conveyed by figurative structures of objects, buildings, monuments, or paintings. The starting point of qualitative research, to which the bricolage method belongs, is a naturalistic interpretive perspective, according to which the investigation is carried out within the natural world with as little intervention as possible.

The anthropological approach of Lévi-Strauss and Gratz also finds deep roots in the epistemological concepts of Aristotle and Plato, in the fourth century BC. Epistemology concerned the nature of knowledge, its sources, limits, and reliability (Steup, 2012). Preoccupation with the epistemologies of the elements of knowledge resulted in many studies that dealt with an in-depth examination of the four elements of knowledge: its certainty, complexity, source, and justification (Hofer, 2002).

Sabar Ben-Yehoshua (2016) described the use of the qualitative research approach as part of the research complex that includes a combination of methods, when there is agreement that each practice allows observation and examination from different angles. Bricolage research encourages the researcher not to be bound by orthodox and rigid approaches, which are at times external to the need and context being studied but to use what is available and thus deepen the research (Berry, 2004).

Denzin and Lincoln (1998, 2011) identified five areas of research writing in which the characteristics of bricolage can be found: theory, methodology, interpretation, political positions, and narratives. Adopting the bricolage approach means agreeing with the assumption that every study is subjective because it is influenced by the researcher's personal history, biography, gender, social class, race and ethnicity, as well as by the people in the society being studied (Denzin and Lincoln, 2011).

A bricolage approach requires a deep understanding that there is no one correct description of an event. The researcher's point of view shifts between the theoretical infrastructure and the observation of the phenomenon, the information that arises in the context of the researched topic, the data analysis, the researcher's point of view, the literary genre that is relevant to different parts of the research, and the language in which it is presented. To this complexity must be added the in-and-out movement, and the positions of the bystander and the participating observer. At times the researcher becomes temporarily the main character of the plot (Spector-Marzel, 2017).

Denzin and Lincoln (2011) reviewed the history of qualitative research and described the bricolage metaphor coined by Lévi-Strauss as having a broad meaning. According to them, the bricolage approach made possible the merging of a large number of disciplines from the humanities and social sciences, as well as multiple methodologies such as ethnography, discourse analysis, deconstruction, folk genealogy, and perspective-changing theories such as feminism, Marxism, and postcolonialism. The boundaries between the social sciences and the humanities became blurred, and researchers from the social sciences began working with the humanities and building semiotic models, theories, and methods of analysis. The bricolage approach to research and writing allows systematic description (*graphy*) alongside personal experience (*auto*) for understanding cultural experiences (*ethno*) (Spector-Marzel, 2017).

Weinstein and Weinstein (1991) argued that the very representation chosen and the interpretation given to the combination of materials is bricolage work because it represents the researcher's impression understanding, and interpretation of the phenomenon under study. The researchers' personal narrative is a significant tool for understanding their point of view when they interpret the events before them. The researchers themselves have an opinion, social position, focus of interest, practices, and methodologies that serve these perceptions.

The bricolage method has encountered difficulties and objections in qualitative research. Pratt, Sonenshein, and Feldman, who have been editors of qualitative journals for many years, in summarizing their professional experience (Pratt et al.,

2022), claimed that the reason was probably entirely pragmatic. Qualitative research was based on a wide range of methods (Bansal et al., 2018; Reay et al., 2019), and to "set things straight" and evaluate the studies, the reviewers of the articles required the researchers to use "templates" and "formulas," renouncing creativity and setting up a research method adapted to the unique conditions of the research and its objective. The most attractive feature of templates is that they simplify research methods. But templates cannot account for the special details and subtle ways that vary from study to study. Pratt et al. (2022) argued that a pattern is at most a map, whereas the study examines an area that is infinitely more complex than the map.

We can conclude that the bricolage approach uses different methodologies that flexibly examine the complex dimensions of a studied phenomenon. The research process is characterized by observation from multiple perspectives that are sometimes competing with each other (Rogers, 2012). The bricolage approach combines in one study many methodological practices and empirical materials, different perspectives, and is best understood as a strategy that adds rigor, breadth, complexity, richness and depth to any investigation (Denzin and Lincoln, 2011).

Case study: The incident of the naval commandos diving in the polluted Kishon river

To demonstrate the challenges of a complex reality faced by researchers, containing many unplanned constraints and opportunities, we present here a research unit from a broad study conducted between 2008 and 2010 in Israel of a case that caused great public upheaval.

The incident is commonly referred to in Israel as "the Kishon affair." In May 2000, two Israeli journalists revealed that soldiers had been training for years in a river that was highly contaminated with industrial waste dumped by nearby factories despite the potential danger of contact with polluted waters that could cause serious illnesses, particularly various forms of cancer. The army failed to take action to protect its soldiers (Neumann and Ben-Asher, 2003). Given the highly selective criteria for acceptance into this elite unit, the soldiers had been in excellent health and top physical condition at the time of their recruitment, therefore the high incidence of illnesses and mortality among them could not be explained by random statistics (Ben-Asher and Goren, 2006). Following the journalists' exposé and the soldiers' demand that the state acknowledge its responsibility for the harm, a special commission of inquiry was appointed, headed by former Supreme Court Justice Meir Shamgar. After 3 years of hearings and the report of the Shamgar Commission, the state accepted responsibility for treating the naval commandos who had contracted cancer and for assisting the families of those

who subsequently died. The naval commandos' struggle received extensive coverage in the Israeli press for three years, from the publication of the original exposé to the state accepting responsibility (Ben-Asher and Ben-Atar, 2016).

The national press in Israel showed great interest in the fighters who contracted cancer after diving in the Kishon. The press became involved in the case, showed concern, and adopted explicit or implicit positions regarding the ethical aspects of the affair. At the same time, it transpired that the fishermen of the Kishon River who worked in the exact same place where the commandos had trained also suffered from serious illnesses, and many of them died of cancer. Despite the similarity between the fishermen's and the commandos' struggles to force the polluting factories and the state to assume responsibility for harming their health, the fishermen's struggle, which lasted 13 years, did not receive media or public attention. The fishermen's struggle was covered only by the local press, which is distributed locally and is not archived.

The question of the prominence and exclusion of groups in Israel is central in a democratic, liberal country, whose main foundation is the right to equality between citizens. The recognition and recognition of the plight of members of different social groups by members of other groups, and the construction of a reality by the media of a reality in which marginalized groups can be part of the social discourse are worthy goals for building a more just society. In an early study (Ben-Atar and Ben-Asher, 2015; Ben-Asher and Ben-Atar, 2016), we examined whether there is justice and equality among citizens in Israeli society. The study examined whether it is possible that the Israeli media openly and almost explicitly favored one social group (the commandos) over another (the fishermen). We sought to uncover the fishermen's narrative about their struggle and the public attitude toward them, as it is reflected and presented in the national and local media.

Constructing the research methodology

Constructing a systematic qualitative research methodology should yield a collection of written information from documents, the media, and interviews with the leaders of the group and of the struggle. In the case of the present study, almost every methodical way was blocked:

1. Documents. The documents of the struggle that lasted for years (including the ones submitted to the court) were not systematically collected. One of the old fishermen (at the time of the interview he was over 80 years old and not in good health), who used to be the head of the committee, showed us a disorganized collection of letters and documents. He refused to let us makes copies of them but agreed for us to read them out loud and record the

reading. In this way, we were able to create a record of the content of these documents.

2. Legal documents. The attorney who led the fight was a retired judge who voluntarily agreed to represent the fishermen. In a telephone conversation with him, he begged us to come to the district court where every Sunday the hearing of the fishermen's claim was held. The lawyer said that he faced alone 43 lawyers of the petrochemical plants who showed up in court with numerous assistants. Unfortunately, for some time after our conversation, the lawyer was not able to continue the work for health reasons, and a few months later he died. The trial continued with the assistance of a young lawyer who voluntarily assumed the task of representing the fishermen out of ideological and social motives. We were exposed to the legal documents in his possession, with his consent, only about a year after he submitted the summary of the claim to the court.

3. Interviews with the participants of the research, the leaders of the fishermen's struggle. Forty-eight fishermen filed claims in court. In practice, the number of families of the sick or dying from cancer was estimated to be about 60, but some of the families chose not to join the fight after the representatives of the petrochemical plants threatened them with high financial claims if they filed a lawsuit in court. In the absence of a proper organizational structure for the fishermen, and especially for those who were sick or elderly and had already retired from work, we had difficulty reaching and interviewing them. In the past, the older fishermen used to hold a traditional informal meeting on Fridays, which they called "Parliament." During the period in which we conducted the study, many had already become ill or passed away, and the weekly meetings were discontinued.

Interviews we conducted with several fishermen before our visit to the port revealed that the younger members of the group were organized by a fisherman with a criminal background. He managed the fish trade in a shed where the fishermen assembled, with full control over the product caught by all the fishermen. The same person represented the fishermen in the lawsuit. His interest was strictly financial, without any social orientation, support, or concern for the families of the sick and deceased. We understood that interviews with the fishermen needed his approval and supervision. We were required to work with a person involved in various transactions, most of which were hidden from the state authorities.

4. Appearances in the visual media. Whereas the representatives of the naval commandos were often the guests of television studios, were interviewed, and presented their struggle clearly and eloquently, the representative of the fishermen was never invited to these studios. Few in the Israeli public knew about the fishermen's struggle, which was conducted at the same time as the well-publicized struggle of the naval commandos.

5. Printed press. As noted, the public media refrained from reporting on the fishermen's struggle. The articles published in the local press over the years were not collected in any archive.

We chose to conduct bricolage research in the field, similar to ethnographic research. We sought to examine the struggle of the fishermen with the help of observations, spontaneous authentic interviews and data collection from the field. We did all this using our subjective personal experience and interpretation of it. According to the bricolage methodology, the description must be systematic and include the subjective data of the researcher, the research process, the findings collected and their interpretation, as well as the emotional and cultural experience of the researcher or the critical point of view of the researcher.

Research process

To demonstrate the bricolage nature of the investigation, we describe one incident that occurred in the course of the research that illustrates the uniqueness of this method.

The researchers were a mother-daughter team, both engaged in the academic field: the mother (the author) is a psychologist who studies the social thinking of marginalized minority groups, especially those affected by illness and bereavement; the daughter specializes in the field of communication. The two researchers were personally and tragically connected with the Kishon affair because the father of the family, who was one of the commandos, died of cancer a few years before the study was conducted and was recognized by the state as an army casualty.

In a roundabout and complex way, we managed to contact the leader of the fishermen and schedule a meeting with him in the morning, in the port at the station where the catch was collected and sent to the markets. The night before we arrived there was a high tide that resulted in a larger than usual quantity of fish. The guard at the entrance of the building where the fish are distributed to the various markets contacted the leader of the fishermen and announced our arrival. He informed us that because of the heavy workload that morning, he would not be able to make time to talk with us, but he agreed to send another fisherman, a man he trusted, for us to interview in his place.

We conducted the interview on a spot covered with grass that separates two roads inside the port. The place was not ideal for holding an in-depth interview. After we introduced ourselves, including our personal connection to the Kishon case, trust appears to have prevailed over suspicion, and the interviewee shared his personal story, including the description of the struggle to recognize the fishermen who were harmed by

the polluted Kishon water and fell ill, his father being one of them. Although the interviewee himself was not a key partner in the struggle, he described what he knew about it and the threats that the families of the sick and deceased received from the petrochemical plants to prevent them from joining the legal struggle. At the end of the interview, we asked him if he had come across articles in the local press about the fishermen's struggle. The interviewee confirmed that such articles were collected by the fishermen, although he did not know how many of them have been kept. The interviewee called the leader of the fishermen and after a short conversation asked us to follow him.

He led us to a dark cold store, packed with fresh product, and he climbed up a shady staircase, at the end of the room, to a small office that appeared to be an observation room for the cold store. The leader of the fishermen watched us from this room at the top of the stairs, without coming down. It is reasonable to assume that the appearance of the foreign women caused a measure of concern, which may have dissipated to some degree at the sight of the pregnant belly of the daughter and by the impression we produced on the fisherman who spoke with us earlier, which was likely been conveyed orally to the "observation tower" inside the cold store. A few moments later the messenger fisherman returned holding a black garbage bag: "Take it and return it in half an hour," he told us.

Outside the dark cold store, we untied the bag and found a treasure in it: a collection of articles published in the local press, photographs, and documents that the fishermen had cut out and kept. It was a unique authentic collection not found anywhere else. On the large table in another office in the port, we spread out all the articles and photographed them with a simple camera, after which we returned the black plastic bag to the guard at the entrance to the fish warehouse.

Unexpectedly and without planning, our research received an empirical basis for a comparative study of the public national and local media in the case of the Kishon fishermen. We examined how the opportunity was used or missed to give a local, weak, and marginalized group a public stage to present its struggle and to win social recognition similar to that of the naval commandos (Ben-Asher and Ben-Atar, 2016).

Discussion

The present article follows the recommendation of Pratt et al. (2022) to regard the bricolage methodology as an analytical alternative to methodological templates. This approach has the potential to improve the way researchers understand, formulate, and implement methodological choices in their research. Using this approach, they recognize that there are many possible ways of conducting high-quality qualitative research. The metaphor of methodological bricolage provides a framework for thinking about the variety of approaches in ways that instill confidence in the methods used. The bricolage metaphor allows us to refer

to researchers as bricoleurs, which focuses attention on their agency, creativity, and craft (Klag and Langley, 2013).

Researchers who adopt the bricolage methodology (for example, Baker and Nelson, 2005; Duymedjian and Rüling, 2010; Pratt et al., 2022) list its three key components: being satisfied with the materials found in the field given the limitations and constraints imposed by reality, utilizing the resources at hand, and combining resources for new purposes. In the short description of the research concerning the part of the media in representing the suffering of the fishermen who came in contact with the polluted water of the Kishon, we can distinguish all three components of bricolage research.

Constraints

Despite our attempt to meet with the fishermen's leader, the field conditions following the large fish harvest on the day of the meeting prevented the meeting from taking place. The interview with the fisherman who was sent to us in his place was a constraint. For us, the visit to the port was the available resource. Note that in the course of the research, we met with additional sick or old fishermen who had left work, as well as with fishermen who previously belonged to this group but left the work at sea in favor of other jobs.

Utilization of available resources

Bricolage deals with the available resources and their understanding. The garbage bag in which the articles of the local press about the fishermen's struggle were collected was a resource that could not be obtained by a normal search of public archives, given the absence of such archives of the local newspapers. The articles were cut out and collected by the fishermen unsystematically, and some of them lacked the date of publication, the name of the writer, or even the name of the newspaper in which they were published. Although we cannot be sure that all the articles published in the local press were indeed collected, their large number (32) allowed us to show that whereas the national press failed to express solidarity with a marginalized social group and preferred a sympathetic identification with a group close to the consensus of the national narrative, the local press remained in touch with the common people and expressed sympathy for their struggle. Many articles in the local press presented the fishermen fighting the petrochemical plants as struggling for the principle of justice and not for financial compensation. The articles were important for two reasons: their content and the fact of their publication (Ben-Asher and Ben-Atar, 2016).

Integration of resources for new purposes

Following the analysis of the articles in the local press, we were also able to identify the weak points in the fishermen's struggle: lack of leadership that can be accepted by the general public as moral and valued, the fishermen's inability to give voice to their struggle in the print and visual media, and the difficulty of a disadvantaged socio-economic group to organize a legal battle against powerful commercial entities. One of the difficulties that stood out following the conversations with the sick fishermen was that of creating a consistent sequence over time of active expression of the struggle. For example, the fishermen were absent from the courtroom during the hearings of their claim for recognition of the harm to their health.

Bricolage involves combining resources for a new purpose. In the bricolage methodology, we creatively incorporated practices designed to fit the research (Locke et al., 2008). For example, when the interviewee who collected some of the documents of the struggle initially refused to let us photograph them, we asked that we read them out loud and record them in this way, to which he consented. It was an analytical move made to identify a problem that arose in the field when we asked to make a record of the documents of the struggle, so that they would be used to substantiate the research claims, but we had to do it in a different way than planned.

Finally, there remains the question of the integrity and reliability of the researchers, their degree of subjectivity, and the part their beliefs, values, and opinions played in the interpretation. The bricolage researcher must display a reflective position, honesty, and transparency. Moving between the individual and the collective, between the inside and the outside should be reflected in the honesty of the researcher. The researcher does not seek to adopt the neutral position of a remote documenter but is a participant, expressing a personal opinion. The involvement of the researchers in the Kishon case and the loss of the father of the family was visible to the research participants and the readers. The personal cost that the Kishon case exacted from the researchers was a source of motivation for research on the topic of state responsibility for the victims of the Kishon water pollution, regardless of class. Writing was also seen as a political act that strives for social change and a social need. The bricolage methodology emphasizes the emotions involved in inquiry (Ellis et al., 2011).

The meanings derived from the understanding of the legitimacy of bricolage research is especially important for researchers at the beginning of their career who prefer to choose "safe" research methods, to use Lévi-Strauss's "engineer" metaphor. Adopting creative and flexible research methods in the spirit of post-positivist approaches attests to the importance of the researcher's freedom. The freedom of unfettered epistemological inquiry is not the exclusive domain of the philosophy of science but can be applied in research in various fields in the social sciences. For example, relational psychotherapy places the one-time relationship between therapist and patient at the center and emphasizes the importance of connections and relationships for creating meaning, contrary previous approaches that advocated neutrality and prevented personal involvement (Mitchell and Aron, 1999). It appears that in several fields simultaneously, the legitimacy of scientific investigation based on an authentic encounter that cannot be planned in advance and cannot be reproduced, yet has the potential to afford new vantage points to the researcher one issues of interest, is gaining strength.

The limitations of methodological research have to do with the great skill required of the researcher, who must navigate with the aid of a roadmap but without marked paths. This demands creativity, navigation skills, reflective ability, and often patience and tolerance for getting lost or wasting time, in the belief that precisely the absence of a well-trodden path may lead to innovation. Additionally, openness is required on the part of the reviewers of the articles to assess them not based on regular patterns known in advance (Pratt et al., 2022).

In conclusion, the theories underlying the bricolage methodology are much more complex than a simple eclectic approach.

Although the concept of bricolage has been used in qualitative research for over 60 years, it is still challenging precisely because of its dynamic nature (Phillimore et al., 2019). This type of research deals with understanding intrapersonal processes, institutional changes and social transformations while combining available research tools and taking advantage of opportunities (Easterby-Smith et al., 2008). The bricolage methodology causes the authors to pay attention to the choice of steps they take, to report transparently on these steps and decisions made "correctly," and to accept the research as unique, a one-time effort under the given conditions. The researcher is similar to a chess player who chooses the appropriate piece in the unique conditions of the given game, using appropriate strategies to achieve the goal. Similar to the game of chess, although the rules are given, the movement of the pieces is always the result of a combination of analytical and creative thinking.

Author contributions

The author confirms being the sole contributor of this work and has approved it for publication.

Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

Baker, T., and Nelson, R. E. (2005). Creating something from nothing: resource construction through entrepreneurial bricolage. *Admin Sci. Q.* 50, 329–366. doi: 10.2189/asqu.2005.50.3.329

Bansal, P., Smith, W. K., and Vaara, E. (2018). New ways of seeing through qualitative research. *Acad. Manage. J.* 61, 1189–1195. doi: 10.5465/amj.2018.4004

Ben-Asher, S., and Ben-Atar, E. (2016). The attitude of the local press to marginal groups: Between solidarity and alienation. *Israel Affairs* 22, 528–548. doi: 10.1080/13537121.2016.1140344

Ben-Asher, S., and Goren, N. (2006). Projective identification as a defense mechanism when facing the threat of an ecological hazard. *J. Psychoanal. Cult. Society* 11, 17–35. doi: 10.1057/palgrave.pcs.2100057

Ben-Atar, E., and Ben-Asher, S. (2015). The media space as a platform to glorify and exclude social groups: analysis of the struggle of the naval commandos and the fishermen in the Kishon Affair. *Emdot 2: Am-Medina-Torah Segreg. Solidarit.* 7, 31–40.

Berry, K. S. (2004) "Structures of bricolage and complexity," in *Rigour and complexity in educational research: Conceptualizing the bricolage*, eds J. L. Kincheloe and Berry, K. S. (Maidenhead: Open University Press), p. 103–127.

Denzin, N. K., and Lincoln, Y. S. (eds.). (1998). *The Landscape of Qualitative Research.* Thousand Oaks, CA: Sage.

Denzin, N. K., and Lincoln, Y. S. (eds.). (2011). *The Sage Handbook of Qualitative Research.* Thousand Oaks, CA: Sage Publications.

Duymedjian, R., and Rüling, C. C. (2010). Towards a foundation of bricolage in organization and management theory. *Organ. Stud.* 31, 133–151. doi: 10.1177/0170840609347051

Easterby-Smith, M., Golden-Biddle, K., and Locke, K. (2008). Working with pluralism: determining quality in qualitative research. *Organ. Res. Methods* 11, 419–429. doi: 10.1177/1094428108315858

Ellis, C., Adams, T. E., and Bochner, A. P. (2011). Autoethnography: an overview. *Hist. Soc. Res.* 36, 273–290. Available online at: http://www.jstor.org/stable/23032294

Feyerabend, P. (1974). Against method: outline of an anarchistic theory of knowledge. *Philosophia* 6, 165–177.

Geertz, C. (1980). Blurred genres: the refiguration of social thought. *Am. Scholar* 49, 165–179.

Geertz, C. (1994). Thick description: toward an interpretive theory of culture. *Readings Philos. Social Sci.* 214.

Hofer, B. K. (2002). "Personal epistemology as a psychological and educational construct: An introduction," in *Personal Epistemology: The Psychology of Beliefs About Knowledge and Knowing*, 3–14. doi: 10.4324/9781410604316

Klag, M., and Langley, A. (2013). Approaching the conceptual leap in qualitative research. *Int. J. Manage. Rev.* 15, 149–166. doi: 10.1111/j.1468-2370.2012.00349.x

Lévi-Strauss, C. (1955). *Tristes Tropiques (Paris: Plon, 1955).* Paris, Plon: Anthropologie structurale.

Levi-Strauss, C. (1962). *The Savage Mind. 1966 English Translation.* Chicago: The University of Chicago Press.

Lévi-Strauss, C. (1983). *Wild Thinking, Hapoalim Library, Da'at Zemenu* (Hebrew). Tel Aviv Merhavia: Kibbutz Arzi Hashomer Hatzair Merhavia.

Lévi-Strauss, C. (2014). *Anthropologie Structurale II.* Plon.

Locke, K., Golden-Biddle, K., and Feldman, M. S. (2008). Perspective-Making doubt generative: Rethinking the role of doubt in the research process. *Organ. Sci.* 19, 907–918. doi: 10.1287/orsc.1080.0398

Mitchell, S. A., and Aron, L. E. (1999). *Relational Psychoanalysis: The Emergence of a Tradition.* Analytic Press.

Neumann, Y., and Ben-Asher, S. (2003). Collective and individual consciousness in testimonies of navy divers. *Social Semiotics* 13, 321–340. doi: 10.1080/1035033032000167042

Phillimore, J., Bradby, H., Knecht, M., Padilla, B., and Pemberton, S. (2019). Bricolage as conceptual tool for understanding access to healthcare in superdiverse populations. *Social Theory Health* 17, 231–252. doi: 10.1057/s41285-018-0075-4

Pratt, M. G., Sonenshein, S., and Feldman, M. S. (2022). Moving beyond templates: a bricolage approach to conducting trustworthy qualitative research. *Organ. Res. Methods* 25, 211–238. doi: 10.1177/1094428120927466

Reay, T., Zafar, A., Monteiro, P., and Glaser, V. (2019). Presenting findings from qualitative research: one size does not fit all! *Res. Sociol. Organ.* 59, 201–216. doi: 10.1108/S0733-558X20190000059011

Rogers, M. (2012). Contextualizing theories and practices of bricolage research. *Qual. Rep.* 17, 1–17.

Sabar Ben-Yehoshua, N. (2016). *Traditions and Currents in Qualitative Research Concepts, Strategies and Advanced Tools (Hebrew).* Mofet Institute Tel-Aviv.

Spector-Marzel, J. (2017). The story of the Kishon case as a bricolage autoethnography. *Stud. Lang. Soc.* 10, 214–219.

Steup, M. (2012). Belief control and intentionality. *Synthese* 188, 145–163. doi: 10.1007/s11229-011-9919-3

Weinstein, D., and Weinstein, M. A. (1991). Georg Simmel: sociological flaneur bricoleur. *Theory Cult. Soc.* 8, 151–168. doi: 10.1177/026327691008003011

*CORRESPONDENCE
Rocío López-Montero
rlopezm@uloyola.es
Carmen García-Navarro
carmengarcia@uloyola.es
Antonio Delgado-Baena
adelgadob@uloyola.es
Rocío Vela-Jiménez
mrvela@uloyola.es
Antonio Sianes
asianes@uloyola.es

Life stories: Unraveling the academic configuration of a multifaceted and multidisciplinary field of knowledge

Rocío López-Montero*, Carmen García-Navarro*, Antonio Delgado-Baena*, Rocío Vela-Jiménez* and Antonio Sianes*

Research Institute on Policies for Social Transformation, Universidad Loyola Andalucía, Córdoba, Spain

In the field of qualitative research, life stories are consolidated as one of the most important techniques within the biographical method. However, due to the multiplicity of techniques covered by this method and the disciplines in which it is applied, the contributions and scope of life histories do not present a clear delimitation. By contrast, a considerable conceptual confusion persists and the transfer of its production remains very narrow. In this sense, this article aims to clarify the field of knowledge generated through life stories. To this end, it innovatively applies the bibliometric method. Making use of performance analysis and scientific mapping through the VosViewer application, it studies a body of 2670 articles indexed in the Web of Science. The results show how knowledge transferred from psychology through its major schools of thought occupies a central place. This leaves in a secondary position the knowledge produced by other disciplines such as sociology or anthropology, which is not transferred in the main forums of scientific impact. In this way, the conclusion points to the need to open up new lines of research to find out the differences between the different techniques and disciplines when applying this methodology.

KEYWORDS

life stories, biographical method, bibliometric analysis, scientific production, VOSviewer

Introduction

The biographical method

One of the most commonly used approaches in qualitative research is the biographical method (Rubio and Varas, 2004). However, and despite its high contribution to the scientific field over time, it has not been exempt from limitations, which have hindered the development of its full potential (Peacock and Holland, 1993)

to these days. It is composed of a wide variety of vaguely defined techniques (Pujadas, 2002), which leads to conceptual confusion. Additionally, there are different orientations depending on the disciplines that use it (Bertaux, 1980), translating into divergent and disjointed results.

In this sense, it is necessary to reach a deep understanding to have an overview of the performance of this method, explain the key concepts, differentiate closely related or similar concepts, determine the characteristics that define different techniques as well as the traits that differentiate the use of such techniques by the different disciplines. This involves identifying the main research streams, emerging and underexplored areas, as well as knowledge gaps and lacunae. This knowledge will allow us to guide academia and to identify the necessary methodology for each investigation, while at the same time suggesting theoretical, contextual, and methodological opportunities and solutions to advance knowledge in this field.

Given the dispersion of the biographical method and to define a systematic approach to its use, we consider pertinent to focus the analysis on a particular technique rather than on the method as a whole: life stories.

Life stories

The birth of the life story technique is related to the origin of the biographical method, in its beginnings the main tool of this method was conceptualized with the term life histories (Rubio and Varas, 2004). However, the term life stories soon emerged (Pujadas, 2002). Both terms coexisted during the first years of their existence and to a certain degree there is still an indiscriminate use of both terms interchangeably (Cordero, 2012).

The present study follows the trend that supports the term life story instead of life history when addressing research in the field of social sciences. First, there is no clear delimitation of the term life history with respect to its use in natural sciences (Nettle and Frankenhuis, 2019). Therefore, we consider that productions that have been developed around this term are not always related to the object of study. Second, the term life story, from its beginnings, has been oriented to the investigation of human experience (Cornejo et al., 2008), which is consistent with the focus of this research. However, we do look at the singular (life story) as well as the plural (life stories) of the word story because different authors use the terms differently to refer to this technique depending on the number of stories studied.

Once the field that will be the object of study has been delimited, it is necessary to identify divergences in the literature with regard to the use of the technique within different disciplines: anthropology and sociology, on the one hand, and psychology, on the other hand, from which two different visions of life stories have been developed (Peacock and Holland, 1993). The former disciplines conceive the technique as a tool for the collection of ethnographic material. Scientific works in

these disciplines have been more oriented toward uncovering the bases of functioning of sociocultural systems than toward the analysis and understanding of individual trajectories (Hernández-Hernández et al., 2020). From psychology, the life story is conceived mainly as a vision of the subjective experience of the narrator (Peacock and Holland, 1993). In this subjectivist approach, the life story is understood as an expression or projection of the psychological dispositions and dynamics of the subject; therefore, it is used as a window to the psyche (Peacock and Holland, 1993).

This perceived differentiation in the disciplinary use of the technique is the starting point of this study, as it highlights the need to understand the production of knowledge generated with its use to explain if the characteristics differ or converge depending on the perspective from which this concept is projected.

Systematic literature reviews are among the most useful vehicles for advancing knowledge and promoting research (Elsbach and van Knippenberg, 2020). These can take various forms (Paul et al., 2021) Among them, we consider that the most appropriate methodological approach for conducting this study is bibliometric analysis.

Bibliometric analysis applied to life stories

The continuous increase in scientific production has made bibliometric studies increasingly important (Madrid Martín et al., 2017). The ability to handle large volumes of scientific data and produce a high research impact (Donthu et al., 2021) has led to them being widely distributed across all disciplines (Serrano et al., 2019). And become increasingly prolific in high quality academic forums (Paul et al., 2021; Mukherjee et al., 2022). Furthermore, unlike other types of reviews, bibliometric reviews are objective and not prone to error because they are based on automated quantitative data and tools (Lim et al., 2022; Mukherjee et al., 2022).

Despite the huge scientific output on life stories and the need to establish reliable knowledge, research on life stories thus far has been unrelated to the application of this method. Addressing this work is therefore indispensable today. Bibliometric research presents unique opportunities to contribute to theory and practice (Mukherjee et al., 2022). Thus, following Lim et al. (2022) we could say that reviewing the literature on life stories is a necessary, important, relevant, and urgent task.

It is necessary to make a general assessment of this field of knowledge with the aim of reaching an in-depth knowledge of the production disseminated through life stories. This effort will allow us to go deeper into the definition of this technique, as well as to establish the idiosyncrasies of the work developed by each of the disciplines from which it is applied. In turn, bibliometric reviews allow scholars to gain an up-to-date and comprehensive understanding of the state of the field (Sianes, 2021) which will

help them to better position their future research in terms of which technique to use, as well as exactly which of the many existing streams they wish to expand. Our last aim it enable future studies to compare the production developed by the other techniques of the biographical method in order to establish, in this way, the boundaries of each of them to avoid the existing conceptual confusion.

Furthermore, reviewing the literature in this field becomes even more relevant when the use of life stories not only has a long tradition, but continues to be widely practiced today. This makes it urgent to establish firm and reliable boundaries, as the production of knowledge generated through this technique continues to grow without clear trade-offs in its use. Continued reliance on incomplete and outdated knowledge can be detrimental to addressing current problems and their overall progress (Lim et al., 2022). Thus, the originality of our study lies both in the methodology used and in the results obtained after the application of the methodology. The application of this method allows an intensive review of the academic literature on life stories, shedding light and deepening the state of the art of this object of study (Rey-Martí et al., 2016).

To clearly report the work carried out, the rest of the article is organized as follows. In section "Materials and methods," we present the method for the bibliometric analysis, and we detail the necessary materials for the application of this method. In section "Results," we present the main results obtained after applying the different techniques, and we discuss the main findings as well as their implications for academia. In section "Discussion," we present the conclusions. We point out the need to open new lines of research, and we close the study with the references consulted.

Materials and methods

Bibliometric analysis

The origin of bibliometrics can be dated to the beginning of the 20th century (Godin, 2006), but it was not until the 1960s that key methodological developments occurred (Pritchard, 1969). Since then, it has gained immense popularity due, on the one hand, to databases that facilitate the acquisition of large volumes of scientific data and, on the other hand, to the ubiquity and usefulness of bibliometric software to evaluate them (Donthu et al., 2021).

Large bibliographic datasets make classical review methods such as systematic review or meta-analysis (Donthu et al., 2021) cumbersome and impractical (Ramos-Rodríguez and Ruíz-Navarro, 2004). In contrast, bibliometric analysis is designed to handle large volumes of data, which shows its suitability when working with 1,000 of articles.

Bibliometric analysis allows for the study of the publication patterns of scientific production in a given discipline to quantitatively evaluate, through statistical calculations, said production (Koseoglu et al., 2016). Bibliometry, as a scientific discipline, is based on the search for statistically regular behaviors in the elements related to the production and consumption of scientific information over time (Ardanuy, 2012).

Through this evaluation, it is possible to identify aspects such as the works on which the analyzed matter is based (Jamal et al., 2008); the academics who generate the production (Schmidgall et al., 2013); the journals where the information is transferred (Svensson et al., 2009); and collaboration between researchers (Köseoglu et al., 2015). In the specific case of life stories, the lack of knowledge of these data provided the inspiration and purpose for this study.

Bibliometric research generally involves two main categories of analytical techniques, performance analysis and scientific mapping (Mukherjee et al., 2022). That is what Benckendorff and Zehrer (2013) call evaluative techniques and relational techniques.

Performance analysis is the hallmark of the studies (Donthu et al., 2021). Most frequently developed in traditional bibliometric studies (Koseoglu et al., 2016). Evaluation techniques represent the first level of complexity of bibliometric methods (Serrano et al., 2019). They focus on the impact of academic studies that evaluate performance through productivity measures, impact metrics and hybrid metrics (Sainaghi et al., 2018). These measures allow reaching global explanations of observed phenomena through the formulation and verification of compliance with bibliometric laws (Ardanuy, 2012). In this study, evaluative techniques are applied through three main laws, i.e., Price's law, Lotka's law, and Bradford's law, to understand the level of scientific production and the productivity of the authors.

Scientific mapping examines the structural connections and interactions between research constituents (Cobo et al., 2011). Relational techniques, although less explored in bibliometric analyses, are more interesting from the scientific point of view because they involve a higher level of complexity with respect to the units of information and analysis (Serrano et al., 2019). These techniques allow us to obtain hidden relationships between topics, authors, and documents (Van Eck and Waltman, 2020), revealing the intellectual structure of a research field. These scientific maping analyses can help enrich the descriptive insights provided by productivity analysis (Lim et al., 2022) by pointing out gaps and social dominance or hidden biases in the field, as well as the implications of research for the development of theory and practice (Mukherjee et al., 2022).

In the present study, these techniques are used to assess the relationships between published research (Figueroa-Domecq et al., 2015) by implementing a network analysis that allows a representation of the co-occurrence of keywords as well as the co-citation of authors and documents. The latter are explored with the help of visualization techniques provided by tools

such as VOSviewer, free software for creating, visualizing, and exploring maps based on network data (Van Eck and Waltman, 2020). The application of Vosviewer software allows though a clustering algorithm a deeper analysis (Waltman et al., 2010).

Data collection

Preparing a protocol is essential to ensure careful planning, anticipating problems, reducing arbitrariness, promoting accountability, and maintaining the integrity of the research (Paul et al., 2021). In our case, we have used the Scientific Procedures and Rationale for Systematic Literature Reviews, or SPAR-4-SLR based on three stages.

First, once the research domain has been identified, it is necessary to follow a series of steps to acquire the body of literature. We start by with the choice of an adequate database. For this study, the online database of the Web of Science (WoS) is the most relevant to achieve our aim because it allows access to source documents in our area of specialization (Mora et al., 2019) and contains data on results, dissemination, collaboration, and impact (Albort-Morant and Ribeiro-Soriano, 2016).

In addition, the data contained in the documents and indexed in the WoS have gone through a peer review process, guaranteeing "certified knowledge" (Ramos-Rodríguez and Ruíz-Navarro, 2004). Therefore, the search strategy included information pertaining to the journals classified in the Social Sciences Citation Index (SSCI) and the Science Citation Index extended (SCI-E) because both indexes contain journals in which life stories are published.

To extract scientific production from the WoS, a search vector is used. Taking into account these premises, the bibliographic sources were extracted by executing the following query: TS = ("life story" OR "life stories"). The search was not restricted to any particular language to avoid bias in the origin of the production.

Data collection was carried out on 22 September 2021. A total of 2,670 source documents were extracted from the database. The sample size corresponds to all publications related to the field of life stories located in the WoS. Regarding the time horizon, the analysis covers a period of almost a century because the sampling of extracted sources covers 1927–2021.

Once the data has been acquired, a second phase of data organization and purification takes place. It is necessary to take into account the existence of certain limitations in any bibliometric analysis. When using the information reported from science and technology information systems, it is common for there to be errors in the dataset extracted (Adam, 2002). Herein, manual verification was performed (Panori et al., 2019) in which some minor errors were corrected, not allowing the database to rectify the nomenclature when different ways of referencing the same author were identified. However, although it is necessary to consider this detail when interpreting the results of this study, previous studies have shown that the lack of accuracy in these terms does not affect the establishment of general patterns (Rodríguez Gutiérrez et al., 2017).

Finally, the data obtained is evaluated and analyzed below.

Results

Evaluation techniques

Law of exponential growth of science

Proposed by De Solla Price (1956), this law identifies behavioral patterns over time by distributing the frequency of publication per year to observe behavior by applying statistical adjustment functions (Kastrin and Hristovski, 2021; Delgado-Baena et al., 2022). This law postulates that the growth of scientific information is exponential and occurs at such a rapid rate that every 10–15 years, global information doubles. In addition, the author notes that over time, scientific production goes through the following stages: precursors–first publications in a research field; exponential growth–the field becomes a research front; and linear growth–growth slows and the primary purpose of publications is to review and archive knowledge (Ardanuy, 2012). However, each discipline undergoes its own evolution; therefore, it is necessary to assess the evolution of life stories.

Figure 1 illustrates how the life story technique has been used since the 1920s, a fact that coincides with the date attributed to the birth of the biographical method (Pujadas, 2002). In this sense, the body of knowledge created through life stories has a trajectory duration of almost a century.

If we observe the trajectory of the publications throughout this time, *a priori*, three differentiated periods are observed.

The initial period spans from the late 1920s to the 1990s. In this phase, the pioneers of the discipline write the first articles that include this technique. In these early years, production was relatively low, especially that indexed in the most prestigious academic journals.

The second phase was when scientific production increased exponentially in the period from 1993 to 2013. This duplicity in production indicates that life stories became a technique commonly used by researchers during these 20 years.

The third phase includes 2014 to the present. In this last stage, there is linear growth, indicating that production stabilizes. However, the rebound observed in 2020 encourages exploration in the future if the use of the technique has reached a ceiling or saturation limit or if there is no growth in future years.

At a general level, the scientific information produced through life stories follows a normalized growth trend over time. The logistical function indicates that this field of knowledge has reached its maturity, strictly complying with Price's law, which allows affirmation that life stories is a consolidated technique within the biographical method (Cordero, 2012).

Lotka's productivity law

This law, proposed by Lotka (1926), addresses the quantitative relationship between authors and their productivity in a given field over a period of time (Ardanuy, 2012). For authors, this discrete probability distribution is expected to be uneven, with most of the articles produced by a small number of very productive authors. The number of authors who contribute to a particular number of works is inversely proportional to the number of works contributed (Kushairi and Ahmi, 2021; Delgado-Baena et al., 2022). Productivity in life stories is shown in **Figure 2**.

Figure 2 shows how a small portion of authors produce most of the articles published on this topic, with a high percentage having low production. Of the 5,048 authors who have published

using life stories, the maximum number of publications is held by a single author with 40 published articles. In contrast, 87% of the authors have contributed with a single publication. As in the majority of consolidated fields of knowledge, only a small number of authors are responsible for the majority of scientific works (González et al., 1997). Lotka's law is also fulfilled.

Compliance with this law allows the most prolific researchers in the field to delimit the object of study. **Table 1** provides the 10 main authors who are publishing life stories, as well as the field within which they do so. The selection of 10 authors as the threshold was made following the procedure reported in previously published bibliometric studies (Galvez, 2018; Sweileh, 2018).
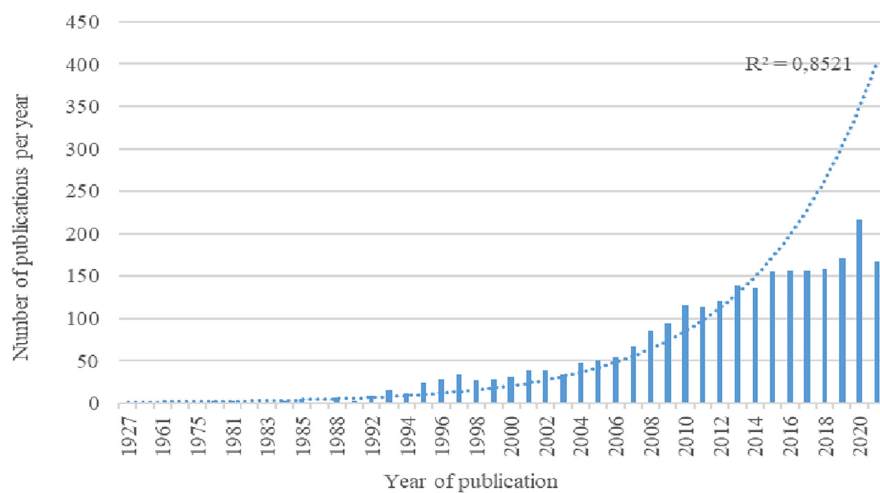

FIGURE 1
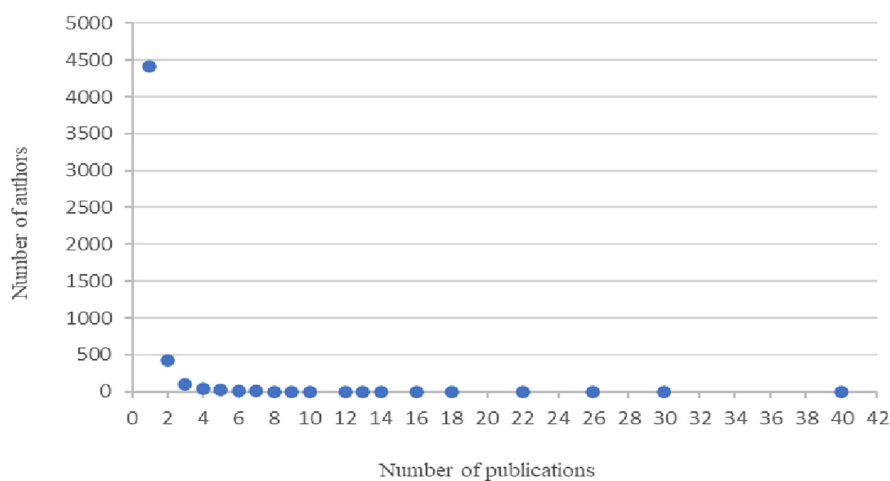Number of documents published per year.

FIGURE 2
Authors and number of published documents.

TABLE 1 List of the most prolific authors.

Position	Most prolific authors	Discipline	Work area
1	Dan P. McAdams	Psychology	Personality
2	Dorthe Berntsen	Psychology	Memory
3	Dorthe Kirkegaard Thomsen	Psychology	Memory
4	Tilmann Habermas	Psychology	Autobiografical narrative
5	Kate C. McLean	Psychology	Personality
6	Robyn Fivush	Psychology	Autobiografical narrative and memory
7	William Dunlop	Psychology	Psychology social and personality
8	Jonathan M. Adler	Psychology	Personality
9	Monisha Pasupathi	Psychology	Autobiográfical narrative
10	Susan Bluck	Psychology	Memory

TABLE 2 Journals belonging to the Bradford nucleus.

Journal	Number of publications	WoS category
Memory	60	Experimental psychology
Journal of personality	46	Social psychology
Narrative inquiry	36	Communication/Linguistics
Qualitative inquiry	35	Interdisciplinary social sciences
Frontiers in psychology	30	Multidisciplinary psychology
Qualitative health research	27	Interdisciplinary social sciences/Biomedical social sciences
Applied cognitive psychology	25	Information sciences and librarianship/Social sciences, biomedical/Social sciences, interdisciplinary
Journal of aging studies	25	Gerontology
Women's studies international forum	22	Studies of women
Developmental psychology	20	Evolutionary psychology

As seen in **Table 1**, the main producers of knowledge in the field of life stories are in the field of psychology, mainly personality, and memory. This finding confirms that the production of knowledge through life stories occurs mainly through psychology because the bulk of publications are attributed to this specialty as are the main reference authors. This fact corroborates the division of the psychological approach into the subjectivist and ethnographic approaches noted by Peacock and Holland (1993) and the predominance of the former over the latter. The invisibility of authors who work within sociology or anthropology points to the lack of transference of the works that are developed from these disciplines.

Law of dispersion in scientific bibliography

This law, proposed by Bradford (1934), estimates the exponential decrease in performance by broadening the search of references in journals. There exist core journals that address this topic in particular (Bradford's core), the journals with more articles and citations are considered the core journals (Borgohain et al., 2021), and several groups that contain approximately the same number of articles as the core. However, recent authors argue that the effort to determine the exact Bradford zones is of no practical interest (Ardanuy, 2012) other than its descriptive aspect to deepen in what type of journals belong to the nuclear zone. To find this nucleus, it is necessary to arrange the journals in decreasing order of frequencies of articles on life stories and deepen knowledge of the sources where these studies are published. The results are shown in **Table 2**.

Table 2 shows that there is no clear leading journal where most articles on life stories are published. The literature is dispersed in a variety of sources belonging to this Bradford nucleus. However, when addressing the categories assigned by the WoS to the sources, the weight of the psychological perspective re-emerges. This, together with the prevalence of the biomedical social sciences category, indicates that more than half of the sources give priority to those articles produced from the most experimental or scientific social sciences, leaving production pertaining to collective social research dedicated to minorities, as pointed out by Bertaux (1980).

Relational techniques

Proximity analysis

Keyword co-occurrence analysis is the only bibliometric technique that uses the word as the unit of analysis (Donthu et al., 2021). It examines the actual content of the publication itself by assuming that words that appear frequently together have a thematic relationship with each other (Donthu et al., 2021). The co-occurrence analysis of keywords reflects the semantic structure of the research field under study. It is the most commonly used technique to identify relationships between the main research topics in a given scientific discipline (Muñoz-Leiva et al., 2012). Through this technique, two main results are obtained: the grouping of topics in clusters on the

basis of their disciplinary proximity (**Table 3**) and the centrality of each topic within the literature as a whole (**Figure 3**; Sianes, 2021).

Figure 3 shows the existence of four large areas of research within the field of life stories. In **Table 3**, each of these four areas is defined as a function of the clustered key words.

Blue cluster: Personality and narrative identity

This cluster includes the most used concept in the entire body of literature: the life story. It is significant that the word most used refers to the technique in the singular, indicating a tendency toward the use of a single life story, displacing the need to reach a saturation point that validates the technique from disciplines such as sociology or anthropology (Bertaux-Wiame, 1980). Around this term are grouped words related to the development of personality and narrative identity. Likewise, there are terms related to adolescence and adulthood, interesting given that the transition from adolescence to adulthood is a critical period in the development of personality (Lüdtke et al., 2011).

Yellow cluster: Autobiographical memory

This cluster groups terms focused on the development of memory. The concept of oneself (self) as well as autobiographies (autobiographical) clearly shows the subjective orientation of

life stories to which Peacock and Holland (1993) alluded. These works are not oriented to processes of collective memory. The prevalence of terms that refer to a moment of life, such as childhood or age, show the importance of temporal factors in the study of this topic (Bartolomé et al., 1996). Age is a widely studied variable because memory capacity in the early stages of life increases, while it decreases considerably in old age; therefore, it is a determining variable in studies developed in this field of research.

Green cluster: Mental health

This cluster includes, almost exclusively, concepts related to mental health, resulting in a very cohesive body of literature that represents a subset within psychology. The terms included in this cluster are related to the most clinical area of this discipline; the most prevalent keywords in the publications grouped in this cluster reflect research focused on the life stories of people with some disorder.

Red cluster: Culture and society

The most central word in this cluster is identity. Combining the results in **Table 3** with those in **Figure 3**, the word life stories is nearby, which shows that the studies that nourish this cluster work with various life stories. This cluster links life stories to a series of specific areas, such as studies on

TABLE 3 Clustering of keyword.

Term	Occurrence	Term	Occurrence
Personality and narrative identity		**Autobiographical memory**	
Life story	365	Self	302
Narrative	170	Autobiographical memory	219
Narrative identity	122	Construction	76
Adolescence	95	Memory	71
Personality	92	Events	60
Coherence	87	Age autobiographical	58
Adults	61	Autobiographical memories	55
Adolescents	36	Childhood	52
Self-defining memories	34	Emergence	52
Autobiography	33	Time	48
Mental health		**Society and culture**	
Model	91	Identity	334
Depression	81	Life stories	165
Dementia	70	Gender	153
Trauma	69	Life	119
Experience	63	Narratives	109
Reminiscence	57	Women	105
Mental health	56	Health	101
Schizophrenia	39	Experiences	96
Stress	39	People	95
Therapy	37	Care	78

FIGURE 3
Keyword co-occurrence analysis.
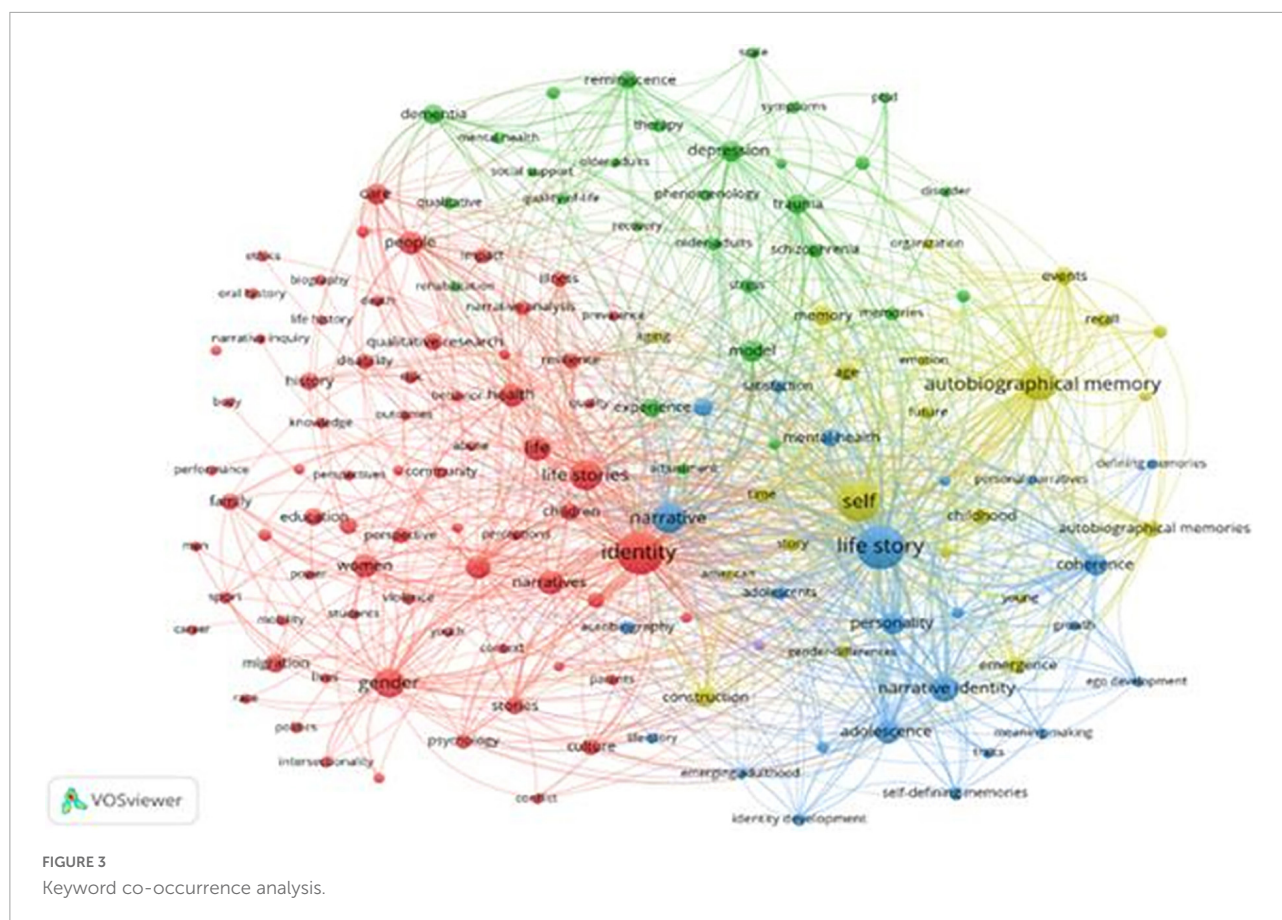
women, homosexuality, old age, experiences of war, alienation at work, the world of drugs and prisons, or prostitution (Pujadas, 2002). All the words that this cluster encompasses indicate that this area of research includes both the work of social psychologists and scientists from disciplines such as sociology and anthropology.

In general, **Figure 3** shows a very connected and dense network, where the clusters are very linked, indicating that the relationship between the different thematic areas is mature. In the first three clusters described, the link to psychology is very clear. The words that form them represent the works that are developed to access knowledge of the dynamics of the human psyche. Specifically, in the first two, the influence of evolutionary psychology is observed; studies assess these aspects from the perspective of vital development (Köber and Habermas, 2017; Camia and Habermas, 2020). The terms that are grouped in the last cluster described indicate production generated from social psychology as well as from other disciplines such as anthropology or sociology. The life stories in this case can be oriented both to the implication of the context in the conception that the person makes of himself and to the knowledge of the group or society to which the person interviewed belongs.

Co-citation analysis

Co-citation of authors refers to the phenomenon by which two or more authors are cited together. When this occurs with significant frequency, it can be assumed that these authors work in the same area of knowledge; however, they are not necessarily collaborating (Ardanuy, 2012). The co-citation links show the relationships between two authors, and the color of the nodes distinguishes the group to which each author is associated by their thematic similarity (Galvez, 2018). The benefit of using co-citation analysis is that, in addition to finding the most influential publications, scholars can also discover thematic clusters (Donthu et al., 2021) to join. The largest nodes are linked to the authors who receive a high number of citations.

Figure 4 shows that there are three major schools of thought within the field of life stories. They are led by the main producers of knowledge about this technique (**Table 4**).

Blue cluster: Personality and narrative identity

It is the most central cluster. It groups together authors who investigate the development of personality and narrative identity throughout the life cycle (McAdams, 2015). Among the authors with greater prominence within this cluster is McAdams, the main producer of knowledge about life stories.
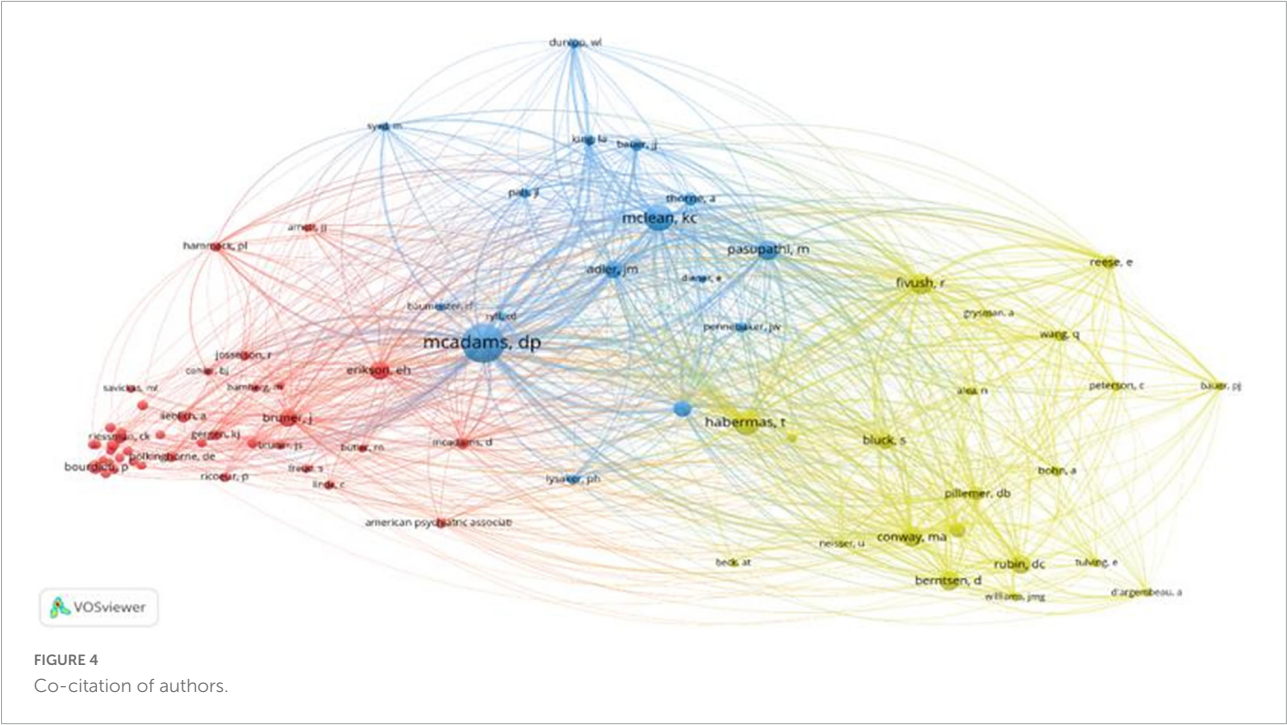
FIGURE 4
Co-citation of authors.

TABLE 4 Main producers of each school of knowledge.

Author	Occurrence	Author	Occurrence	Author	Occurrence
Personality and identity		**Autobiographical memory**		**Society and culture**	
D. P. McAdams	1,695	T. Habermas	681	U. H. Erikson	362
K. C. Mclean	746	R. Fivush	524	P. Bourdieu	222
M. Pasupathi	436	D. C. Rubin	398	C. K. Riessman	177
J. M. Adler	327	M. A. Conway	391	D. McAdams	160
H. A. Singer	295	D. Berntsen	386	E. Goffman	150
Thorne	204	J. Bruner	347	K. J. Gergen	137
J. J. Bauer	166	S. Bluck	294	P. Ricoeur	119
P. H. Lysaker	137	D. K. Thomsen	243	P. L. Hammack	116
Pennebaker	137	D. B. Pillemer	235	V. Braun	115
L. A. King	131	E. Reese	211	M. Foucault	113

McLean, the second most prolific author, focuses his work on the development of narrative identity among adolescence and emerging adults, similar to the studies developed by Pasupathi. There is a slight transition toward the themes that compose the red cluster due to the importance of context in the development of personality because it is constructed through social interactions and genetics (McAdams, 1996; Barlow, 2019).

Yellow cluster: Autobiographical memory

In this cluster, we find the presence of very prolific authors such as Habermas, Fivush, and Bluck. These authors analyse the construction of autobiographical memory as well as the way in which its development occurs (Fivush et al., 2011). Likewise,

they address the stability of memory as a function of age or life events (Köber and Habermas, 2017; Camia and Habermas, 2020).

Red cluster: Culture and society

This is the most peripheral cluster. As the name indicates, it incorporates the social and cultural dimensions of studies conducted through life stories. This group includes Erikson, Bruner, and Hammack as the main references, in addition to great references in psychology, such as Freud, the father of psychoanalysis, or Vygotsky, the founder of historical-cultural psychology. This cluster also includes contemporary sociologists such as Glen Elder Catherine, Kohler Reissman,

FIGURE 5
Co-citation of documents.
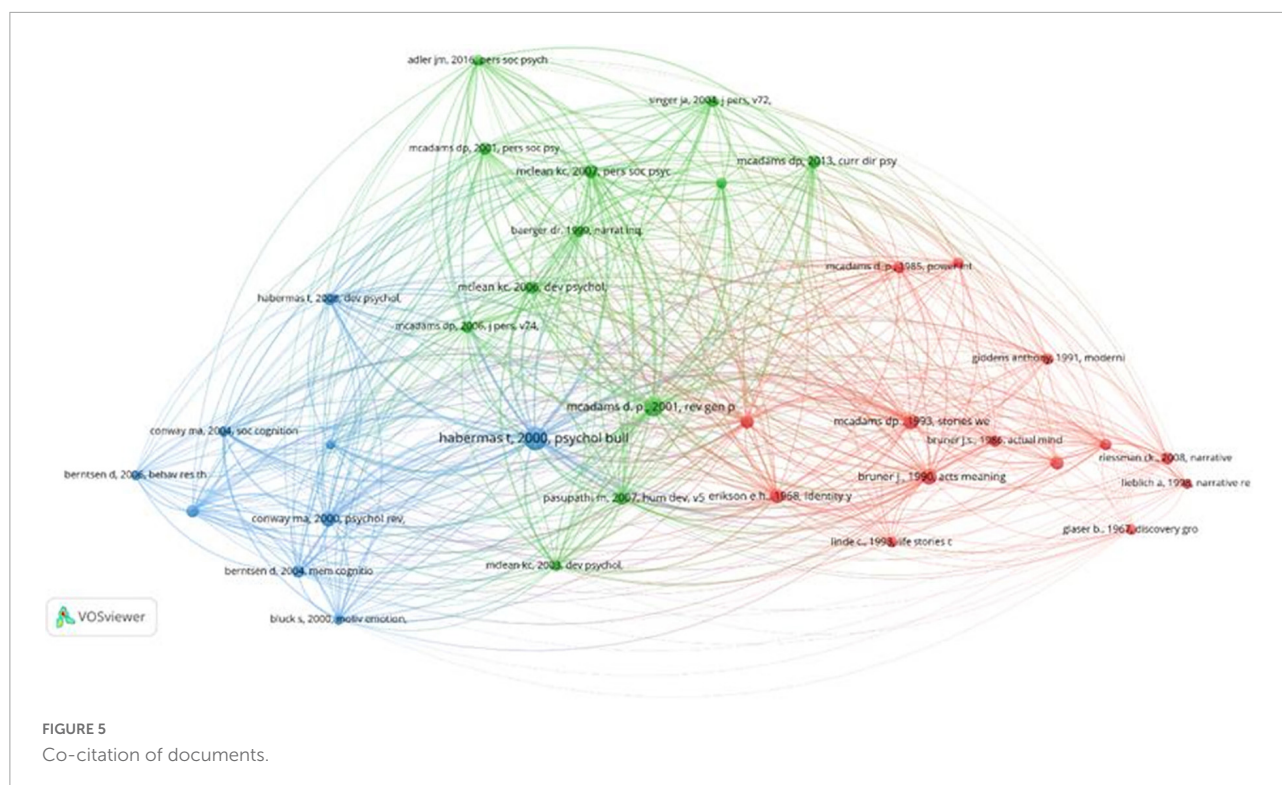
and Gabriele Rosenthal, and great names in this discipline, such as Pierre Bourdieu, Michel Foucault, Anthony Giddens, and Erving Goffman.

The graphic analysis again shows that the accounts created doctrine within psychology because most of the authors cited at length are psychologists. However, in the literature referenced in the red cluster, eminent sociologists stand out, although their lower relative prevalence suggests that they compose more the theoretical basis of the sociocultural approach than a source of empirical research.

Document co-citation analysis

Co-citation analysis occurs when two elements of the literature are cited together by a third party (Miguel et al., 2007). In addition, if it is assumed that a highly cited documents represent key concepts, methods, or experiments in a certain field, co-citation can be used to identify and visualize the relationship between these key ideas (Small, 2013). Co-citation analysis is a technique for scientific mapping that assumes that publications that are frequently cited together are thematically similar (Hjørland, 2013). In this sense, co-citation analysis has proven to be a useful empirical technique to describe the intellectual structure of the disciplines (Miguel et al., 2007; Sainaghi et al., 2018).

Figure 5 shows three clusters that represent the intellectual structure developed around life stories. Each of these three clusters identifies and visualizes the works that address the different topics of the field of study.

Green cluster: Personality and narrative identity

This is the most central cluster and includes the work of the main producers of knowledge. We find works by McAdams et al. (2001), McAdams and Pals (2006), McLean and Pratt (2006), McLean et al. (2007), Pasupathi et al. (2007), McAdams (2013), and Adler et al. (2016). These works deal with the study of narrative identity from different approaches; however, the psychosocial impact on narrative identity throughout the lives of people is commonly identified.

Blue cluster: Autobiographical memory

The main works in this cluster belong to authors such as Bluck and Habermas (2000), Conway and Pleydell-Pearce (2000), Habermas and Bluck (2000), Berntsen and Rubin (2004), or Conway et al. (2004). Their work deals with the concept of autobiographical memory as such. The authors work on this term as the union not only of individual events but also of life and its coherence, giving rise to a diagram of the life history of people.

Red cluster: Culture and society

This cluster includes the work developed by authors such as Kemph (1969), Bruner (1990), McAdams et al. (1993), and Habermas and Bluck (2000) pertaining to the search and construction of identity and how it is influenced by a cultural system. It also includes the work of Riessman (2008), who offers guidance in terms of social research, specifically the use of narrative methods. In this sense, the contributions of authors

such as McAdams show the closeness between the two clusters and the intellectual influences of the same author in different fields of knowledge.

The graph again shows a very connected network, revealing the existence of deep intellectual influences between the different works. There are no large central works but many and very connected ones. Therefore, the knowledge is based on numerous and current research. This distribution, again, is a trend that is typical of experimental techniques. However, once again, this trend is nuanced in the red cluster, where the presence of older works indicates the influence of trends more typical of the humanities, for which research is based on previous works to support studies.

Discussion

This study has shown the important role that literature reviews play in integrating and synthesizing existing knowledge and providing state-of-the-art understanding, identifying gaps, and inconsistencies in the literature, as well as pointing to avenues for future research to address outstanding issues and advance knowledge (Paul et al., 2021; Lim et al., 2022).

The work developed herein is relevant because it allows us to shed light on this matter. Through this first bibliometric analysis of the scientific production generated through life stories, we have gained knowledge of one of its techniques.

All the results indicate that we are facing a strongly consolidated technique. With almost a century of use, life stories have gone through different stages, reaching maturity recently. However, based on the analysis of the body of articles, we conclude that such maturity occurs in the field of psychology. We did not find references among the most prominent researchers to those who approach their studies from fields such as sociology, anthropology, or social work, which displaces their work to a more residual position. However, it is possible that the knowledge produced by sociologists or anthropologists will be transferred in other spaces and in other forms (Delgado-Baena et al., 2022).

Likewise, when analyzing the journals in which these researchers publish, there is a diversity of categories. However, among them, those belonging to the field of psychology are once again taking center stage. There are four topics addressed by these publications: personality and narrative identity, autobiographical memory, health and society, and culture. The first two present a clear psychological approach. The third is related to production developed from the health sciences. Only in the fourth category is there a contribution to social problems from sociology or anthropology. However, using bibliometric analysis, we cannot distinguish the weight or perspective of these disciplines because their relational techniques do not allow us to deepen this knowledge.

These topics are addressed by three major schools of thought personality and narrative identity, autobiographical memory, and society and culture, which are led by the main producers of knowledge. Clear cooperation occurs between them, leading to the fact that in these schools, knowledge is based on numerous and current investigations that are discussed, which again shows trends typical of the experimental techniques.

From the analyses completed thus far, we can conclude that the production developed from the field of psychology occupies a privileged position in terms of the production and transmission of knowledge through life stories. In contrast, the contributions that are made from sociology or anthropology in this field are blurred, relegating to the background the work carried out by its scholars. The technique of life history in the scientific field is thus associated with the psychological, being concerned mainly with the development of the personality in its relationship with the social or cultural environment, rather than with the social facts themselves.

The displacement of work from these disciplines is due, above all, to external causes and not intrinsic weaknesses of the specialties themselves. The monopoly of science means that those disciplines with more empiricist approaches, such as psychology, have a greater place in the science market. Meanwhile, other types of contributions do not leave a mark on the scientific literature, blurring the information in the databases, which also do not collect all the production that is developed (Moravcsik, 1989). Similarly, the analysis concentrates only on highly cited publications, and leaves publications that are recent or niche outside their subject groups (Donthu et al., 2021).

The hegemony of psychology over sociology or anthropology can reduce the other forms of observation and theorization to a marginal, precarious existence, or ultimately to their disappearance (Bertaux, 1980).

In this sense, a contribution of this study, in addition to helping researchers and readers understand the general intellectual structure of the field of life stories, is the identification of the need for future research that delves into the disciplinary differences in the use of this technique. Continuing systematic reviews of the literature produced through the other techniques of the biographical method and the triangulation of these studies is a matter of urgency for the optimal development of this method, as well as the advancement of scientific knowledge in this field.

Likewise, the results demonstrate to research communities, government institutions, and funding agencies the need to value scientific spaces with more constructivist views on social problems, such as sociology or anthropology, as well as develop solutions from the perspective of these disciplines.

Data availability statement

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

Author contributions

RL-M, CG-N, and AS: conceptualization, methodology, and formal analysis. RL-M: data curation and writing—original draft preparation. CG-N and AS: writing—review and editing and supervision. RL-M, CG-N, AD-B, RV-J, and AS: validation, investigation, resources, visualization, read, and agreed to the published version of the manuscript.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

Adam, D. (2002). Citation analysis: The counting house. *Nature* 415, 726–730. doi: 10.1038/415726a

Adler, J. M., Lodi-Smith, J., Philippe, F. L., and Houle, I. (2016). The incremental validity of narrative identity in predicting well-being: A review of the field and recommendations for the future. *Pers. Soc. Psychol. Rev.* 20, 142–175. doi: 10.1177/1088868315585068

Albort-Morant, G., and Ribeiro-Soriano, D. (2016). A bibliometric analysis of international impact of business incubator. *J. Bus. Res.* 69, 1775–1779.

Ardanuy, J. (2012). *Breve introducción a la bibliometría*. Barcelona: Universitat de Barcelona.

Barlow, F. K. (2019). Nature vs. nurture is nonsense: On the necessity of an integrated genetic, social, developmental, and personality psychology. *Aust. J. Psychol.* 71, 68–79. doi: 10.1111/ajpy.12240

Bartolomé, M. V., Sastre, M., del, M., and Fernández, V. (1996). Importancia en la edad y el nivel educacional en la exploración neuropsicológica de la memoria. *Rev. Fed. Esp. Asoc. Psicol.* 49, 221–232.

Benckendorff, P., and Zehrer, A. (2013). A network analysis of tourism research. *Ann. Tour. Res.* 43, 121–149. doi: 10.1016/j.annals.2013.04.005

Berntsen, D., and Rubin, D. C. (2004). Cultural life scripts structure recall from autobiographical memory. *Mem. Cogn.* 32, 427–442. doi: 10.3758/BF03195836

Bertaux, D. (1980). L'approche biographique: Sa Validité méthodologique, ses potentialités. *Cah. Int. Sociol.* 69, 197–225.

Bertaux-Wiame, I. (1980). Une application de l'approche autobiographique. *Les Migr. Prov. Ann. Vingt* 10, 201–205.

Bluck, S., and Habermas, T. (2000). The life story schema. *Motiv. Emot.* 24, 121–147. doi: 10.1023/A:1005615331901

Borgohain, D. J., Verma, M. K., Nazim, M., and Sarkar, M. (2021). Application of Bradford's law of scattering and Leimkuhler model to information science literature. *Collnet J. Scientometrics Inf. Manage.* 15, 197–212. doi: 10.1080/09737766.2021.1943041

Bradford, S. C. (1934). Sources of information on specific subjects. *Engineering* 137, 85–86.

Bruner, J. (1990). *Acts of meaning*. Cambridge, MA: Harvard University Press.

Camia, C., and Habermas, T. (2020). Explaining change in content of life narratives over time. *Memory* 28, 655–668. doi: 10.1080/09658211.2020.1761397

Cobo, M. J., López-Herrera, A. G., Herrera-Viedma, E., and Herrera, F. (2011). An approach for detecting, quantifying, and visualizing the evolution of a research field: A practical application to the fuzzy sets theory field. *J. Informetr.* 5, 146–166. doi: 10.1016/j.joi.2010.10.002

Conway, M., and Pleydell-Pearce, C. (2000). La construcción de memorias autobiográficas en el sistema de automemoria. *Rev. Psicol.* 107, 261–288. doi: 10.1037/0033-295X.107.2.261

Conway, M. A., Singer, J. A., and Tagini, A. (2004). The self and autobiographical memory: Correspondence and coherence. *Soc. Cogn.* 22, 491–529. doi: 10.1521/soco.22.5.491.50768

Cordero, M. C. (2012). Historias de vida Historias de vida: Una metodología de investigación cualitativa. *Rev. Griot* 5, 50–67.

Cornejo, M., Mendoza, F., and Rojas, R. C. (2008). La investigación con relatos de vida: Pistas y opciones del diseño metodológico. *Psykhe* 17, 29–39. doi: 10.4067/S0718-22282008000100004

De Solla Price, D. J. (1956). The exponential curve of science. *Discovery* 17, 240–243.

Delgado-Baena, A., Serrano, L., Vela-Jiménez, R., Jiménez, J., López-Montero, R., and Sianes, A. (2022). Epistemic injustice and dissidence: A bibliometric analysis of the literature on participatory action research hosted on the web of science. *Action Res.* 2022:147675032211265. doi: 10.1177/14767503221126531

Donthu, N., Kumar, S., Mukherjee, D., Pandey, N., and Lim, W. M. (2021). How to conduct a bibliometric analysis: An overview and guidelines. *J. Bus. Res.* 133, 285–296. doi: 10.1016/j.jbusres.2021.04.070

Elsbach, K. D., and van Knippenberg, D. (2020). Creating high-impact literature reviews: An argument for "integrative reviews". *J. Manage. Stud.* 57, 1277–1289. doi: 10.1111/joms.12581

Figueroa-Domecq, C., Pritchard, A., Segovia-Pérez, M., Morgan, N., and Villacé-Molinero, T. (2015). Tourism gender research: A critical accounting. *Ann. Tour. Res.* 52, 87–103. doi: 10.1016/j.annals.2015.02.001

Fivush, R., Habermas, T., Waters, T., and Zaman, W. (2011). The making of autobiographical memory: Intersections of culture, narratives and identity. *Int. J. Psychol.* 46, 321–345. doi: 10.1080/00207594.2011.596541

Galvez, C. (2018). El campo de investigación del Análisis de Redes Sociales en el área de las Ciencias de la Documentación: Un análisis de co-citación y co-palabras. *Rev. Gen. Inf. Doc.* 28, 455–475. doi: 10.5209/RGID.62834

Godin, B. (2006). On the origins of bibliometrics. *Scientometrics* 68, 109–133. doi: 10.1007/s11192-006-0086-0

González, J., Moya, M., and Mateos Hernández, M. A. (1997). Indicadores bibliométricos: Características y limitaciones en el análisis de la actividad científica. *An. Esp. Pediatr.* 49, 235–244.

Habermas, T., and Bluck, S. (2000). Getting a life: The emergence of the life story in adolescence. *Psychol. Bull.* 126, 748–769. doi: 10.1037/0033-2909.126.5.748

Hernández-Hernández, F., Apraiz, E. A., Gorospe, J. M. C., and Sancho-Gil, J. M. (2020). *¿Cómo aprenden los docentes? Tránsitos entre cartografías, experiencias, corporeidades y afectos*. Barcelona: Octaedro Editorial.

Hjørland, B. (2013). Facet analysis: The logical approach to knowledge organization. *Inf. Process. Manage.* 49, 545–557. doi: 10.1016/j.ipm.2012.10.001

Jamal, T., Smith, B., and Watson, E. (2008). Ranking, rating and scoring of tourism journals: Interdisciplinary challenges and innovations. *Tour. Manage.* 29, 66–78. doi: 10.1016/j.tourman.2007.04.001

Kastrin, A., and Hristovski, D. (2021). Scientometric analysis and knowledge mapping of literature-based discovery (1986–2020). *Scientometrics* 126, 1415–1451. doi: 10.1007/S11192-020-03811-Z

Kemph, J. P. (1969). Erik H. Erikson. Identity, youth and crisis. New York: W. W. Norton Company. *Behav. Sci.* 14, 154–159. doi: 10.1002/bs.3830140209

Köber, C., and Habermas, T. (2017). How stable is the personal past? Stability of most important autobiographical memories and life narratives across eight years in a life span sample. *J. Pers. Soc. Psychol.* 113, 608–626. doi: 10.1037/pspp0000145

Koseoglu, M. A., Rahimi, R., Okumus, F., and Liu, J. (2016). Bibliometric studies in tourism. *Ann. Tour. Res.* 61, 180–198. doi: 10.1016/j.annals.2016.10.006

Köseoglu, M. A., Sehitoglu, Y., and Craft, J. (2015). Academic foundations of hospitality management research with an emerging country focus: A citation and co-citation analysis. *Int. J. Hosp. Manage.* 45, 130–144. doi: 10.1016/j.ijhm.2014.12.004

Kushairi, N., and Ahmi, A. (2021). Flipped classroom in the second decade of the millenia: A bibliometrics analysis with lotka's law. *Educ. Inf. Technol.* 26, 4401–4431. doi: 10.1007/S10639-021-10457-8

Lim, W. M., Kumar, S., and Ali, F. (2022). Advancing knowledge through literature reviews: "What", "why", and "how to contribute". *Serv. Indust. J.* 42, 481–513. doi: 10.1080/02642069.2022.2047941

Lotka, A. J. (1926). The frequency distribution of scientific productivity. *J. Washington Acad. Sci.* 16, 317–323.

Lüdtke, O., Roberts, B. W., Trautwein, U., and Nagy, G. (2011). A random walk down university avenue: Life paths, life events, and personality trait change at the transition to university life. *J. Pers. Soc. Psychol.* 101, 620–637. doi: 10.1037/a0023743

Madrid Martí,n, M. J., Jiménez-Fanjul, N., León-Mantero, C., and Maz-Machado, A. (2017). Revistas brasileñas de Educación en SCOPUS: Un análisis bibliométrico. *Biblios* 30–41. doi: 10.5195/BIBLIOS.2017.344

McAdams, D. P. (1996). Personality, modernity, and the storied self: A contemporary framework for studying persons. *Psychol. Inq.* 7, 295–321. doi: 10.1207/s15327965pli0704_1

McAdams, D. P. (2013). The psychological self as actor, agent and author. *Perspect. Psychol. Sci.* 8, 272–295. doi: 10.1177/1745691612464657

McAdams, D. P. (2015). Tracing three lines of personality development. *Res. Hum. Dev.* 12, 224–228. doi: 10.1080/15427609.2015.1068057

McAdams, D. P., de St. Aubin, E. D., and Logan, R. L. (1993). Generativity among young, midlife, and older adults. *Psychol. Aging* 8, 221–230. doi: 10.1037/0882-7974.8.2.221

McAdams, D. P., and Pals, J. L. (2006). A new Big Five: Fundamental principles for an integrative science of personality. *Am. Psychol.* 61, 204–217. doi: 10.1037/0003-066X.61.3.204

McAdams, D. P., Reynolds, J., Lewis, M., Patten, A. H., and Bowman, P. J. (2001). When bad things turn good and good things turn bad: Sequences of redemption and contamination in life narrative and then-relation to psychosocial adaptation in midlife adults and in students. *Pers. Soc. Psychol. Bull.* 27, 474–485. doi: 10.1177/0146167201274008

McLean, K., Pasupathi, M., and Pals, J. (2007). Selves creating stories creating selves: A process model of self-development. *Pers. Soc. Psychol. Rev.* 11, 262–278. doi: 10.1177/1088868307301034

McLean, K., and Pratt, M. (2006). Life's little (and big) lessons: Identity statuses and meaning-making in the turning point narratives of emerging adults. *Dev. Psychol.* 42, 714–722. doi: 10.1037/0012-1649.42.4.714

Miguel, S., Moya-Anegón, F., and Herrero-Solana, V. (2007). El análisis de co-citas como método de investigación en Bibliotecología y Ciencia de la Información. *Invest. Bibliotecol.* 21, 139–155. doi: 10.22201/iibi.0187358xp.2007.43.4129

Mora, L., Deakin, M., and Reid, A. (2019). Combining co-citation clustering and text-based analysis to reveal the main development paths of smart cities. *Technol. Forecast. Soc. Change* 142, 56–69. doi: 10.1016/j.techfore.2018.07.019

Moravcsik, J. M. (1989). Between reference and meaning*. *Midwest Stud. Philos.* 14, 68–83. doi: 10.1111/j.1475-4975.1989.tb00183.x

Mukherjee, D., Lim, W. M., Kumar, S., and Donthu, N. (2022). Guidelines for advancing theory and practice through bibliometric research. *J. Bus. Res.* 148, 101–115. doi: 10.1016/j.jbusres.2022.04.042

Muñoz-Leiva, F., Viedma-del-Jesús, M. I., Sánchez-Fernández, J., and López-Herrera, A. G. (2012). An application of co-word analysis and bibliometric maps for detecting the most highlighting themes in the consumer behaviour research from a longitudinal perspective. *Qual. Quant.* 46, 1077–1095. doi: 10.1007/s11135-011-9565-3

Nettle, D., and Frankenhuis, W. E. (2019). The evolution of life-history theory: A bibliometric analysis of an interdisciplinary research area. *Proc. R. Soc.* 286:20190040. doi: 10.1098/rspb.2019.0040

Panori, A., Mora, L., and Reid, A. (2019). Five decades of research on urban poverty: Main research communities, core knowledge producers, and emerging thematic areas. *J. Clean. Prod.* 237:117850. doi: 10.1016/j.jclepro.2019.117850

Pasupathi, M., Mansour, E., and Brubaker, J. R. (2007). Developing a life story: Constructing relations between self and experience in autobiographical narratives. *Hum. Dev.* 50, 85–110. doi: 10.1159/000100939

Paul, J., Lim, W. M., and O'Cass, A. (2021). Scientific procedures and rationales for systematic literature reviews (SPAR-4-SLR). *Int. J. Consum. Stud.* 45, O1–O16. doi: 10.1111/ijcs.12695

Peacock, J. L., and Holland, D. C. (1993). The narrated self: Life stories in process. *Ethos* 21, 367–383. doi: 10.1525/eth.1993.21.4.02a00010

Pritchard, A. (1969). Statistical bibliography or bibliometrics. *J. Doc.* 25, 348–349.

Pujadas, J. J. (2002). *El método biográfico: El uso de las historias de vida en ciencias sociales.* Madrid: Sociological Research Center.

Ramos-Rodríguez, A.-R., and Ruíz-Navarro, J. (2004). Changes in the intellectual structure of strategic management research: A bibliometric study of the strategic management journal, 1980–2000. *Strateg. Manage. J.* 25, 981–1004. doi: 10.1002/smj.397

Rey-Martí, A., Ribeiro-Soriano, D., and Palacios-Marqués, D. (2016). A bibliometric analysis of social entrepreneurship. *J. Bus. Res.* 69, 1651–1655. doi: 10.1016/j.jbusres.2015.10.033

Riessman, C. (2008). *Narrative methods for the human sciencies.* Thousand Oaks, CA: Sage Publications, Inc.

Rodríguez Gutiérrez, J. K., Gómez Velasco, N. Y., and Herrera-Martínez, Y. (2017). Técnicas bibliométricas dinâmicas na produção em grupos de investigação científica. *Rev. Lasallista Invest.* 14, 73–82. doi: 10.22507/rli.v14n2a7

Rubio, M. J., and Varas, J. (2004). *El anailisis de la realidad en la intervicioìn social: Meìtodos y teìcnicas de investigaciòin.* Madrid: CCS.

Sainaghi, R., Phillips, P., Baggio, R., and Mauri, A. (2018). Cross-citation and authorship analysis of hotel performance studies. *Int. J. Hosp. Manage.* 73, 75–84. doi: 10.1016/j.ijhm.2018.02.004

Schmidgall, R., Woods, R. H., and Hardigree, C. (2013). Hospitality's most influential scholars: Fifteen years of citation analyses (1989–2004). *J. Hosp. Tour. Educ.* 19, 32–43. doi: 10.1080/10963758.2007.10696888

Serrano, L., Sianes, A., and Ariza-Montes, A. (2019). Using bibliometric methods to shed light on the concept of sustainable tourism. *Sustainability* 11:6964. doi: 10.3390/su11246964

Sianes, A. (2021). Academic research on the 2030 agenda: Challenges of a transdisciplinary field of study. *Glob. Policy* 12, 286–297. doi: 10.1111/1758-5899.12912

Small, H. (2013). Tracking and predicting growth areas in science. *Scientometrics* 68, 595–610. doi: 10.1007/s11192-006-0132-y

Svensson, G., Svaeri, S., and Einarsen, K. (2009). 'Scientific identity' of scholarly journals in hospitality and tourism research: Review and evaluation. *Int. J. Hosp. Manage.* 28, 631–634. doi: 10.1016/j.ijhm.2009.01.006

Sweileh, W. M. (2018). Research trends on human trafficking: A bibliometric analysis using Scopus database. *Global. Health* 14, 1–12. doi: 10.1186/s12992-018-0427-9

Van Eck, N. J., and Waltman, L. (2020). *Manual de VOSviewer.* Available online at: http://vosviewer.com (accessed December 12, 2022).

Waltman, L., Van Eck, N., and Noyons, E. (2010). A unified approach to mapping and clustering of bibliometric networks. *J. Informetr.* 4, 629–635. doi: 10.1016/j.joi.2010.07.002

"I am feeling tension in my whole body": An experimental phenomenological study of empathy for pain

David Martínez-Pernía[1,2,3]*, Ignacio Cea[1,4],
Alejandro Troncoso[1], Kevin Blanco[1],
Jorge Calderón Vergara[1], Constanza Baquedano[1],
Claudio Araya-Veliz[5], Ana Useros-Olmo[6,7], David Huepe[1],
Valentina Carrera[1], Victoria Mack Silva[1] and Mayte Vergara[1]

[1]School of Psychology, Center for Social and Cognitive Neuroscience (CSCN), Universidad Adolfo
Ibáñez, Santiago, Chile, [2]Faculty of Medicine, Geroscience Center for Brain Health and Metabolism
(GERO), University of Chile, Santiago, Chile, [3]Faculty of Medicine, Memory and Neuropsychiatric
Clinic (CMYN), Neurology Service, Hospital del Salvador, University of Chile, Santiago, Chile,
[4]Philosophy Department, Faculty of Philosophy and Humanities, Universidad Alberto Hurtado,
Santiago, Chile, [5]School of Psychology, Universidad Adolfo Ibáñez, Santiago, Chile, [6]Unidad de
Daño Cerebral, Hospital Beata María Ana, Madrid, Spain, [7]Departamento de Fisioterapia and Motion
in Brains Research Group, Institute of Neuroscience and Sciences of the Movement (INCIMOV),
Centro Superior de Estudios Universitarios La Salle, Universidad Autónoma de Madrid, Madrid, Spain

Introduction: Traditionally, empathy has been studied from two main perspectives: the theory-theory approach and the simulation theory approach. These theories claim that social emotions are fundamentally constituted by mind states in the brain. In contrast, classical phenomenology and recent research based on the enactive theories consider empathy as the basic process of contacting others' emotional experiences through direct bodily perception and sensation.

Objective: This study aims to enrich the knowledge of the empathic experience of pain using an experimental phenomenological method.

Materials and methods: Implementing an experimental paradigm used in affective neuroscience, we exposed 28 healthy adults to a video of sportspersons suffering physical accidents while practicing extreme sports. Immediately after watching the video, each participant underwent a phenomenological interview to gather data on embodied, multi-layered dimensions (bodily sensations, emotions, and motivations) and temporal aspects of empathic experience. We also performed quantitative analyses of the phenomenological categories.

Results: Experiential access to the other person's painful experience involves four main themes. Bodily resonance: participants felt a multiplicity of bodily, affective, and kinesthetic sensations in coordination with the sportsperson's bodily actions. Attentional focus: some participants centered their attention more on their own personal discomfort and sensations of rejection, while

others on the pain and suffering experienced by the sportspersons. Kinesthetic motivation: some participants experienced the feeling in their bodies to avoid or escape from watching the video, while others experienced the need to help the sportspersons avoid suffering any injury while practicing extreme sports. The temporality of experience: participants witnessed temporal fluctuations in their experiences, bringing intensity changes in their bodily resonance, attentional focus, and kinesthetic motivation. Finally, two experiential structures were found: one structure is self-centered empathic experience, characterized by bodily resonance, attentional focus centered on the participant's own experience of seeing the sportsperson suffering, and self-protective kinesthetic motivation; the other structure is other-centered empathic experience, characterized by bodily resonance, attentional focus centered on the sportsperson, and prosocial kinesthetic motivation to help them.

Discussion: We show how phenomenological data may contribute to comprehending empathy for pain in social neuroscience. In addition, we address the phenomenological aspect of the enactive approach to the three dimensions of an embodiment of human consciousness, especially the intersubjective dimension. Also, based on our results, we suggest an extension of the enactive theory of non-interactive social experience.

Introduction

Empathy is central to intersubjective life. It is a critical component of our capacity to understand other people's minds and to predict and explain their behavior (Stueber, 2019). Despite its importance in social life, the concept of empathy is still debated due to extensive associations with social phenomena (Cuff et al., 2016; Hall and Schwartz, 2019). For instance, some authors consider empathy essential for responding ethically to others (Caplan and Goldie, 2011), as well as for developing morality, prosocial action, and motivation (Hoffman, 2001; Decety and Cowell, 2014). On the other hand, other authors state that empathy is related to cruelty and immoral behavior (Decety and Cowell, 2018). Furthermore, empathy has even been considered a prerequisite for the scientific study of consciousness (Thompson, 2001) and the privileged method in social sciences (Dilthey, 1961).

A relevant aspect of studying intersubjective life is empathy for pain. Studies have consistently shown that exposure to pain images induces empathy and activates neural circuits similar to those triggered by first-hand experience of pain, particularly the brain regions linked to affective-motivational processing of pain. This evidence emphasizes the implicit

and automatic neural representations shared between oneself and others to experience empathy for pain. This experience is generally aversive, unpleasant, and even painful for the observers themselves (Lamm et al., 2007, 2011; Bernhardt and Singer, 2012).

Although empathy is a core component of social life, there is no clear theoretical consensus on its definition. As Neumann et al. (2015: 257) point out, "an examination of the definitions of empathy in the last 20 years reveals that there is no single definition that is systematically quoted; in fact, the multitude of definitions is often quoted as a distinctive feature of the field." The concept of empathy is also essential in various disciplines, such as social neuroscience, psychology, psychiatry, philosophy, and aesthetics.

In the field of social neuroscience, the most popular approaches to empathy are the theory-theory (TT) and the simulation theory (ST). Although both involve mind-reading, TT uses theoretical inferences while ST employs a first-person simulation routine (Keysers and Gazzola, 2006).

The theory theorists (Gopnik and Wellman, 1992; Baron-Cohen, 1995; Carruthers, 2009) consider that humans are capable of reading minds because they possess a common-sense "theory of mind" (ToM) with which they explain human

behavior. As one of the most general terms in empathy research, ToM refers to the capacity to attribute mental states to oneself and others, and make predictions about others' future behaviors by inferring their mental states (Premack and Woodruff, 1978). ToM maintains that the knowledge we acquire about our and others' minds is not a formal scientific theory but an informal, everyday, or fundamental theory. For example, experience plays an essential formative role in developing the ToM in children (Flavell, 2004).

By contrast, simulation theorists (Gordon, 1986; Goldman, 2006; Gallese, 2009) deny that our understanding of others is theoretical in nature. Instead, they argue that we use our minds as a model for understanding others' minds. Consequently, mind-reading depends on the ability to mentally simulate another person's mind (Gallese and Goldman, 1998; Goldman, 2006). This perspective suggests that people perform internal simulations of the observed sensations, emotions, and actions of others (Oberman et al., 2007). For example, Uddin et al. (2007) suggest that we have specific brain networks for processing external (more bodily) actions and attitudes of ourselves and others through simulation, while other structures allow us to infer our and others' mental states through ToM.

Neuroscientific findings on human mirror neurons have been interpreted as empirical evidence supporting ST. Mirror neurons have been considered acentral factor that enables the development of intersubjective relationships and the root of social cognition (Oberman et al., 2007; Stueber, 2019). Although the TT and the ST start from different theoretical assumptions, both are based on a representationalist perspective that presupposes one's mind as internal, hidden, and fundamentally opaque to others. Consequently, others' minds are not accessible from experience but through indirect processes such as theoretical inference or simulation (Zahavi, 2010; Colombetti, 2014).

As an alternative to these approaches, the phenomenological perspective offers a different explanation of the nature of empathy (Stein, 1917; Husserl, 1973; Scheler, 1973). For Husserl, "Einfühlung" [literally "feeling into," translated by Titchener (1909) as "empathy"] is a particular form of intentionality in which one's consciousness is directed toward another's experience. He wrote that "in empathy, the empathizing I experiences the inner life or, to be more precise, the consciousness of the other I" (Husserl, 2006: 82). Husserl's approach to empathy was further developed by his student Edith Stein in her 1916 doctoral thesis, *On the Problem of Empathy Stein (1964).* She affirms that observing the other's subjectivity does not require explicit reasoning ("Einsicht") but simply that we perceive and feel ("Einfühlung"). Consequently, Stein emphasizes the sensual experience of the empathic answer, which she terms "sensual empathy" ("Empfindungseinfühlung"). Stein's proposal is the basis of the approach to empathy developed by Giovanna Colombetti (2014), who stresses the affective and bodily dimensions of empathy. As defined by

Colombetti, basic empathy corresponds to our bodies' affective response to others' bodily presence. It is the most elemental experience of the other and takes place as soon as she enters our perceptive field. However, the other's body does not appear simply as a physical object ("Körper") but as a living body endowed with subjectivity ("Leib"), following the classic Husserlian distinction. In this study, we follow Colombetti's phenomenologically inspired characterization of empathy and define it as affective and bodily "*experiential* access to the other's subjectivity" (Colombetti, 2014: 174).

The enactive approach (Varela, 1984, 1991; Varela et al., 1991; Thompson and Varela, 2001; Thompson, 2007) is the explanatory framework in cognitive science that underlies Colombetti's proposal and the present study. One critical contribution of this framework is placing conscious experience central to the scientific study of the mind. In *The Embodied Mind*, Varela (1991: 15) state that "the new sciences of mind need to enlarge their horizon to encompass both lived human experience and the possibilities of transformation inherent in human experience." Moreover, following the phenomenological tradition, especially Merleau-Ponty's development, they endorse the phenomenological view that considers the bodies of conscious creatures, especially human bodies, "both as physical structures and as lived, experiential structures—in short, as both 'outer' and 'inner,' biological and phenomenological" (Varela et al., 1991: 15).

Despite the importance of studying the subjective experience, most empathy studies have focused only on physiological mechanisms and used only self-reported assessments to investigate subjectivity (e.g., Timmers et al., 2018). Such subjective reports have been crucial to validating empathy for pain paradigms and relating physiological responses to changes in subjective responses (e.g., Klimecki et al., 2014). However, self-report methods have several limitations. For instance, self-report questionnaires quantify the participant's empathic perception but do not describe how the subjective experience unfolds or how the interaction with another is experienced, thus overlooking a subtle subjective world (Olivares et al., 2015; Petitmengin, 2017). In addition, when these studies assess participants' emotional state (e.g., fear and anger) or their empathic perception (e.g., valence and arousal), it is assumed that they must be and have been aware of the questions to which they are subjected, having the risk of inducing or colluding a subjective state (Hurlburt and Heavey, 2015). Another limitation is that self-report assessments reveal previous theoretical assumptions about the nature of empathic experience, and thus prevent knowing the participant's subjective in their words and experiential domains (Colombetti, 2014).

In contrast to self-report methods, phenomenological methods aim to understand the structures of human experience, including highly embodied dimensions and multi-layered, intricate dynamics of lived experiences

(Bitbol and Petitmengin, 2017). Since its incorporation into the field of cognitive science, phenomenology has exhibited accuracy and high utility in understanding phenomena such as meditative states (Silva-Mack et al., 2018; Nave et al., 2021), contemplative training (Przyrembel and Singer, 2018), epilepsy (Le Van Quyen and Petitmengin, 2002), fibromyalgia (Valenzuela-Moguillansky, 2013), and chronic pain (Smrdu, 2022). In addition, analysis of subjective experience captures very subtle descriptions of embodied experiential microdynamics, such as approach and avoidance behaviors (Baquedano and Fabar, 2017), exploration of awareness during sleep (Alcaraz-Sánchez et al., 2022), adjustments of attention (Lachaux et al., 2000), variation of emotional state (Depraz et al., 2017), and movement intention (Jo et al., 2014).

To the best of our knowledge, no prior research has incorporated subtle descriptions of empathic experience. However, a series of promising studies have classified participants according to the experience of consciously feeling vicarious pain in a classic empathy for pain paradigm. Notably, these studies show differences in functional connectivity among the subjective clusters (Grice-Jackson et al., 2017a,b). Although these studies analyzed subjective experience through self-report questionnaires and considered few bodily and affective subjective dimensions, they reveal the significant contribution of incorporating the study of subjective experience into paradigms of empathy for pain.

This study aims to deepen the knowledge of empathy for pain by implementing an experimental phenomenological method, which entails "discovering the structure of the experience as it appears in consciousness through a research design that incorporates the peculiarities of experimental psychology and phenomenological psychology" (Martínez-Pernía, 2022: 149). To achieve our goal, we examined the phenomenological experience with an emphasis on embodied, multi-layered dimensions (bodily sensations, emotions, and motivations) and temporal aspects of empathic experience. Our research design exposed participants to a video of people having physical accidents while practicing extreme sports. We applied a second-person method (phenomenological interview) to rigorously collect phenomenological data (Petitmengin, 2006; Olivares et al., 2015; Petitmengin et al., 2019), which we analyzed by drawing on Giorgi's phenomenological analysis (Giorgi et al., 2017).

The study's relevance regarding social emotions, and more specifically empathic experience of pain, lies in two central elements. First, social cognition research has traditionally been conducted through self-report, behavioral, and neuroimaging measures (Neumann et al., 2015), but first-person methods based on the phenomenological experience

have been neglected[1] (Gallagher, 2011; Fuchs, 2013). We will also discuss how phenomenological data may contribute to comprehending empathy for pain in social neuroscience. Second, since the enactive approach emerged, just a few of the plethora of publications in basic science have implemented enactive concepts with qualitative research (Fernandez, 2020). This article discusses our phenomenological results as a resource to explore the unfolding of experience from the perspective of the enactive approach (Stilwell and Harman, 2021; Martínez-Pernía, 2022).

Materials and methods

Participants

Between September 2017 and January 2018, 28 adults participated in the study. Inclusion criteria required individuals with no clinical history of cognitive, neurological, or psychiatric disorder and normal or corrected-to-normal visual acuity. Criteria were corroborated in a brief interview. To characterize the sample, participants were asked to complete the Montreal Cognitive Assessment (MoCA; Nasreddine et al., 2005), the Beck Depression Inventory-II (BDI-II; Beck et al., 1996), and the State-Trait Anxiety Inventory (STAI; Spielberger et al., 1970).

Participants were recruited from workers and university students at Hospital del Salvador (Santiago, Chile). All participants gave written informed consent. The study procedure was conformed with the Declaration of Helsinki principles and was approved by the "Scientific Ethics Committee of the Servicio de Salud Metropolitano Oriente" and the "Research in Humans being Ethics Committee of the Medicine Faculty, Universidad de Chile."

Construction and validation of the emotional stimuli

To construct and validate the stimuli, we followed the methodological considerations widely used in affective neuroscience (e.g., Stemmler, 2003). Empathy for pain stimuli were produced using audiovisual material found online under Creative Commons licensing. In total, 12 scenes that included men and women, with an average duration of 7–11 s, were used

---

[1] The third-person view refers to the objective procedures to study cognition through technological devices (e.g., fMRI and EEG). The first-person view refers to the meaning reports of the participant's lived experience (e.g., self-report and phenomenological experience). The second-person view is the implementation of interview procedures applied by the researcher to collect the participant's experience. In this study, we implemented a phenomenological interview (second-person view) to collect participants' phenomenological experience (first-person view).

to validate the emotional condition. Each scene depicted an intense physical accident resulting from wrong movements or miscalculations while practicing extreme sports (e.g., parkour, skateboarding, snowboarding, or climbing). All 12 scenes had a similar event sequence. Each began with a sportsperson skillfully practicing a sports activity. The sportsperson then loses balance and impacts heavily against the ground. Finally, the sportsperson is seen lying on the ground. No scenes depicted dismemberment, disfigurement, or death.

Once all the scenes were prepared, they were validated with 65 university students (38 women; mean age = 19.34±1.56) following the indications of the Self-Assessment Manikin (Bradley and Lang, 1994). This scale assesses the person's emotional reaction to the stimulus in terms of valence ("unpleasant" to "pleasant"), arousal ("low" to "high"), and dominance ("without control" to "with control") on a 9-point rating scale (1–9). Empirical works have repeatedly confirmed that these emotional dimensions effectively measure a person's affective reaction (Bradley and Lang, 1994). Higher scores indicated pleasant valence, more arousal, and having control of the situation; lower scores indicate unpleasant valence, less arousal, and losing control of the situation. Because this article aimed to study empathy for others' physical pain, we selected as the final scenes those scored in the trial as unpleasant, provoking high arousal, and triggering the perception of lost control. The selected scenes had the following mean scores: 3.77 (±1.94) for valence; 6.40 (±1.78) for arousal, and 5.31 (±2.68) for control. Seven scenes (six men and one woman) were combined to produce the final video (60-s duration) that all participants in the main study would watch (the video was uploaded[2]).

Procedure

Participants completed the questionnaires and all the experimental protocols in the Clínica de la Memoria y Neuropsiquiatría (CMYN) del Hospital del Salvador. A psychologist supervised the informed consent process and verified that each participant met the inclusion criteria through interviews and the previously described scales. After this step, we implemented an experimental protocol previously used in affective neuroscience research (e.g., Hagenaars et al., 2012, 2014; Gea et al., 2014). Each participant was requested to stand on a marked spot exactly 1 m from a 40-inch screen TV, installed at eye level.[3] They had to motionlessly maintain a comfortable bipedal stance, with their arms relaxed alongside the body. The video was then played on the screen. Immediately

---

3   This study also collected physiological and behavioral data through third-person methods such as force platform, electrocardiogram, and galvanic skin response. However, this paper focuses only on the phenomenological data.

after it finished, a researcher conducted a phenomenological interview with each participant, explaining the aim of this kind of phenomenological inquiry. Details of this interview are presented in the next section.

The phenomenological interview

The same researcher conducted all 28 phenomenological interviews in Spanish (DM-P). They were audio-recorded and later transcribed verbatim. At the beginning of each interview, the participant was asked to describe the scenes that induced unpleasant feelings and then choose the scene (participants chose all different scenes) associated with the highest overall intensity of their experience (no participant had difficulty identifying this). This process enabled the whole interview to focus on the singular experience of the selected scene.

The researcher who conducted the interviews adopted the phenomenological attitude, also named "epochç" (Moustakas, 1994; Merriam, 2009). It allows studying the appearance of the phenomenon as such, through suspending the natural attitude with which we usually know and the step toward a phenomenological attitude. Phenomenological reduction leads to the source of meaning and existence of the experienced world (Moustakas, 1994). The interviews were also partially guided by the criteria for micro-phenomenological interviews (Petitmengin, 2006). In order to help the participant to assume the phenomenological attitude, the interviewer maintained the principle of evocation during the interview (Petitmengin et al., 2019). Implementing the principle of evocation is essential to obtain the participants' pre-reflective descriptions and to make their past experiences more vivid (Petitmengin et al., 2019). This is important because "usually interviewees glide into general descriptions of condensed situations that make it difficult to produce precise descriptions. Therefore, it is important to continually bring the interviewee back to the chosen particular situation" (Valenzuela-Moguillansky, 2013: 340–341). Below is an example of how this part of the micro-phenomenological interview method was implemented:

> "...Well done [name of participant]. Now, I will ask you to close your eyes, and visualize, feel as if you are re-living the experience of watching the video. So, close your eyes please, and see yourself again in this situation in which you are standing, watching the television screen, and the accidents occur..."

Another relevant aspect of the phenomenological interview was to collect data conveying "what" the participant experienced and "how" she experienced it, for example, by asking, "What do you feel?"; "How do you perceive it?"; and "How do you know it?" The time course of the experience was also taken into account, for example, by asking, "How do you feel at the

beginning of the video?"; "And just after that, how do you feel?". Another characteristic of the interview procedure was recapitulating participants' responses to facilitate their recalling.

The descriptive phenomenological psychological method

To phenomenologically analyze the data, we used the descriptive phenomenological psychological method, hereafter Giorgi's method (Giorgi, 1975; Giorgi et al., 2017). This method centers analysis on the meaning of the experience and aims to describe its structure by identifying central themes (Giorgi et al., 2017). In this sense, the experience's psychological structure refers to how the subject makes sense of her own lived experience in the world. This method considers the experience as a psychological consciousness through a non-transcendental phenomenological psychological method (Giorgi, 2021).

Each of the three researchers involved in data analysis (DM-P, AT, and KB) began by reading an interview in full and then summarizing its general meaning. We then carefully re-read the interview, highlighting in the transcribed document every statement expressing or referring to the direct experience (meaning units). After completing this, we re-read each meaning unit to identify the sub-themes and main themes in which the lived experience occurred. For this, the researchers must transform the participant's expressions into categories that highlight their psychological meanings. It requires maintaining the original meaning of singular verbatims while simultaneously allowing a generalization of them to similar experiences of other participants (Giorgi et al., 2017). The last step of Giorgi's method is to grasp and describe the whole structure of the experience. Because the main themes inform us about specific parts of the experience, we tied the main themes together to get a whole structure. To achieve this structure moving from particular aspects to participants' essential understanding, we looked at these particular elements and systematically varied them to determine their psychological essence. It is important to clarify that the main themes characterizing the specific aspects of the experience emerge in the penultimate step of the analysis process, while the whole psychological structure of the experience emerges in the last step. The qualitative results will be presented in this order in their corresponding section.

After completing their individual analyses of each interview, the three researchers met to triangulate the data by jointly reviewing each analysis. We compared and discussed the meaning units, themes, and essential structure of the interview during the triangulation process. Any disagreement had to be resolved by reaching a consensus among the researchers. Our analysis also used iteration throughout the procedure. Where a new main theme or sub-theme appeared or was modified, we had to review all previous analyses to keep consistency between the new and previous categories. This

review procedure and consistency were also implemented in the structural experiential analysis.

The individual and triangulation analyses were supported by ATLAS.ti (2022) 9 qualitative data analysis software and implemented for each of the 28 interviews.

Quality assurance

We deployed several measures to ensure the quality of data collection and analysis. First, the researcher who conducted the interviews, who is certified in a micro-phenomenological interview, adopted a phenomenological attitude by setting aside or bracketing beliefs, prejudgments, and thoughts. Some examples of these mind processes that had to be set aside were: the researcher's inferences that his own past experiences are the same as that the participant is living, or presuppositions that specific experiences of the participant are understandable from a pre-established theoretical model. For the purpose to adopt the phenomenological attitude, the interviewer disclosed his own evaluations and experiences before data collection, aiming to be open to observing emerging phenomena without preconceptions (Hamilton et al., 2018). Moreover, before and during each interview, the researcher deliberately examined his own beliefs and their temporary suspension, being open to observing emerging phenomena without preconceptions (Hamilton et al., 2018). This phenomenological attitude was also maintained rigorously by all three researchers throughout the data analysis process. In addition to adopting the phenomenological attitude, the researchers "reduce" or restrict their frames of reference to the psychological meaning (psychological reduction). This means that they have to focus on a dimension of the experience that "is neither abstractly conceptual, nor objectively physical; it is concretely and personally lived, by a particular person, always socially engaged, in a particular situation in everyday social life, in space, time and history" (Englander and Morley, 2021).

As a second quality-assurance measure, the three researchers are all experienced in phenomenological studies and each independently analyzed the 28 interviews using ATLAS.ti (2022) 9 qualitative software.

As a third measure, we implemented a four-step quality procedure to ensure the reliability of triangulation analysis for sub-themes in each temporal phase and the experiential structure. In the first step, the three researchers jointly analyzed the first ten interviews in a systematic and rigorous triangulation process, in which we corroborated the different phenomenological categories generated for every utterance by each participant, together with the underlying experiential and linguistic criteria used by each researcher separately to generate the phenomenological categories. After reaching a consensus in these analyses, the researchers shared a common view about the analyzed interviews and phenomenological categories.

In the second step, to triangulate the last 18 interviews after independent analyses, each researcher downloaded the ATLAS.ti software the quantitative data in XLS file format with the phenomenological coding of each interview. The codings of the three researchers were then displayed in the R statistical programming environment to reveal which phenomenological categories were agreed upon or subject to disagreement. In the third step, the researchers identified any category for which there was no consensus that undertook the same systematic, rigorous triangulation process described in the first step. Finally, the fourth step entailed analyzing inter-rater agreement using Fleiss' Kappa on each sub-theme and each individual phase. This calculation was performed only in independent categories (e.g., multifocal). This coefficient calculates the level of agreement of inter-raters on categorical data and is considered more reliable than a simple calculation of the agreement ratio (Fleiss et al., 2013). This calculation allows for analyzing the inter-rater agreement and provides feedback to detect errors, omissions, and disagreements among the researchers. If a kappa below 0.8 was observed, we went back to the previous steps. The average kappa was 0.97 (0.85–1.00) (for more detail, see text footnote 2). Finally, the experiential description for each participant was performed with a common data set containing a complete agreement and common quotes.

Quantitative analysis

Once the phenomenological analysis was completed, quantitative analyses were conducted in the *R* statistical programming environment. First, we calculated the number and percentage of participants for each main theme and sub-theme. We also studied the phenomenology of empathy for pain through a system-thinking perspective (Meadows, 2008), designing a relationship map based on network analysis (Newman, 2010; Barabási, 2012). This analysis allows us to focus on independently studying experiential categories and how phenomenological categories interact and create relational patterns with other experiential categories, which are represented in a network analytical diagram. For this qualitative approach, we elaborate a network diagram using the software IBM SPSS v28.0. This diagram uses statistical frequency analysis to calculate the size of each node based on the frequency of subjects belonging to that experiential categorization and its associative co-occurrence with other categories. In this case, the co-occurrence considers the frequency in which the subjects appear within each phenomenological category defined in the data set, grouping them as a network. Nodes represent phenomenological categories, while links represent the strength of influence between them. Larger nodes and thicker lines, respectively, represent stronger influence and connections. Conversely, smaller nodes and thinner lines, respectively, represent weaker influence and connections.

In summary, implementing these methodological procedures (qualitative and quantitative analyses) will allow us to show our results from two research approaches. On the one hand, we will formulate a detailed phenomenological description of the empathic experience of pain. On the other hand, we will show how the descriptive results are understood from an analytic view.

Results

Participants

Twenty women and eight men participated in the study (mean age = 29.6 ± 6.6 years; mean years of education = 16.9 ± 2.4). The participants report a MoCA total: mean = 28.5 ± 1.5; STAI total: mean = 48.8 ± 12.5; BDI-II total: mean = 5.0 ± 5.7 (for more detail, see text footnote 2). Two participants showed scores for depression (29) and cognitive alteration (24) far away from their normative reference group. Their phenomenological results were similar to the rest of the participants.

Phenomenological results

The description of the empathic experience of pain was extracted from 28 interviews. Each full interview lasted 15 min on average, and the total interviewing time was 420 min. In the first abstraction level of the coding procedure, we identified 42 meaningful codes (e.g., heart palpitations). These codes were then transformed into 21 emergent experiential sub-categories (e.g., multifocal sensations). Next, experiential sub-categories were grouped into sub-themes with a similar thematic affinity (e.g., localization of bodily sensations). Finally, four main themes were identified at the maximum abstraction level: bodily resonance, kinesthetic motivation, attentional focus, and temporality of experience (**Figure 1**). These four main themes are present in all 28 experiences examined; however, they manifest differently in the two types of experiential structures: self-centered empathy for pain and other-centered empathy for pain (this description will be shown in the experiential structure section).

Phenomenological description

This section describes the four main themes identified in participants' experience and the categories that compose them (for a more complete and holistic understanding, refer to the Codebook at see text footnote 2).

Bodily resonance

While watching the video, participants' bodily experiences resonated in coordination with the sportsperson's bodily actions. Bodily resonance means that the participant is bodily affected by the sportsperson's behaviors. Thus, participants' bodily resonance was intertwined with the sportsperson's movements, producing a wide range of bodily, affective, and kinesthetic sensations according to the events and actions of the sportsperson.

Concerning bodily sensations, participants felt diverse sensations in muscles and viscera, either focused on a specific bodily region (focal, 18%) or several regions simultaneously (multifocal, 93%). The specific parts where participants felt sensations were the abdomen (36%), chest (50%), heart (32%), face (11%), lower extremity (21%), and upper extremity (39%). These bodily sensations were related to the upcoming fall event or the sportsperson's fall.

> "Yes, yes... and when the person hits the ground I feel even more pressure in my stomach." (P19)

> "When the person has already fallen, the tension in the gut does not persist, it starts to decrease until it disappears... or I don't know if it completely disappears, but it definitely decreases." (P13)

Together with the bodily sensations, several negative emotions emerged during participants' experiences intertwined with the event that the sportsperson was living. All participants described discomfort that made them feel unpleasant emotions while watching the video. They verbalized these emotions as "*tension*" (79%), "*pain*" (29%), "*fear*" (18%), "*anguish*" (18%), and "*anxiety*" (7.1%). Toward the end of the scene, when the sportsperson had already suffered the accident, most participants (57%) also felt an emotion of relief, which they described as recovering to their normal state.

> "Yes, my tension keeps increasing a lot according to how she [the sportsperson] advances, because I could anticipate what was going to happen, I said, 'Something bad is going to happen,' so, as she progresses, I feel more sensitivity, more pressure in my chest, I breathe a lot as the video progresses, it increases, I breathe a lot..." (P20)

> *"Once the person falls, the tension dissolves. The person starts to fall, and the tension starts to decrease, I know it is impossible that he dies, but it is interesting because the tension dissolves."* (P19)

The third dimension of bodily resonance is kinesthetic sensations, experienced by many participants (46%) as feeling "unbalanced" (46%) as their bodies autonomously reacted to the unfolding scenes, which induced the feeling of "losing" bodily control.

> *"I got a bit unbalanced when I saw a fall."* (P10)

Kinesthetic motivation

Participants reported that, while watching the video, they experienced the "*feeling*" in their bodies, or sections of their bodies, of "*wanting*" to do something concerning what was happening in the video. Most (54%) described the motivation to avoid or escape from watching the video.

> *"I almost turned my head... No. I did nothing, I did nothing, but I had the intention; it was the first thing that came to me like this."* (P11)

> *"And the feeling of rejection, so I kind of leaned my body back, and I also tried to frown a lot, as with that feeling of... I don't know, rejecting it, as my whole body and all my movements that do kind of line up, as if trying to get away from, from that video."* (P28)

> *"A feeling of wanting to get away, as if my body was going backward."* (P16)

A few participants (11%) reported feeling the need to help the sportspersons avoid suffering any injury while practicing extreme sports.

> *"Hold them down, so they don't do something stupid like, they are going to kill themselves or get injured. Or wanting to do something to avoid the situation."* (P22)
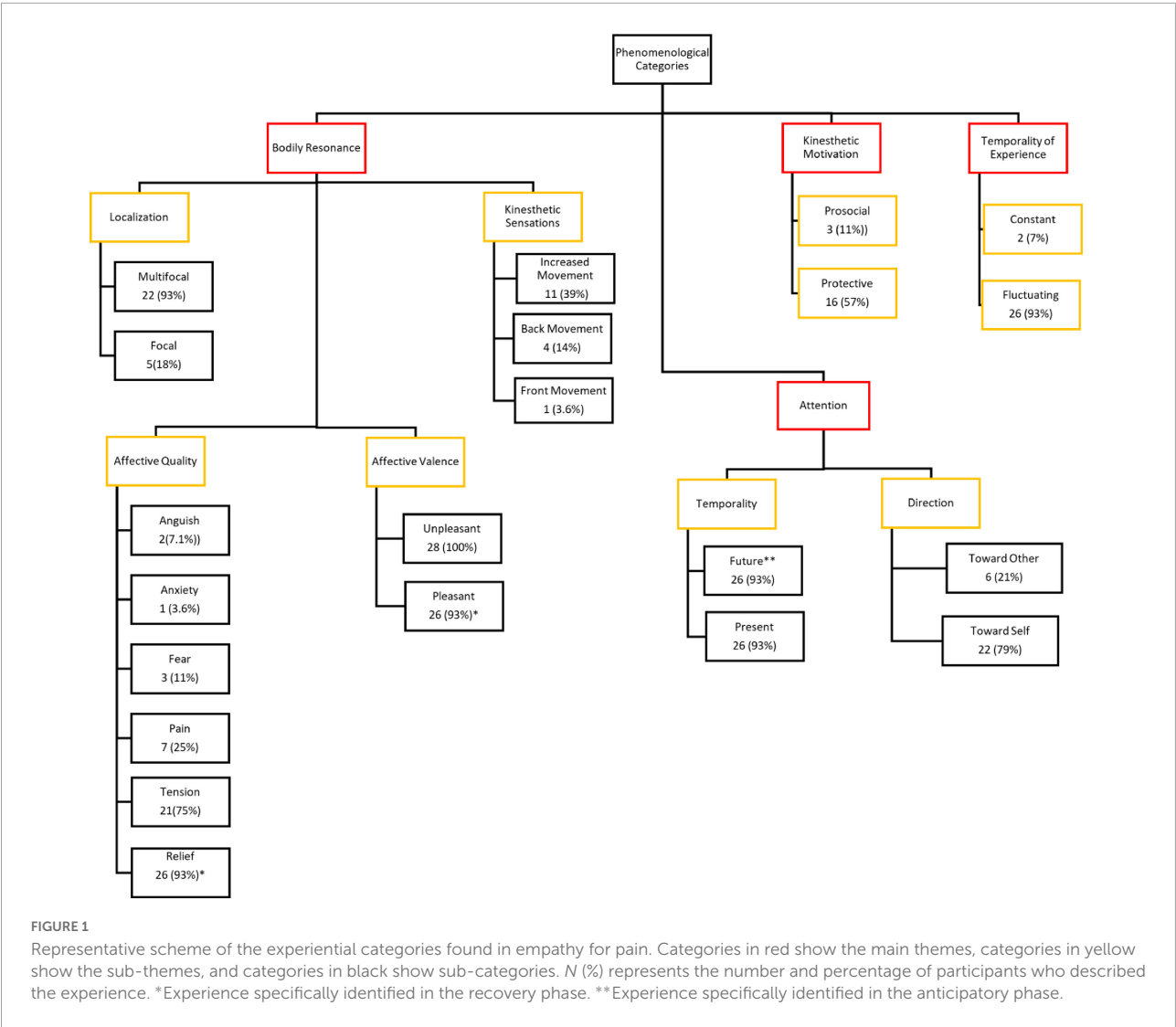
> *"I felt that, if I did move in some way, I was going to prevent them from falling, as if my corporeality could be... as if I was getting involved with them."* (P5)

Attentional focus

In addition to this whole bodily, affective, and motivational experience, participants' attentional focus comprised directional and temporal dimensions while watching the video.

Concerning the direction of attentional focus, most participants (79%) centered their attention more on their own personal discomfort and sensations of rejection while watching the sportspersons.

> *"Fear, I want to move, to protect myself."* (P11)

Representative scheme of the experiential categories found in empathy for pain. Categories in red show the main themes, categories in yellow show the sub-themes, and categories in black show sub-categories. N (%) represents the number and percentage of participants who described the experience. *Experience specifically identified in the recovery phase. **Experience specifically identified in the anticipatory phase.

"But, it's like a rejection more than anything. It's something I don't necessarily want to watch." (P9)

The remaining participants (21%) centered their attentional focus primarily on the pain and suffering experienced by the sportspersons.

"What I feel the most is tension . . . Thinking no, I hope he doesn't fall, but knowing that he is going to fall." (P3)

"Like... nervousness. I couldn't do anything to prevent the falling." (P24)

Regarding the temporal dimension of attentional focus, some participants described the events unfolding in the video with reference to the future while others referred

to the present. Participants with future-directed attentional focus described expectations of the immediate and extended future, preoccupation about what might happen to the other, negative judgments about the other's decisions, and beliefs that something catastrophic might happen as a consequence of the accident.

"Like, you get into the video, as it is there, anticipating something that I am seeing is going to happen." (P4)

"I knew she was going to fall, but I did not know how she was going to fall, what was going to happen." (P11)

Conversely, participants with present-directed attentional focus described the events the sportspersons were living at that precise moment. Some descriptions related to the sportspersons'

movements to maintain balance or to the impact of their bodies on the floor.

> *"I hope it wasn't so serious. I thought, 'Oh, what pain!'"* (P3)

> *"It annoys me a little because she does something completely absurd, which is to stretch out a leg, which has no purpose other than to fall, and, well, she falls."* (P12)

Temporality of experience

During the video, most participants (93%) perceived a temporal fluctuation in their experience, identified in three different temporal moments: anticipatory, climax, and recovery. By contrast, the remaining participants felt no temporal change in their experience as the video unfolded (7%).

The first temporal moment of most participants' experience was heavily characterized by a sense of anticipation of the looming accident, with a gradual increase in the intensity of their negative emotions, bodily sensations, and thoughts as each scene progressed: the longer participants watched the sportsperson, the more intense their experience became.

> *"My tension is increasing a lot according to how the video progresses because I could anticipate what was about to happen."* (P18)

The second temporal moment of the experience began just a few instants before the accident happened and included the time of the accident occurring. In terms of their bodily resonance and *kinesthetic motivation,* participants' experiential intensity climaxed during this moment.

> *"[referring to the rise in unpleasant bodily sensations] When the impact with the ground occurs, that is the moment when I feel the most intensity."* (P26)

In the final temporal moment that followed the accident, with the observed sportsperson already lying on the ground, participants' experiential intensity tended to diminish significantly. Specifically, they felt a physical relaxation of their body accompanied by the easing of negative emotions, bringing relief, tranquility, and less concern.

> *"This person is putting himself more and more in a risky situation while climbing, and once he has already fallen, I feel relieved..."* (P12)

Experiential structures

The four main themes elaborated above are the main elements of the experiential structures arising from our data analysis. Although these phenomenological categories are described as autonomous phenomenological dimensions, they are tightly intertwined in participants' experiences. As shown in the relationship map (Figure 2), the different sub-themes and sub-categories closely interact, showing that the empathic experience is a holistic and complex process of interaction between corporeality, affectivity, kinesthetic motivation, and the direction of attention.

However, these phenomenological categories did not appear in an equal manner in all experiences. The way they presented themselves in the experiences of different participants was very distinct; in this sense, two experiential structures were identified: self-centered empathy ($N = 22$) and other-centered empathy ($N = 6$) (for details of the quantitative analysis between empathic structures, see text footnote 2). At the core of both structures, we found the direction of attentional focus and kinesthetic motivation. Attentional focus expresses where participants' concern and affective quality are directed (at themselves or the sportsperson), while kinesthetic motivation is participants' pre-reflective intention to self-protect or help the sportspersons.

Self-centered empathy

Participants who showed this experiential structure were preoccupied with the other and had intense feelings of discomfort but mainly focused on themselves. Although they referenced the pain suffered by the sportspersons, they focused on their own emotions of discomfort and how these emotions made them upset and uncomfortable. This was accompanied by a general sensation of rejection toward the video, which manifested affectively motivationally as a "feeling" of not wanting to look, or "wanting" to turn away. Their preoccupation with the other and feelings of discomfort also involved the activation of different bodily sensations while watching the video, such as muscular sensations (e.g., tension in the arms, legs, and trunk) and visceral sensations (e.g., palpitations, breathing, and oppression in the chest). Overall, participants' attentional focus was directed toward the other person having a painful fall but their kinesthetic motivation and affective levels were primarily centered on themselves (Figure 3). Regarding the temporal dimension of the experience, participants perceived mild bodily sensations and feelings at the start of the video, but these tended to intensify as each scene unfolded, reaching a peak when the fall occurred. After that moment, participants felt their bodily resonances began to decline.

Other-centered empathy

Participants who exhibited this experiential structure were greatly preoccupied with what was happening to the sportspersons in the video. They needed to find ways to help the other, which manifested in physical and verbal potential actions directed toward them: to "*grab*" the person so they would not fall or shout to alert them of what lay ahead. Their preoccupation also involved different muscular sensations (e.g., tension in the
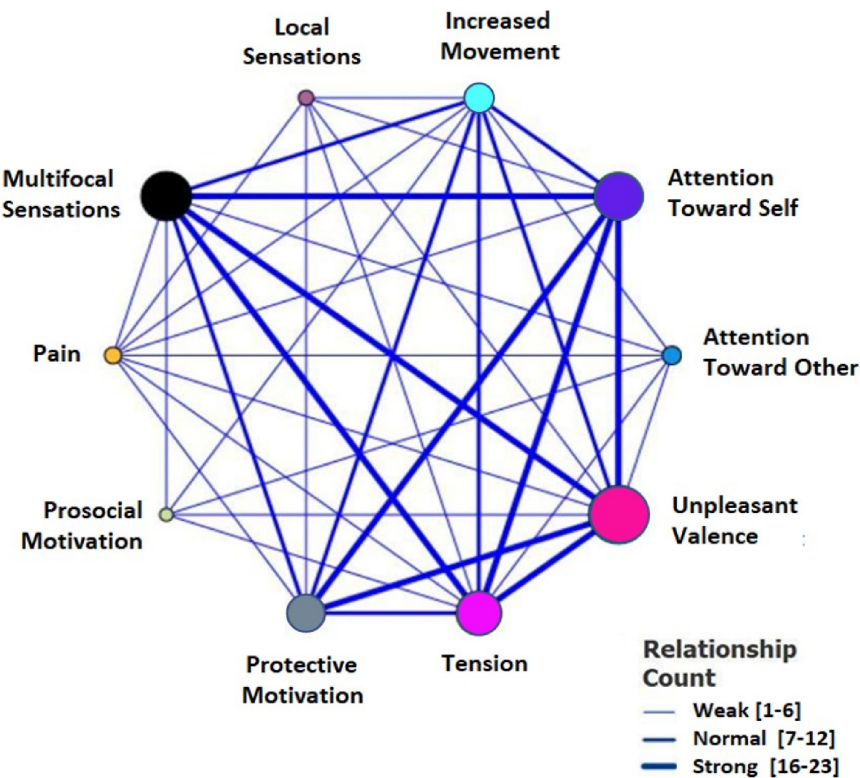
FIGURE 2
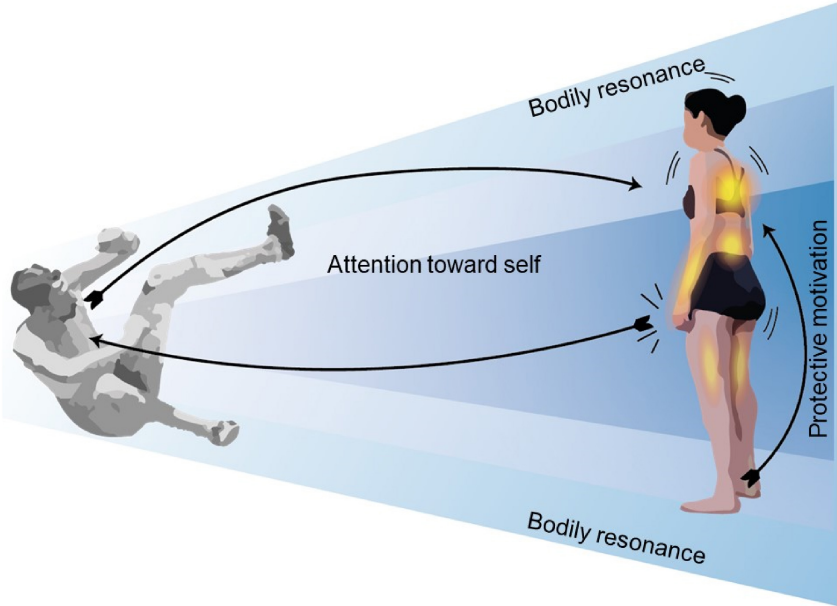Relationship map of the phenomenological categories.

FIGURE 3
Experiential structure of self-centered empathy for pain. The empathizer's intentional object is the empathized experience; they see the sportsperson as sentient and having a painful experience. This empathic structure is characterized by bodily resonance, attentional focus centered on the participant's own experience of seeing the other suffer, and self-protective kinesthetic motivation.

arms, legs, and trunk) and visceral sensations (e.g., palpitations, breathing, and oppression in the chest) while watching the sportspersons. Overall, these participants' attentional focus was more centered on the sportspersons and their kinesthetic motivation was to avoid their suffering (**Figure 4**). In addition, the temporal development of their experience was similar to that described for self-centered empathy.

Quantitative analysis of the experiential structures

The two empathic structures share similar phenomenological categories in the bodily resonance, affective, and temporal dimensions (for more details, see text footnote 2). Nonetheless, self-centered and other-centered empathy differ in the phenomenological categories of attentional focus direction and kinesthetic motivation. Thus, participants with the other-centered empathic experience ($N = 6$) directed their attention toward others (100%) and manifested a prosocial kinesthetic motivation to help the sportspersons (50%). Conversely, participants with the self-centered empathic experience ($N = 22$) directed attention to themselves (100%) and manifested a kinesthetic motivation to avoid or escape from the sportspersons (68%). The quantitative differences in the experience of phenomenological categories between other-centered and self-centered empathy are highlighted in **Figure 5**.

Discussion

Through an experimental phenomenological method, this study explored the phenomenological experience with an emphasis on embodied, multi-layered dimensions (bodily sensations, emotions, and motivations) and temporal aspects of empathic experience. Similar to other theoretical studies (Fuchs, 2013; Fuchs and Koch, 2014), our results show that experiential access to the other person's painful experience involves a multiplicity of bodily sensations and negative emotions that fluctuate through time, accompanied by various kinesthetic sensations and motivations. In contrast to other empirical studies deploying first-person methods (Grice-Jackson et al., 2017a,b), every participant reported perceiving bodily sensations during the empathic experience of pain. More specifically, we found that bodily resonance was central to participants' experience and was described in great detail, comprising muscular sensations (e.g., tension in the arms, legs, and whole body) and visceral sensations (e.g., palpitations, breathing, and oppression in the chest), negative emotions (e.g., tension, pain, fear, anguish, and anxiety), and involuntary backward/forward swaying of the body. In addition, participants' experiences while watching the video showed

directional and temporal dimensions and involved the feeling of their bodies wanting to do something concerning events unfolding on screen. Finally, participants witnessed temporal fluctuations in their experiences, bringing intensity changes in their bodily sensations, emotions, and motivations.

Our analysis identified two experiential structures: self-centered empathy for pain and other-centered empathy for pain. These two structures differ mainly in the direction of attentional focus and kinesthetic motivation. In the case of self-centered empathy, participants focused attention on their own unpleasant experience of watching the accidents unfold, and their behavioral motivation was to avoid or reject. By contrast, in the case of other-centered empathy, participants focused attention on the sportspersons' harm and suffering, which elicited the motivation to help through physical or verbal action. Similarly, it is relevant to mention that although the experiential structures are mainly characterized by two independent phenomenological categories (direction of attentional focus and kinesthetic motivation), other categories were shared in both structures (e.g., bodily sensations, affective quality, and increased movement). These results suggest that the empathic experience of pain embraces an intertwined emotional continuum, ranging from self-centered empathy to other-centered empathy. This means that participants are not experiencing two fully dichotomous or independent structures. Instead, they are living an empathic experience constituted by shared embodied categories. Although our findings did not show that self-centered and other-centered empathy shared the main categories that characterized these structures (direction of attentional focus and kinesthetic motivation), it is relevant to mention that this study was implemented with a restricted number of participants, reducing the possibility of findings new phenomenological categories or, even showing a more complex view of empathy (e.g., participants in the initial phase of the experience feel a self-protective motivation, but those in the climax phase feel the necessity of helping the sportspersons avoid falling to the ground).

The rest of the discussion is organized into two subsections. First, we will discuss how our phenomenological data contribute to comprehending empathy for pain concerning the neurobiological and behavioral data from social neuroscience. Because research in this latter field is central to our scientific understanding of social-emotional phenomena such as empathy discussing the implications of the current study to social neuroscience can have a significant positive impact in advancing and enriching the way in which empathy is typically approached, with the potential of gaining deeper, more accurate, and more useful scientific knowledge of this target phenomena. The second subsection will then discuss the implications of our results for the enactive approach to social-emotional experience. More specifically, we will address the phenomenological aspect of empathy for pain in the context of the three *dimensions of the embodiment* of human consciousness
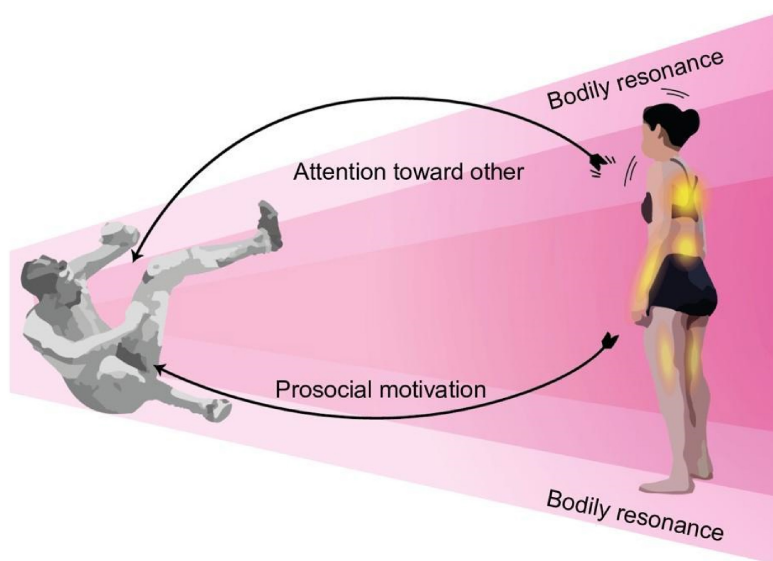
FIGURE 4
Experiential structure of other-centered empathy for pain. The empathizer's intentional object is the empathized experience; they see the sportsperson as sentient and having a painful experience. This empathic structure is characterized by bodily resonance, attentional focus centered on the sportsperson, and prosocial kinesthetic motivation to help him.
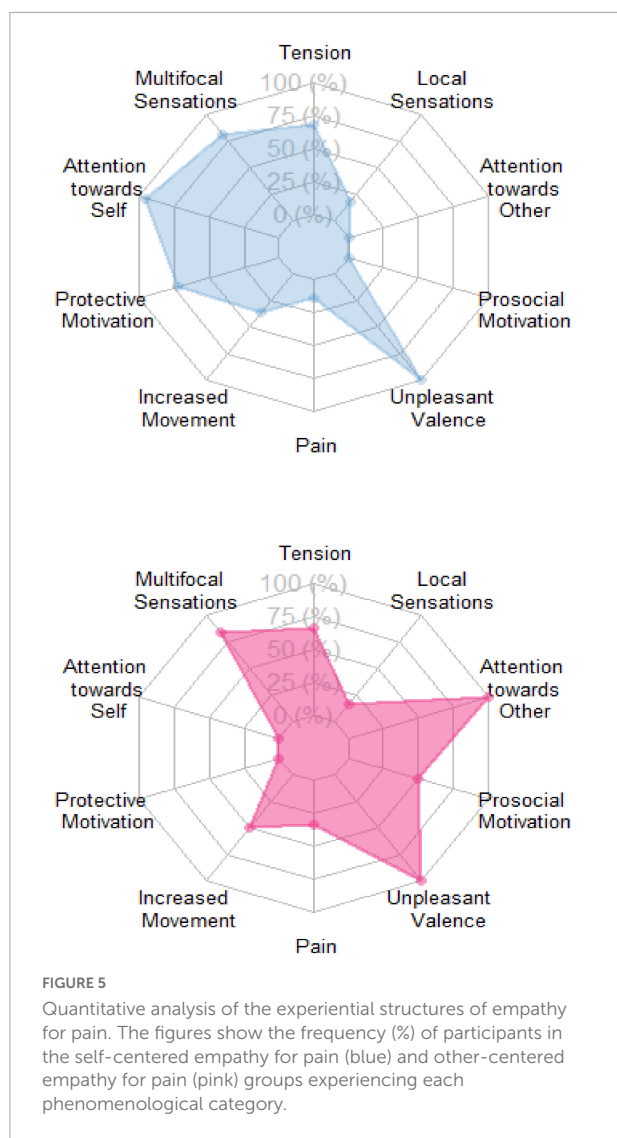
(Thompson and Varela, 2001; Varela and Thompson, 2003). The enactive approach is one of the main research programs in cognitive/affective science that has systematically given the body and lived to experience a central place in the study of cognition, perception, affect, intersubjectivity, and agency (Varela et al., 1991; Varela, 1996; Thompson, 2007; Fuchs and de Jaegher, 2009; Colombetti, 2014; Di Paolo et al., 2017). Thus, discussing the implications of our study for the enactive approach can contribute to advancing this important research program and with that, our scientific understanding of the key role that the body and subjective experience have in empathy and more generally, in social cognition, emotions, and intersubjectivity.

Contribution of the phenomenological data to understanding empathy for pain in social neuroscience

The classic cognitivist approaches (TT and ST) and the phenomenological tradition show a problem of incommensurability; that is, they advocate incompatible ontologies and epistemologies (Small, 2011). For instance, the cognitive perspectives claim that private mental states inside the brain fundamentally constitute the mind while the body is an objective and public physical machine causally interacting with those mental states. Conversely, in the phenomenological tradition, the body is taken to be a sentient lived body and the mind is considered fully present in the meaningful arrays of

facial gestures and body motions expressing the first-personal character of lived experiences (Thompson, 2007). Although the cognitive and phenomenological perspectives show contrary views at their conceptual roots, there is scope for dialog between empirical findings from studies applying these different approaches, which can improve comprehension of a given mental phenomenon (e.g., Morgan, 2007; Denscombe, 2008). This subsection will show how our phenomenological data contribute to comprehending empathy for pain in the field of social neuroscience.

There is now extensive evidence that the somatosensory and motor cortices are activated when seeing the pain in others (e.g., Hoenen et al., 2015; Fabi and Leuthold, 2017; Motoyama et al., 2017; Riečanskı et al., 2019). These findings have profoundly influenced comprehension of empathy, with some authors claiming that sensorimotor responses are the basic process of social cognition (Gallese, 2005; Hari et al., 2015) since social interaction occurs through exchanging sensations and movements with another. Concerning our phenomenological findings, participants felt a multiplicity of bodily and kinesthetic sensations. Muscular sensations were experienced throughout the body, thus occupying a central place in the experience (e.g., tension in the arms, back, legs, and hands). Participants also reported kinesthetic sensations like feeling "unbalanced" or "losing" bodily control. In addition, they felt motivated to move to either help the sportspersons or run away (kinesthetic motivation). An open question for future research is how these phenomenological reports are related to the brain processing of empathy. Specifically, studies should investigate whether

FIGURE 5

Quantitative analysis of the experiential structures of empathy for pain. The figures show the frequency (%) of participants in the self-centered empathy for pain (blue) and other-centered empathy for pain (pink) groups experiencing each phenomenological category.

these sensorimotor experiences are related to sensorimotor activity in areas of the brain considered as earlier (bottom-up sensory processing) (Riečanský and Lamm, 2019), or to more complex empathic responses, such as the affective aspects and motivations of others (Prochazkova and Kret, 2017).

Another aspect to discuss concerning bodily sensations is interoception. Recent studies have shown an association between the perception of inner corporeal states and empathy (e.g., Fukushima et al., 2011; Terasawa et al., 2014). For instance, Ernst et al. (2013) found that activity in the bilateral anterior insula during an empathy task was enhanced when participants briefly attended to their heartbeats. In another study, Grynberg and Pollatos (2015) found that individuals who are able to more accurately perceive their own corporeal inner states (interoceptive sensitivity or interoceptive accuracy) felt higher pain intensity and more compassion

in response to others suffering pain. These studies show that interoceptive awareness not only plays a crucial role in regulating homeostatic functions (e.g., thirst, hunger, and visceral urgency) and emotional awareness (Barrett et al., 2004; Wiens, 2005) but is also connected to sharing with other people's emotions, such that people with better interoceptive awareness have greater empathic abilities, such as more compassion (Grynberg and Pollatos, 2015; Arnold et al., 2019). A possible neurobiological explanation for this relationship is that observation of another's pain (Decety, 2010; Lamm and Singer, 2010) and interoceptive awareness (Craig, 2002) both depend on the activity of similar neuroanatomical structures (anterior insula and medial/anterior cingulate cortex). Concerning our phenomenological results, we identified an association between interoceptive awareness and the empathic experience of pain. Participants in both experiential structures reported abundant sensations in muscles (e.g., tension in the arms, legs, and back) and viscera (e.g., palpitations, changes in breathing rhythm, oppression in the chest, and pressure in the stomach). Future research could improve the understanding of interoceptive awareness concerning empathy. Traditionally, studies have implemented heartbeat-detection tasks or focused on the objective perception of heartbeats (e.g., Grynberg and Pollatos, 2015). However, knowledge is still seriously lacking on what it is like to experience the inner body states of empathy. Implementing experimental phenomenological methods could help improve this understanding.

Although empathy has been extensively studied through neuroimaging, it is also connected to physiological functions, such as postural control and autonomic response (Lelard et al., 2019; Jauniaux et al., 2020). Postural control studies report contradictory results concerning the effects of social situations on motor control. For instance, some studies show that aversive social stimuli (e.g., mutilation images) produce a decrease in postural sway, namely, a freezing response (e.g., Azevedo et al., 2005; Codispoti et al., 2008; Hagenaars et al., 2014), while others show that such stimuli provoke an increase in body sway (e.g., Gea et al., 2014; Brandão et al., 2016). Studies have also found that negative social emotions provoke withdrawal behavior motivated by self-defense (Lelard et al., 2019). Our phenomenological results show some evidence related to kinesthetic sensations and motivations. For instance, some participants reported feeling bodily imbalance, suggesting that their postural control responses brought an increase in body sway, similar to the findings of Brandão et al. (2016) and Gea et al. (2014). In addition, participants with self-centered empathy reported feeling motivated to avoid or escape from watching the video, suggesting they had a withdrawal behavioral response. Conversely, participants with other-centered empathy reported feeling motivated to help the sportspersons through cooperative behavioral responses, which is similar to Gea et al.'s (2014) finding using postural control measures. Future

studies should confirm the association between postural control and kinesthetic experience by simultaneously collecting third-person and phenomenological data (in preparation).

In addition to the physiological measures, our phenomenological results show that participants perceived temporal fluctuations during their empathic experiences. One aspect that temporally fluctuated was bodily sensations (visceral and muscular). At the beginning of the video, participants experienced a gradual increase in the intensity of bodily sensations; this intensity then peaked as the anticipated accident occurred; finally, after the accident, they felt a physical relaxation in their bodies. The critical point of this discussion concerns the quantitative methods used to analyze postural control and physiological responses in studies of social emotions. Traditionally, these studies consider sensorimotor and somatic body reactions as a linear process that is averaged throughout a time analysis (e.g., Gea et al., 2014; Hagenaars et al., 2014; Brandão et al., 2016). This approach precludes revealing the temporal dynamics of body movements and the physiological responses, as observed in our phenomenological results. Therefore, we call for future studies to implement non-linear analysis methods to detect the motor and physiological temporal dynamics (e.g., Van Emmerik et al., 2016; Jauniaux et al., 2020).

Traditionally, social neuroscience has identified two types of empathic responses to observing someone in discomfort: empathic concern and personal distress (e.g., Batson et al., 1987; Eisenberg and Eggum, 2009; Jordan et al., 2016). Empathic concern, also called sympathy, is an other-oriented emotional response congruent with what the other is perceived to be experiencing. By contrast, personal distress is a self-oriented emotional response focused on one's own sensations (Okun et al., 2000). Empathic concern leads individuals to focus on the other's well-being and results in prosocial behaviors, whereas personal distress mobilizes behaviors to reduce one's own suffering (Singer and Lamm, 2009). We found similar evidence but from a phenomenological perspective. In self-centered individuals, attention to the other generated intense feelings of discomfort and the wish to avoid the situation; conversely, other-centered participants focused attention on what happens to the sportspersons and the possible consequences of the accidents, which motivated prosocial behavior. Although the concepts of empathic concern and personal distress appear similar to what we observed phenomenologically, they provide different perspectives on the same phenomenon. The first provides a naturalized comprehension of empathy for pain (Gallagher, 2011; Olivares et al., 2015), while the second offers a holistic perspective, integrating a repertoire of sensitive, affective, somatic, sensorimotor, and cognitive experiences that change temporally (as discussed further below). Finally, when unraveling the concept of compassion in this study, our phenomenological data support that participants with other-centered empathic style showed a compassionate attitude toward the sportspersons, in the sense that those participants directed their attention toward others and manifested a prosocial kinesthetic motivation to help the suffering person. Nevertheless, sensations and feelings such as warmth, care, and benevolence, generally associated with compassion in the contemplative neuroscience field (Singer and Klimecki, 2014), did not emerge in the interviews. Therefore, our phenomenological results are in accordance with findings of compassion experience without pleasant or positive emotions in participants without previous meditation practice (Condon and Barrett, 2013).

Empathic experience for pain and the enactive dimensions of embodiment

This subsection further discusses the relationship between empathy and other mental and biological processes, specifically addressing how empathy relates to interoceptive, affective, and sensorimotor processes, from the first-person perspective, and under an *enactive* cognitive science framework. To contextualize, the enactive approach of Varela and colleagues has been essential to incorporating phenomenology into cognitive science (Varela et al., 1991; Varela, 1996; Thompson, 2007), and a clinical perspective of the human being based on physical, subjective, and environmental attributes (De Jaegher, 2013; De Haan, 2020; Martínez-Pernía, 2020; Martínez-Pernía et al., 2021).

It is also important to clarify that the enactive approach is a specific research program within a much larger set of embodied approaches (Thompson, 2007; Di Paolo et al., 2017). These approaches can be broadly divided into two incompatible sets of views. One is embodied functionalism (Di Paolo et al., 2017), also called "the body snatchers" (Gallagher, 2015), or what Clark (1999) refers to by simple embodiment. While extending the focus of research from solely the brain to also include the effect of the body and the environment on mental processing, nonetheless retain the view that cognition and affect essentially consist of the manipulation of representations and performance of mental functions inside the head. In contrast, the other trend, which Thompson (2007) calls embodied dynamicism, and Clark (1999) radical embodiment, rejects the appeal to both representations and functional properties/states, and sees the body, including its brain, as a dynamical, self-organizing, emergent system in interaction with the environment, giving rise to cognition and affect. The enactive approach fits within this latter camp and aims to build bridges between dynamical accounts of the brain-body-environment interaction and the phenomenology of lived experience. Our study contributes to this, by experimentally enhancing our knowledge of the phenomenology of empathy, and suggesting an extension of the enactive theory concerning social experience, as we will see in more detail below. As a final clarification, we would also

like to mention that there are three, different accounts that are usually called "enactive" (Ward et al., 2017). One is radical enactivism (Hutto and Myin, 2013), the other is sensorimotor enactivism (O'Regan and Noë, 2001), and finally, there is the so-called autopoietic enactivism of Varela et al. (1991). Although all reject the representationalist, computationalist, functionalist understanding of cognition and affect, and share the emphasis on adaptive, sensorimotor interaction between agent and environment, they also differ in many respects and we want to make clear that we are focusing on the latter, Varelian, autopoietic variant[4].

In particular, we will focus on the *three dimensions of embodiment* (Thompson and Varela, 2001; Varela and Thompson, 2003), premised on the claim that consciousness-relevant brain activity should be understood in the context of the three cycles of operation in which the brain participates within the living organism. The first cycle is the process of *organismic regulation* within the human body; the second is the *sensorimotor coupling* of the conscious agent with its environment; and the third is the *intersubjective interaction* between two or more conscious agents. Hence, consciousness—including empathic experience—arises through not just the brain but its dynamic coupling with the living body in a world including other conscious organisms (Thompson and Varela, 2001; Varela and Thompson, 2003).

Before discussing the place of empathy in Varela and Thompson's account, and how it relates to our phenomenological data, we need to give more details about the three cycles. First, in the *organismic regulation* cycle, the brain interacts with the rest of the body, especially through interoceptive and autonomic pathways, to secure the homeostatic balance needed for preserving life and health. Importantly, the experiential correlates of this activity are bodily sensations and feelings including pains, tickles, hunger, thirst, and muscular tension; emotional states such as fear, distress, and happiness; and a basic affective and embodied sense of selfhood (Damasio, 1999, 2018; Craig, 2002, 2015; Barrett, 2017; Seth and Tsakiris, 2018; Carvalho and Damasio, 2021). Second, the *sensorimotor coupling* cycle between the agent and its environment has perceptual and kinesthetic experiential correlates (Thompson and Varela, 2001; Varela and Thompson, 2003). Its main tenet is the reciprocal relationship between movement and perception in the unfolding of experience: what (and how) we perceive is a function of how we move (or would potentially move), and how we move is a function of what we perceive (Varela et al., 1991; O'Regan and Noë, 2001; Noë, 2006; Thompson, 2007). Third, the *intersubjective interaction* cycle between two or more subjects is the domain of psychology and neuroscience studies of social cognition and emotions. Notably, Varela and Thompson (2003: 14) state that the experiential

dimension of "social cognition is empathy, in the broad sense of the affectively mediated experience of self and other." From the enactive perspective, then, empathy is central to situations in which we think and feel in relation to others, as those capacities presuppose that we experience others as *subjects* of experience (not just physical entities with complex behaviors), that could also have thoughts and feelings about us.

Crucially, Thompson and Varela (2001: 424) state that both the "affective state and sensorimotor coupling plays a huge role in social cognition, especially in apes and humans," alluding to the idea that the first two cycles play a key role in the third (intersubjective) one. However, somewhat contradicting their emphasis on embodiment and consciousness, their phenomenological description is very limited; they mainly cite evidence that cerebral structures important in social cognition are also key in emotion (e.g., the amygdala), and the "mirror neurons" studies mentioned earlier. This is related to the fact that social cognition research has frequently employed third-person methodologies (Gallagher, 2012), such as functional magnetic resonance imaging, electroencephalogram, physiological activity, and motor control (Neumann et al., 2015). Although these methodologies are undoubtedly very valuable, our research has two clear advantages in uncovering the phenomenology of an empathic experience: it uses an easily replicable experimental setting previously employed in affective neuroscience (e.g., Azevedo et al., 2005; Hagenaars et al., 2012, 2014), and it applies a well-defined methodology to assess participants' first-person experience. We, thus, consider that our results contribute to experimentally filling the phenomenological gap within the enactive approach and also in the field of social cognition and social emotions more generally. Although the enactive approach has been extended in both phenomenological and dynamical terms to account for intersubjectivity [De Jaegher and Di Paolo, 2007; Fuchs and de Jaegher, 2009; see also the review by Lindblom (2020)], and the philosophical phenomenology of empathy has been discussed within enactivism (Thompson, 2001, 2007), the phenomenological gap has not been filled empirically, nor specifically in relation to empathy for pain in non-interactive situations[5], and in that sense our study represents a contribution to the enactive approach.

Very importantly, our study also contributes to a more complete theoretical understanding of intersubjectivity within the enactive framework itself, which has been developed with an exclusive focus on interactive situations (Thompson and Varela, 2001; De Jaegher and Di Paolo, 2007; De Jaegher and Froese, 2009; Fuchs and de Jaegher, 2009; Froese et al., 2014;

---

4 Hereafter, by "enactive approach" and "enactivism" we will refer to the autopoietic, Varelian, original version of enactivism.

---

5 By "non-interactive situations" we mean instances of social cognition and emotion where the experimental subject is not interacting with other subjects (in our experimental setting the sportspersons seen in the TV screen) whose painful experiences are, nonetheless, an integral part of the experimental subject's empathic experience.

De Jaegher, 2015; De Jaegher et al., 2017), thus, neglecting non-interactive social experiences like dreaming about someone, imagining dancing with a friend, or seeing the video-recording of someone having a painful experience (as in our case). In other words, while the enactive approach to intersubjectivity until now has focused exclusively on understanding the dynamics and phenomenology of actual interactions between two or more agents, there is a whole set of social experiences that are left outside, in which there is no actual interaction between the agent and the subjects that appear in her experience. Based on our study, we would like to offer a sketch of how the enactive theory may be extended to account for these non-interactive social experiences.

If enactivism is right that both autonomy and its concomitant twofold process of sense-making and identity are the basis of mind (Varela, 1984; Thompson, 2007, 2011), we can say there is a non-interactive form of empathic sense-making and identity, grounded on the actual autonomous activity of the empathizer in their environment (which could exclude the physical presence of other subjects); this would enact an experience in which other experiential subjects are also present, probably due to a previous history of intersubjective interactions (Fuchs, 2017). A reasonable hypothesis, then, is that previous intersubjective interactions may trigger changes in the autonomous organization underlying both organismic regulation and sensorimotor coupling (comprising the central nervous system but plausibly also global properties of bodily configuration such as musculature and homeostatic processes), enabling a non-interactive form of social identity and sense-making to be enacted through the operationally closed activity of the organismic and sensorimotor cycles alone. As mentioned, this hypothesis and the future studies we expect will be motivated by it, represent an extension of the current enactive approach to social experience because it enlarges the scope of the theory to account for non-interactive situations in which, nonetheless, other subjects experientially appear to an agent.

Concerning our findings on the self-centered and other-centered empathic experiential structures, we hypothesize that the operation of the first two cycles (i.e., homeostatic and sensorimotor), with their experiential correlates, may determine or influence the extent to which the individual focuses concern on herself or the other in intersubjective experiences. This is compatible with prior findings that when confronted with someone in need, a subject's degree of experienced empathic concern and personal distress is correlated with her/his ability to emotionally self-regulate (Eisenberg and Spinrad, 2014), which, in turn, is tightly related to interoceptive/homeostatic regulation (Craig, 2015; Barrett, 2017). Our results also indicate that the kinesthetic dimension marks an important difference between self-centered and other-centered experiences. For some participants, kinesthetic sensations and motivations were expressive of more self-centered concern and the will to avoid

or escape the situation (self-centered structure); for others, kinesthetic experiences were more directed to the sportspersons, often with the intention of helping (other-centered structure). This suggests that the difference between experiencing personal distress and experiencing empathy may not be entirely explained by "cognitive focus" (Maibom, 2017: 3) and that the kinesthetic component, which is a key phenomenological element of the second cycle, could also play a key role that has been virtually disregarded by researchers. Our results also showed that the empathic experience of seeing others in pain is neither an exclusively cognitive process of mentalizing, i.e., *cognitive empathy* (Spaulding, 2017) usually explained in terms of TT, ST, or a mixture of both, nor an exhaustively affective-cognitive process in which an affective emotional quality is accompanied by a certain type of cognitive evaluation and focus, i.e., *affective empathy* (Maibom, 2017). Instead, our study indicated that empathic experience is a far more complex process in which not just affect (e.g., emotions and moods) and cognition (e.g., thoughts and attention) participate, but also a bodily resonance comprising visceral and muscular sensations, and also a key kinesthetic component related to the experience of moving or wanting to move in a certain way. This could have important implications for the future study of affective empathy, as our investigation suggests that considering the somatic, sensorimotor, and temporal phenomenological dimensions could shed important light on the affective and cognitive elements themselves, while also providing a more complete picture of the whole experiential process taking place.

Conclusion

According to Neumann et al. (2015), empathy has been evaluated through self-report, behavioral and neuroscientific measures, but first-person methods based on the phenomenological experience have been neglected (Gallagher, 2011; Fuchs, 2013), leaving little understanding of empathy from the observer's subjective experience. Hence, our main aim was to contribute, empirically, to enlarge our little scientific knowledge of the empathic experience of pain by offering the first investigation of empathic experience through an experimental phenomenological method. In this way, our study significantly contributes to filling the "phenomenological gap" in the empirical study of empathy by employing a clearly defined procedure by which the lived experience of empathizers is collected and analyzed. Overall, our study revealed two experiential structures—self-centered empathy and other-centered empathy—that differ in how the subjects show concern for people suffering pain. In particular, our results reveal that understanding of the other person occurs through bodily resonance and involves an integrated multiplicity of bodily sensations, negative emotions, motivations, and thoughts

that fluctuate through time. Furthermore, we showed how our findings may contribute to advancing our understanding of empathy in social neuroscience, and how they may enhance the enactive approach to social experience and intersubjectivity. We also suggested how our study can enhance our concepts of empathy by highlighting that beyond the dichotomies of cognitive/affective empathy, empathic concern/personal distress; empathic experience is a rich and complex process with gradualities along several dimensions, in which the lived body plays an essential but most often neglected role.

However, our study also has some limitations. First, we instructed participants to remain still while watching the videos. This certainly narrowed to a great extent what we found concerning kinesthetic sensations and the sensorimotor cycle in general. Future studies should encourage full expression of movement and bodily postures, such that the sensorimotor cycle is not artificially restricted even in non-interactive situations. A second limitation is that our study only collected phenomenological data, while a more integral understanding of the target phenomenon probably requires simultaneously collecting physiological, neural, and phenomenological measures; and finding out the relations between them, as in neurophenomenology (Varela, 1996).

Finally, future studies should test the hypotheses and suggestions that stem from our study concerning empathy research in social neuroscience, such as whether interoceptive and kinesthetic sensations in the empathic experience are more correlated with lower-level or higher-level processing in the brain; and the implications for the enactive approach, such as the specific ways in which intersubjective interactions shape the structures supporting the homeostatic and sensorimotor cycles and the role these cycles may then play in non-interactive empathic experiences.

Data availability statement

The original contributions presented in this study are included in https://osf.io/fd7vt/, further inquiries can be directed to the corresponding author.

Ethics statement

The studies involving human participants were reviewed and approved by all the participants signed informed consent. The study procedure was according to the Declaration of Helsinki principles. It was approved by the "Scientific Ethics Committee of the Servicio de Salud Metropolitano Oriente" and the "Research in Humans being Ethics Committee of the Medicine Faculty, Universidad de Chile." The patients/participants provided their written informed consent to participate in this study.

Author contributions

DM-P conceived the study, constructed and validated the videos, and implemented the phenomenological interviews. DM-P, AT, and KB did the phenomenological analysis. AT and KB analyzed the quantitative data. CB and CA-V wrote the codebook. DM-P, IC, JC, VC, VM, and MV wrote the first version of the manuscript. DM-P, IC, AT, KB, CB, and CA-V wrote the final version of the manuscript. AU-O and DH constructively reviewed the manuscript. All authors contributed to the article and approved the submitted version.

Funding

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

References

Alcaraz-Sánchez, A., Demšar, E., Campillo-Ferrer, T., and Torres-Platas, S. G. (2022). Nothingness is all there is: An exploration of objectless awareness during sleep. *Front. Psychol.* 13:901031. doi: 10.3389/fpsyg.2022.901031

Arnold, A., Winkielman, P., and Dobkins, K. (2019). Interoception and social connection. *Front. Psychol.* 10:2589. doi: 10.3389/fpsyg.2019.02589

Atlas.ti (2022). *Version 9, ATLAS.ti scientific software development GmbH. Qualitative data analysis.* Long Island City, NY: ATLAS.

Azevedo, T. M., Volchan, E., Imbiriba, L. A., Rodrigues, E. C., Oliveira, J. M., Oliveira, L. F., et al. (2005). A freezing-like posture to pictures of mutilation. *Psychophysiology* 42, 255–260.

Baquedano, C., and Fabar, C. (2017). Modeling subjects' experience while modeling the experimental design: A mild-neurophenomenology-inspired approach in the piloting phase. *Constr. Found.* 12, 166–180.

Barabási, A. L. (2012). The network takeover. *Nat. Phys.* 8, 14–16.

Baron-Cohen, S. (1995). *Learning, development, and conceptual change. Mindblindness: An essay on autism and theory of mind.* Cambridge, MA: The MIT Press.

Barrett, L. (2017). The theory of constructed emotion: An active inference account of interoception and categorization. *Soc. Cogn. Affect. Neurosci.* 12, 1–23. doi: 10.1093/scan/nsw154

Barrett, L. F., Quigley, K. S., Bliss-Moreau, E., and Aronson, K. R. (2004). Interoceptive sensitivity and self-reports of emotional experience. *J. Pers. Soc. Psychol.* 87, 684–697. doi: 10.1037/0022-3514.87.5.684

Batson, C., Fultz, J., and Schoenrade, P. (1987). Distress and empathy: Two qualitatively distinct vicarious emotions with different motivational consequences. *J. Pers.* 55, 19–39. doi: 10.1111/j.1467-6494.1987.tb00426.x

Beck, A. T., Steer, R. A., and Brown, G. K. (1996). *Manual for the Beck Depression Inventory-II.* San Antonio, TX: Psychological Corporation, doi: 10.1007/978-1-4419-1005-9_441

Bernhardt, B. C., and Singer, T. (2012). The neural basis of empathy. *Annu. Rev. Neurosci.* 35, 1–23.

Bitbol, M., and Petitmengin, C. (2017). Neurophenomenology and the microphenomenological interview. *Blackwell Companion Conscious.* 2, 726–739.

Bradley, M. M., and Lang, P. J. (1994). Measuring emotion: The self-assessment manikin and the semantic differential. *J. Behav. Ther. Exp. Psychiatry* 25, 49–59. doi: 10.1016/0005-7916(94)90063-9

Brandão, A., Palluel, E., Olivier, I., and Nougier, V. (2016). Effects of emotional videos on postural control in children. *Gait Post.* 45, 175–180. doi: 10.1016/j.gaitpost.2016.01.017

Caplan, A., and Goldie, P. (2011). *Empathy: Philosophical and psychological perspectives.* Oxford: Oxford Scholarship Online.

Carruthers, P. (2009). How we know our own minds: The relationship between mindreading and metacognition. *Behav. Brain Sci.* 32, 121–138. doi: 10.1017/S0140525X09000545

Carvalho, G. B., and Damasio, A. (2021). Interoception and the origin of feelings: A new synthesis. *BioEssays* 43:2000261.

Clark, A. (1999). An embodied cognitive science?. *Trends Cogn. Sci.* 3, 345–351.

Codispoti, M., Surcinelli, P., and Baldaro, B. (2008). Watching emotional movies: Affective reactions and gender differences. *Int. J. Psychophysiol.* 69, 90–95. doi: 10.1016/j.ijpsycho.2008.03.004

Colombetti, G. (2014). *The feeling body: Affective science meets the enactive mind.* London: MIT Press.

Condon, P., and Barrett, L. F. (2013). Conceptualizing and experiencing compassion. *Emotion* 13, 817–821. doi: 10.1037/a0033747

Craig, A. (2002). How do you feel? Interoception: The sense of the physiological condition of the body. *Nat. Rev. Neurosci.* 3, 655–666. doi: 10.1038/nrn894

Craig, A. (2015). *How do you feel? An interoceptive moment with your neurobiological self.* Princeton: Princeton University Press.

Cuff, B. M., Brown, S. J., Taylor, L., and Howat, D. J. (2016). Empathy: A review of the concept. *Emot. Rev.* 8, 144–153.

Damasio, A. (2018). *The strange order of things. The life, feelings and the making of culture.* New York, NY: Pantheon Books.

Damasio, A. R. (1999). *The feeling of what happens: Body and emotion in the making of consciousness.* New York, NY: Harcourt Brace.

Depraz, N., Gyemant, M., and Desmidt, T. (2017). A first-person analysis using third-person data as a generative method. *Construc. Found.* 12, 190–203.

De Haan, S. (2020). An enactive approach to psychiatry. *Philos. Psychiatry Psychol.* 27, 3–25.

De Jaegher, H. (2013). Embodiment and sense-making in autism. *Front. Integr. Neurosci.* 7:15. doi: 10.3389/fnint.2013.00015

De Jaegher, H. (2015). How we affect each other: Michel Henry's "pathos-with" and the enactive approach to intersubjectivity. *J. Conscious. Stud.* 22, 112–132.

De Jaegher, H., and Froese, T. (2009). On the role of social interaction in individual agency. *Adapt. Behav.* 17, 444–460.

De Jaegher, H., and Di Paolo, E. (2007). Participatory sense-making. *Phenomenol. Cogn. Sci.* 6, 485–507. doi: 10.1007/s11097-007-9076-9

De Jaegher, H., Pieper, B., Clénin, D., and Fuchs, T. (2017). Grasping intersubjectivity: An invitation to embody social interaction research. *Phenomenol. Cogn. Sci.* 16, 491–523.

Decety, J. (2010). To what extent is the experience of empathy mediated by shared neural circuits? *Emot. Rev.* 2, 204–207. doi: 10.1177/1754073910361981

Decety, J., and Cowell, J. (2018). "The Social Neuroscience of Empathy and Its Relationship to Moral Behavior," in *The wiley blackwell handbook of forensic neuroscience*, eds A. R. Beech, A. J. Carter, R. E. Mann, and P. Rotshtein (Chichester, UK: John Wiley & Sons, Ltd), 145–169.

Decety, J., and Cowell, J. M. (2014). The complex relation between morality and empathy. *Trends Cogn. Sci.* 18, 337–339.

Denscombe, M. (2008). Communities of practice: A research paradigm for the mixed methods approach. *J. Mix. Methods Res.* 2, 270–283. doi: 10.1177/1558689808316807

Di Paolo, E., Buhrmann, T., and Barandiaran, X. (2017). *Sensorimotor life: An enactive proposal.* Oxford: Oxford University Press.

Dilthey, W. (1961). *Gesammelte schriften, 15.* Leipzig: Teubner Verlagsgesellschaft.

Eisenberg, N., and Eggum, N. (2009). "Empathic responding: Sympathy and personal Distress," in *The social neuroscience of empathy*, eds J. Decety and W. Ickes (London: MIT Press), 71–84. doi: 10.7551/mitpress/9780262012973.003.0007

Eisenberg, N., and Spinrad, T. L. (2014). "Multidimensionality of prosocial behavior: Rethinking the conceptualization and development of prosocial behavior," in *Prosocial development: A multidimensional approach*, eds L. M. Padilla-Walker and G. Carlo (Oxford: Oxford University Press), 17–39. doi: 10.1093/acprof:oso/9780199964772.003.0002

Englander, M., and Morley, J. (2021). Phenomenological psychology and qualitative research. *Phenomenol. Cogn. Sci.* 1–29. doi: 10.1007/s11097-021-09781-8

Ernst, J., Northoff, G., Böker, H., Seifritz, E., and Grimm, S. (2013). Interoceptive awareness enhances neural activity during empathy. *Hum. Brain Mapp.* 34, 1615–1624. doi: 10.1002/hbm.22014

Fabi, S., and Leuthold, H. (2017). Empathy for pain influences perceptual and motor processing: Evidence from response force, ERPs, and EEG oscillations. *Soc. Neurosci.* 12, 701–716. 919.2016.12380 09 doi: 10.1080/17470

Fernandez, A. V. (2020). Embodiment and objectification in illness and health care: Taking phenomenology from theory to practice. *J. Clin. Nurs.* 29, 21–22. jocn.15431 doi: 10.1111/

Flavell, J. H. (2004). Theory-of-mind development: Retrospect and prospect. *Merrill Palmer Q.* 50, 274–290.

Fleiss, J. L., Levin, B., and Paik, M. C. (2013). *Statistical methods for rates and proportions.* Hoboken, NJ: John Wiley & Sons.

Froese, T., Iizuka, H., and Ikegami, T. (2014). Using minimal human-computer interfaces for studying the interactive development of social awareness. *Front. Psychol.* 5:1061. doi: 10.3389/fpsyg.2014.01061

Fuchs, T. (2013). "The phenomenology of affectivity," in *The Oxford handbook of philosophy and psychiatry*, eds K. W. M. Fulford, M. Davies, R. G. T. Gipps, G. Graham, J. Z. Sadler, G. Stanghellini, et al. (Oxford: Oxford University Press), 612–631.

Fuchs, T. (2017). *Ecology of the brain: The phenomenology and biology of the embodied mind.* Oxford: Oxford University Press.

Fuchs, T., and de Jaegher, H. (2009). Enactive intersubjectivity: Participatory sense-making and mutual incorporation. *Phenomenol. Cogn. Sci.* 8, 465–486. doi: 10.1007/s11097-009-9136-4

Fuchs, T., and Koch, S. C. (2014). Embodied affectivity: On moving and being moved. *Front. Psychol.* 5:508. doi: 10.3389/fpsyg.2014.00508

Fukushima, H., Terasawa, Y., and Umeda, S. (2011). Association between interoception and empathy: Evidence from heartbeat-evoked brain potential. *Int. J. Psychophysiol.* 79, 259–265. doi: 10.1016/j.ijpsycho.2010.10.015

Gallagher, S. (2011). In defense of phenomenological approaches to social cognition: Interacting with the critics. *Rev. Philos. Psychol.* 3, 187–212. doi: 10.1007/s13164-011-0080-1

Gallagher, S. (2012). Empathy, simulation, and narrative. *Sci. Context* 25, 355–381. doi: 10.1017/S0269889712000117

Gallagher, S. (2015). 'How embodied cognition is being disembodied', The Philosophers'. *Magazine* 68, 96–102.

Gallese, V. (2009). Mirror Neurons, Embodied Simulation, and the Neural Basis of Social Identification. *Psychoanal. Dialog.* 19, 519–536.

Gallese, V., and Goldman, A. (1998). Mirror Neurons and the Simulation Theory of Mind-Reading. *Trends Cogn. Sci.* 2, 493–501.

Gallese, V. L. (2005). "'Being like me': Self–other identity, mirror neurons and empathy," in *Perspectives on imitation I*, eds S. Hurley and N. Chater (Cambridge, MA: MIT Press), 101–118.

Gea, J., Muñoz, M., Costa, I., Ciria, L., Miranda, J., and Montoya, P. (2014). Viewing pain and happy faces elicited similar changes in postural body sway. *PLoS One* 9:e104381. doi: 10.1371/journal.pone.0104381

Giorgi, A. (1975). "An application of phenomenological method in psychology," in *Duqesne studies in phenomenological psychology, Vol II*, eds A. Giorgi, C. Fischer, and E. Murray (Pittsburgh: Duquesne University Press).

Giorgi, A. (2021). The necessity of the epochç and reduction for a Husserlian phenomenological science of psychology. *J. Phenomenol. Psychol.* 52, 1–35. doi: 10.1163/15691624-12341382

Giorgi, A., Giorgi, B., and Morley, J. (2017). "The descriptive phenomenological psychological method," in *The Sage Handbook on qualitative research in psychology*, eds C. Willig and W. S. Rogers (Thousand Oaks: Sage), 176–192.

Goldman, A. (2006). *Simulating minds: The philosophy, psychology, and neuroscience of mindreading*. New York, NY: Oxford University Press.

Gopnik, A., and Wellman, H. M. (1992). Why the child's theory of mind really is a theory. *Mind Lang.* 7, 145–171. doi: 10.1111/j.1468-0017.1992.tb00202.x

Gordon, R. (1986). Folk psychology as simulation. *Mind Lang.* 1, 158–171.

Grice-Jackson, T., Critchley, H. D., Banissy, M. J., and Ward, J. (2017a). Common and distinct neural mechanisms associated with the conscious experience of vicarious pain. *Cortex* 94, 152–163. doi: 10.1016/j.cortex.2017.06.015

Grice-Jackson, T., Critchley, H. D., Banissy, M. J., and Ward, J. (2017b). Consciously feeling the pain of others reflects atypical functional connectivity between the pain matrix and frontal-parietal regions. *Front. Hum. Neurosci.* 11:507. doi: 10.3389/fnhum.2017.00507

Grynberg, D., and Pollatos, O. (2015). Alexithymia modulates the experience of the rubber hand illusion. *Front. Hum. Neurosci.* 9:357. doi: 10.3389/fnhum.2015.00357

Hagenaars, M. A., Roelofs, K., and Stins, J. F. (2014). Human freezing in response to affective films. *Anxiety Stress Coping* 27, 27–37. doi: 10.1080/10615806.2013.809420

Hagenaars, M. A., Stins, J. F., and Roelofs, K. (2012). Aversive life events enhance human freezing responses. *J. Exp. Psychol.* 141:98. doi: 10.1037/a0024211

Hall, J. A., and Schwartz, R. (2019). Empathy present and future. *J. Soc. Psychol.* 159, 225–243.

Hamilton, A. K., Pernía, D. M., Wilson, C. P., and Dell'Aquila, D. C. (2018). What makes metalheads happy? A phenomenological analysis of flow experiences in metal musicians. *Qualit. Res. Psychol.* 16, 537–565. doi: 10.1080/14780887.2017.1416210

Hari, R., Henriksson, L., Malinen, S., and Parkkonen, L. (2015). Centrality of social interaction in human brain function. *Neuron* 88, 181–193. doi: 10.1016/j.neuron.2015.09.022

Hoenen, M., Lübke, K., and Pause, B. (2015). Somatosensory mu activity reflects imagined pain intensity of others. *Psychophysiology* 52, 1551–1558. doi: 10.1111/psyp.12522

Hoffman, M. (2001). *Empathy and moral development: Implications for caring and justice*. Cambridge, MA: Cambridge University Press.

Hurlburt, R. T., and Heavey, C. L. (2015). Investigating pristine inner experience: Implications for experience sampling and questionnaires. *Conscious. Cogn.* 31, 148–159. doi: 10.1016/j.concog.2014.11.002

Husserl, E. (1973). *Zur phänomenologie der intersubjektivität I–III. Husserliana XIII–XV*. The Hague: Nijhoff.

Husserl, E. (2006). "Collected works, Vol. XII: The basic problems of phenomenology, from the lectures, winter semester: 1910–1911," in *The basic problems of phenomenology*, ed. R. Bernet (Berlin: Springer), doi: 10.1080/09697250126422

Hutto, D. D., and Myin, E. (2013). *Radicalizing enactivism: Basic minds without content., Basic Minds without Content*. Cambridge, MA: The MIT Press.

Jauniaux, J., Tessier, M., Regueiro, S., Chouchou, F., Fortin-Côté, A., and Jackson, P. (2020). Emotion regulation of others' positive and negative emotions is related to distinct patterns of heart rate variability and situational empathy. *PLoS One* 15:e0244427. doi: 10.1371/journal.pone.0244427

Jo, H. G., Wittmann, M., Borghardt, T. L., Hinterberger, T., and Schmidt, S. (2014). First-person approaches in neuroscience of consciousness: Brain dynamics correlate with the intention to act. *Conscious. Cogn.* 26, 105–116.

Jordan, M., Amir, D., and Bloom, P. (2016). Are empathy and concern psychologically distinct? *Emotion* 16, 1107–1116. doi: 10.1037/emo0000228

Keysers, C., and Gazzola, V. (2006). Towards a unifying neural theory of social cognition. *Progress Brain Res.* 156, 379–401. doi: 10.1016/S0079-6123(06)56021-2

Klimecki, O. M., Leiberg, S., Ricard, M., and Singer, T. (2014). Differential pattern of functional brain plasticity after compassion and empathy training. *Soc. Cogn. Affect. Neurosci.* 9, 873–879. doi: 10.1093/scan/nst060

Lachaux, J. P., Rodriguez, E., Le Van, Quyen, M., Lutz, A., Martinerie, J., et al. (2000). Studying single-trials of phase synchronous activity in the brain. *Int. J. Bifurcation Chaos* 10, 2429–2439.

Lamm, C., Decety, J., and Singer, T. (2011). Meta-analytic evidence for common and distinct neural networks associated with directly experienced pain and empathy for pain. *Neuroimage* 54, 2492–2502. doi: 10.1016/j.neuroimage.2010.10.014

Lamm, C., Nusbaum, H. C., Meltzoff, A. N., and Decety, J. (2007). What are you feeling? Using functional magnetic resonance imaging to assess the modulation of sensory and affective responses during empathy for pain. *PLoS One* 2:e1292. doi: 10.1371/journal.pone.0001292

Lamm, C., and Singer, T. (2010). The role of anterior insular cortex in social emotions. *Brain Struct. Funct.* 214, 579–591. doi: 10.1007/s00429-010-0251-3

Lelard, T., Stins, J., and Mouras, H. (2019). Postural responses to emotional visual stimuli. *Neurophysiol. Clin.* 49, 109–114.

Le Van Quyen, M., and Petitmengin, C. (2002). Neuronal dynamics and conscious experience: An example of reciprocal causation before epileptic seizures. *Phenomenol. Cogn. Sci.* 1, 169–180.

Lindblom, J. (2020). A radical reassessment of the body in social cognition. *Front. Psychol.* 11:987. doi: 10.3389/FPSYG.2020.00987

Maibom, H. L. (2017). "Affective empathy," in *The Routledge handbook of philosophy of empathy*, ed. H. L. Maibom (London: Routledge/Taylor & Francis Group), 22–32.

Martínez-Pernía, D. (2020). Experiential neurorehabilitation: A neurological therapy based on the enactive paradigm. *Front. Psychol.* 11:924. doi: 10.3389/fpsyg.2020.00924

Martínez-Pernía, D. (2022). The experimental phenomenological method: A scientific approach closer to the 5E approach. *Constr. Found.* 17, 148–150.

Martínez-Pernía, D., Cea, I., and Kaltwasser, A. (2021). "Recovering the phenomenological and intersubjective nature of mindfulness through the enactive approach," in *Relational mindfulness: Fundamental and applications*, eds R. Arístegui, J. García-Campayo, and P. Barriga (Switzerland: Springer), 65–89.

Meadows, D. H. (2008). *Thinking in systems: A primer*. Vermont: Chelsea Green Publishing.

Merriam, S. B. (2009). *Qualitative research: A guide to design and implementation*. San Francisco, CA: Jossey-Bass.

Morgan, D. L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *J. Mix. Methods Res.* 1, 48–76. doi: 10.1177/2345678906292462

Motoyama, Y., Ogata, K., Hoka, S., and Tobimatsu, S. (2017). Frequency-dependent changes in sensorimotor and pain affective systems induced by empathy for pain. *J. Pain Res.* 10, 1317–1326. doi: 10.2147/jpr.s129791

Moustakas, C. E. (1994). *Phenomenological research methods*. Thousand Oaks, CA: Sage.

Nave, O., Trautwein, F. M., Ataria, Y., Dor-Ziderman, Y., Schweitzer, Y., Fulder, S., et al. (2021). Self-boundary dissolution in meditation: A phenomenological investigation. *Brain Sci.* 11:819. doi: 10.3390/brainsci11060819

Nasreddine, Z. S., Phillips, N. A., Bédirian, V., Charbonneau, S., Whitehead, V., Collin, I., et al. (2005). The montreal cognitive assessment, MoCA: A brief screening tool for mild cognitive impairment. *J. Am. Geriatr. Soc.* 53, 695–699.

Neumann, D., Chan, R., Boyle, G., Wang, Y., and Westbury, H. (2015). "Measures of empathy: Self-report, behavioral, and neuroscientific approaches," in *Measures of personality and social psychological constructs*, eds G. J. Boyle, D. H. Saklofske, and G. Matthews (Cambridge, MA: Elsevier Academic Press), 257–289. doi: 10.1016/B978-0-12-386915-9.00010-3

Newman, M. E. J. (2010). *Networks: An introduction*. Oxford: OxfordUniversity Press.

Noë, A. (2006). *Action in perception*. London: MIT Press.

Oberman, L. M., Pineda, J. A., and Ramachandran, V. S. (2007). The human mirror neuron system: A link between action observation and social skills. *Soc. Cogn. Affect. Neurosci.* 2, 62–66.

Okun, M., Shepard, S., and Eisenberg, N. (2000). The relations of emotionality and regulation to dispositional empathy-related responding among volunteers-in-training. *Pers. Individ. Differ.* 28, 367–382. doi: 10.1016/s0191-8869(99)00107-5

Olivares, F. A., Vargas, E., Fuentes, C., Martínez-Pernía, D., and Canales-Johnson, A. (2015). Neurophenomenology revisited: Second-person methods for the study of human consciousness. *Front. Psychol.* 6:673. doi: 10.3389/fpsyg.2015.00673

O'Regan, J., and Noë, A. (2001). A sensorimotor account of vision and visual consciousness. *Behav. Brain Sci.* 24, 939–973. doi: 10.1017/s0140525x01000115

Petitmengin, C. (2006). Describing one's subjective experience in the second person: An interview method for the science of consciousness. *Phenomenol. Cogn. Sci.* 5, 229–269. doi: 10.1007/s11097-006-9022-2

Petitmengin, C. (2017). Enaction as a lived experience: Towards a radical neurophenomenology. *Const. Found.* 12, 139–147.

Petitmengin, C., Remillieux, A., and Valenzuela-Moguillansky, C. (2019). Discovering the structures of lived experience. *Phenomenol. Cogn. Sci.* 18, 691–730.

Premack, D., and Woodruff, G. (1978). Does the chimpanzee have a theory of mind? *Behav. Brain Sci.* 1, 515–526. doi: 10.1017/S0140525X00076512

Prochazkova, E., and Kret, M. (2017). Connecting minds and sharing emotions through mimicry: A neurocognitive model of emotional contagion. *Neurosci. Biobehav. Rev.* 80, 99–114. doi: 10.1016/j.neubiorev.2017.05.013

Przyrembel, M., and Singer, T. (2018). Experiencing meditation - Evidence for differential effects of three contemplative mental practices in micro-phenomenological interviews. *Conscious. Cogn.* 62, 82–101. doi: 10.1016/j.concog.2018.04.004

Riečanskı, I., and Lamm, C. (2019). The role of sensorimotor processes in pain empathy. *Brain Topogr.* 32, 965–976. doi: 10.1007/s10548-019-00738-4

Riečanskı, I., Lengersdorff, L., Pfabigan, D., and Lamm, C. (2019). Increasing self-other bodily overlap increases sensorimotor resonance to others' pain. *Cogn. Affect. Behav. Neurosci.* 20, 19–33. doi: 10.3758/s13415-019-00724-0

Scheler, M. (1973). *Wesen und formen der sympathie*. Bern: Francke Verlag.

Seth, A. K., and Tsakiris, M. (2018). Being a beast machine: The somatic basis of selfhood. *Trends Cogn. Sci.* 22, 969–981. doi: 10.1016/j.tics.2018.08.008

Silva-Mack, V., Araya-Véliz, C., Martínez-Pernía, D., and Arístegui Lagos, R. (2018). La experiencia de estar presente en meditadores zen: Una aproximación fenomenológica. *Límite* 13, 29–39.

Singer, T., and Klimecki, O. M. (2014). Empathy and compassion. *Curr. Biol.* 24, R875–R878. doi: 10.1016/j.cub.2014.06.054

Singer, T., and Lamm, C. (2009). The social neuroscience of empathy. *Ann. N. Y. Acad. Sci.* 1156, 81–96. doi: 10.1111/j.1749-6632.2009.04418.x

Small, M. L. (2011). How to conduct a mixed methods study: Recent trends in a rapidly growing literature. *Annu. Rev. Sociol.* 37, 57–86.

Smrdu, M. (2022). Kaleidoscope of pain: What and how do you see through it. *Constr. Found.* 17, 136–147.

Spaulding, S. (2017). "Cognitive empathy," in *The Routledge handbook of philosophy of empathy*, ed. H. L. Maibom (London: Routledge/Taylor & Francis Group), 13–21.

Spielberger, C. D., Gorsuch, R. C., and Lushene, R. E. (1970). *Manual for the State Trait Anxiety Inventory*. Palo Alto, CA: Consulting Psychologists Press.

Stein, E. (1917). *Zum problem der einfühlung*. Halle: Waisenhaus.

Stein, E. (1964). *On the problem of empathy*. Berlin: Springer.

Stemmler, G. (2003). "Methodological considerations in the psychophysiological study of emotion," in *Handbook of affective sciences*, eds R. J. Davidson, K. R. Scherer, and H. H. Goldsmith (Oxford: Oxford University Press), 225–255.

Stilwell, P., and Harman, K. (2021). Phenomenological research needs to be renewed: Time to integrate enactivism as a flexible resource. *Int. J. Qualit. Methods* 20:1609406921995299.

Stueber, K. (2019). "Empathy," in *The Stanford encyclopedia of philosophy*, ed. E. N. Zalta (Stanford, CA: Stanford University).

Terasawa, Y., Moriguchi, Y., Tochizawa, S., and Umeda, S. (2014). Interoceptive sensitivity predicts sensitivity to the emotions of others. *Cogn. Emot.* 28, 1435–1448.

Thompson, E. (2001). "Empathy and consciousness," in *Between ourselves: Second-person issues in the study of consciousness*, ed. E. Thompson (Devon: Imprint Academic), 1–32.

Thompson, E. (2007). *Mind in life: Biology, phenomenology, and the sciences of mind*. Cambridge, MA: Harvard University Press.

Thompson, E. (2011). Précis of Mind in life: Biology, phenomenology, and the sciences of mind. *J. Conscious. Stud.* 18, 10–12.

Thompson, E., and Varela, F. J. (2001). Radical embodiment: Neural dynamics and consciousness. *Trends Cogn. Sci.* 5, 418–425. doi: 10.1016/S1364-6613(00)01750-2

Timmers, I., Park, A. L., Fischer, M. D., Kronman, C. A., Heathcote, L. C., Hernandez, J. M., et al. (2018). Is empathy for pain unique in its neural correlates? A meta-analysis of neuroimaging studies of empathy. *Front. Behav. Neurosci.* 12:289. doi: 10.3389/fnbeh.2018.00289

Titchener, E. B. (1909). *Lectures on the experimental psychology of thought processes*. New York, NY: Macmillan.

Uddin, L. Q., Iacoboni, M., Lange, C., and Keenan, J. P. (2007). The self and social cognition: The role of cortical midline structures and mirror neurons. *Trends Cogn. Sci.* 11, 153–157. doi: 10.1016/j.tics.2007.01.001

Valenzuela-Moguillansky, C. (2013). Pain and body awareness: An exploration of the bodily experience of persons suffering from fibromyalgia. *Constr. Found.* 8, 339–350.

Van Emmerik, R. E., Ducharme, S. W., Amado, A. C., and Hamill, J. (2016). Comparing dynamical systems concepts and techniques for biomechanical analysis. *J. Sport Health Sci.* 5, 3–13.

Varela, F. (1984). "Living ways of sense-making: A middle path for neuroscience," in *Order and Disorder: Proceedings of the Stanford International Symposium*, ed. P. Livingstone (Stanford: Anma Libri), 208–224.

Varela, F. (1991). "Organism: A meshwork of selfless selves," in *Organism and the origins of self. boston studies in the philosophy of science, vol 129*, ed. A. I. Tauber (Dordrecht: Springer), 79–107.

Varela, F. (1996). Neurophenomenology: A methodological remedy for the hard problem. *J. Conscious. Stud.* 3, 330–349.

Varela, F., and Thompson, E. (2003). "Neural synchrony and the unity of mind: A neurophenomenological perspective," in *The unity of consciousness*, ed. A. Cleeremans (Oxford: Oxford University Press), doi: 10.1093/acprof:oso/9780198508571.003.0014

Varela, F., Thompson, E., and Rosch, E. (1991). *The embodied mind: Cognitive science and human experience*. London: MIT Press.

Ward, D., Silverman, D., and Villalobos, M. (2017). Introduction: The Varieties of Enactivism. *Topoi* 36, 365–375. doi: 10.1007/s11245-017-9484-6

Wiens, S. (2005). Interoception in emotional experience. *Curr. Opin. Neurol.* 18, 442–447.

Zahavi, D. (2010). Empathy, embodiment and interpersonal understanding: From Lipps to Schutz. *Inquiry* 53, 285–306. doi: 10.1080/00201741003784663

Facet theory and the mapping sentence: Evolving philosophy, use, and declarative applications 2nd ed. 2021 edition-Paul M. W. Hackett

Ava Gordley-Smith*†

School of Communication, Emerson College, Boston, MA, United States

Introduction

In *Facet theory and the mapping sentence: Evolving philosophy, use, and declarative applications*, Paul M. W. Hackett illustrates Facet Theory's expansive evolution and diverse application. This second edition of the former Facet theory and the mapping sentence: Evolving philosophy, use, and application (2014) is twice as long and exhibits a title amendment with the addition of "declarative." Whereas, the first edition largely regarded qualitative facet theory, the second edition delves deeply into the development and application of the declarative mapping sentence. The thrust of the work is substantially more philosophical, ethnographic, and qualitative in nature. Hackett's expressive second edition is a compelling read for students, academics, and researchers within the disciplines of the humanities, behavioral sciences, and social sciences.

Hackett methodically illustrates the fundamentals of Facet Theory and mapping sentences whilst journeying the reader through the diverse co-existing utilizations. He encapsulates these dynamic capabilities through descriptive vignettes ranging from studies of avian cognition and behavior to prison officers' occupational stress and the Black Lives Matter movement. He writes, "Facet theory and the mapping sentence offer a potentially constructive philosophical basis for both the understanding of daily existence and inquiries into personal ontologies and mereologies" (p 214). Whilst echoing the instructive crux of the first edition, the second edition gives prominence to the traditional mapping sentence and the declarative mapping sentence. Hackett is also keen to address the mapping sentence's evolved consideration and ability to stand alone as a research tool outside of Facet Theory.

Discussion

Facet Theory was originally proposed by Louis Guttman as a quantitative research approach for the empirical sciences (Shye, 1999). Hackett's declarative adaptation of the mapping sentence is an evolution of Guttman's work expanding into qualitative branches. Hacket explicates the differences between the traditional mapping sentence and the declarative mapping sentence and the necessity for the declarative adaptation. Hackett's amended mapping sentence, the declarative mapping sentence, provides a reflexive framework that responds to input from broad derivations whilst a traditional mapping sentence holds a stipulated and outcome variable form. The declarative mapping sentence does not impose a structure upon the data but the responsive framework is transportable from one situation and data source to another, reacting to each by allowing alterations. The declarative mapping sentence stimulates cumulative knowledge development, avoiding the imposition of assumptions present in a more rigid design and analysis system, rather, it creates space for knowledge emergence.

An ancillary function to this knowledge emergent space seen in Hackett's declarative mapping sentence is the utilization of one's personal vernacular and the engaged kinship of linguistic determinism. In other words, the declarative mapping sentence requires the researcher to develop their thoughts through their own linguistic systems leading to an intimacy uninhibited by an imposed outcome. This rapport shepherds companionship that is deepened through facet iteration and ultimately leads to a holistic interplay of self and research knowledge emergence. Whilst this symbiotic reflexivity might demand meticulous adjustments, it is this iterative and unconfined linguistic proximity that substantiates the declarative mapping sentence's unique attributes.

One might consider the likeness of this process to therapeutic journaling. Journaling is a commonly known personal writing strategy to express oneself and was made notable as a psychoanalytic Freudian and cognitive Alderian method in the twentieth century (Schneider and Stone, 1998). Journaling exercised in academic or clinical settings may be employed to gain insight through personal reflection, analysis, cooperative dialogue, and feedback (Haertl, 2008). This self-dialogical method expresses a comparable interplay between linguistic determinism, reflexivity, iteration, and knowledge emergence. Similarly to the declarative mapping sentence, a journal imposes no structure upon the data, it exists blankly, only structured by the facets and connective phraseology of one's mental maps. With continued engagement it becomes an iterative process of reflection, maturing into a body of work that improves more comprehensively with time. The process of reading one's own words develops direction and creates a clarifying distance whilst allowing for deeper insight formation; a personal didactic. True to form, Hackett eloquently journals his own experiences unveiling the declarative mapping sentence's notable ability to form an intimacy and companionship between the researcher and their research.

Conclusion

The process of creating and employing a mapping sentence is a body of work on its own merits. Notable Facet Theorist David Canter wrote, "Facet theory is still only slightly recognized by psychologists and other social sciences. Even when it is accepted, it is only partially understood" (Canter, 1985). Although spotted acknowledgments of Canter's sentiment may exist, Hackett's demonstrated extensive and diverse contributions to Facet Theory assist its expansion, awareness, and necessity. And whilst critics dismiss the Facet Theory and the mapping sentence as overly laborious, Hackett's compelling exposition for the enlightenment found through the application offers a persuasive contention for the recognition of their multitudinous benefits. Hackett's *Facet theory and the mapping sentence: Evolving philosophy, use, and declarative applications* is a philosophical didactic that masterfully traces the evolution and use of Facet Theory.

Author contributions

The author confirms being the sole contributor of this work and has approved it for publication.

Conflict of interest

The author declares that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

References

Canter, D. (1985). *Facet theory Approaches to Social Research*. Berlin: Springer-Verlag.

Haertl, K. (2008). "Journaling as an assessment tool in mental health," in *Assessments in Occupational Therapy Mental Health: An Integrative Approach*. (West Deptford, NJ: SLACK Incorporated).

Schneider, M. F., and Stone, M. (1998). Processes and techniques of journal writing in Adlerian therapy. *J. Ind. Psychol.* 54, 511–534.

Shye, S. (1999). Facet theory. *Encyclopedia Stat. Sci.* 3, 231–239.

Frontiers in Psychology

Paving the way for a greater understanding of human behavior

The most cited journal in its field, exploring psychological sciences - from clinical research to cognitive science, from imaging studies to human factors, and from animal cognition to social psychology.

Discover the latest Research Topics

See more →

frontiers | Research Topics

frontiers

Frontiers in
Psychology