



Differences in the Evaluation of Prosocial Lies: A Cross-Cultural Study of Canadian, Chinese, and German Adults

Renuka M. Giles^{1*}, Kathrin Rothermich² and Marc D. Pell¹

¹ Neuropragmatics & Emotion Lab, School of Communication Sciences and Disorders, McGill University, Montréal, QC, Canada, ² Social Communication and Neuroscience Lab, Department of Communication Sciences and Disorders, East Carolina University, Greenville, NC, United States

OPEN ACCESS

Edited by:

Jon Andoni Dunabeitia,
Nebrija University, Spain

Reviewed by:

Carlos Romero-Rivas,
Autonomous University of Madrid,
Spain

Eva María Moreno Montes,
Universidad Complutense de Madrid,
Spain

Alice Foucart,
Universitat Pompeu Fabra, Spain

*Correspondence:

Renuka M. Giles
renukagiles@gmail.com

Specialty section:

This article was submitted to
Language Sciences,
a section of the journal
Frontiers in Communication

Received: 17 April 2019

Accepted: 08 July 2019

Published: 23 July 2019

Citation:

Giles RM, Rothermich K and Pell MD (2019) Differences in the Evaluation of Prosocial Lies: A Cross-Cultural Study of Canadian, Chinese, and German Adults. *Front. Commun.* 4:38. doi: 10.3389/fcomm.2019.00038

In daily life, humans often tell lies to make another person feel better about themselves, or to be polite, or socially appropriate in situations when telling the blunt truth would be perceived as inappropriate. Prosocial lies are a form of non-literal communication used cross-culturally, but how they are evaluated depends on socio-moral values, and communication strategies. We examined how prosocial lies are evaluated by Canadian, Chinese, and German adults. Participants watched videos and rated politeness, appropriateness, and predicted frequency of use of prosocial lies and blunt truths. A two-way intention x culture interaction was observed for appropriateness and predicted frequency of use. These results suggest that the evaluation of prosocial lies is influenced by an interplay of intercultural communication strategies depending on cultural group membership.

Keywords: non-literal communication, cross-cultural communication, blunt, white lie, directness, collectivism, politeness, social appropriateness

INTRODUCTION

Prosocial lies can serve many purposes, including preventing negative consequences to the interlocutor (Camden et al., 1984), enhancing social image (Nakkouzi, 2011), ensuring that social interactions proceed smoothly (Goffman, 1967; Brown and Gilman, 1989), preventing harm to the recipient, and avoiding conflict (Camden et al., 1984; DePaulo et al., 1996). Although Grice's Maxim of Quality (1975), states that interlocutors ought to be truthful, in some social situations telling a lie may benefit an interlocutor, whereas speaking the truth would likely have a negative effect on the relationship between communication partners. For example, telling a friend that their new haircut looks great, although they do not truthfully believe it does, avoids unnecessary conflict, maintains the friend's self-esteem, and fosters a positive relationship. In contrast to self-serving lies, which can be harmful and are told for one's own benefit, prosocial lies about feelings, preferences, attitudes, and opinions are used to reap psychological rewards, such as closeness and respect, to protect another's self-image, and to avoid hurt feelings (DePaulo et al., 1996, 2003; Argo et al., 2011).

The decision for a speaker to use a prosocial lie (also known as a "white lie") is influenced by individual differences including age, gender, cognitive ability, personality, and social preferences (Ennis et al., 2008; Chakravarty et al., 2011; Cappelen et al., 2013). However, other factors also

govern decisions about whether or not to use prosocial lies in conversation, including the topic of conversation, and the relationship of the interlocutors (Backbier et al., 1997; Perkins and Turiel, 2007). We are interested in the growing evidence that culturally shaped ideas of morality and social norms influence the use and perception of prosocial lies (Lee et al., 1997; Ferns and Thorn, 2001; Fu et al., 2007).

Cultures¹ and communities of practice have different norms and values, and communicators are typically socialized within the moral, and social value systems of their own culture. Fu et al. (2007) describe that in many cases, these values are consistent across cultural groups and thus promote a coherent set of morally and socially acceptable behaviors. Previous studies have also shown that socially acceptable behaviors and social norms in everyday communications are universally maintained through conversational strategies and politeness (Grice, 1975; Brown and Levinson, 1987). These strategies guide interlocutors' conversations and determine which responses are socially expected and appropriate given a certain situation. Thus, failure to produce a prosocial lie in some cases can violate social norms, especially since interlocutors' true opinion is intended to remain undetected when telling these lies (Shany-Ur et al., 2012).

In a world in which immigration is commonplace and interactions between people of diverse cultural backgrounds occurs regularly, cultural differences in social pragmatic preferences, and strategies for the maintenance of social norms are likely to produce miscommunications or misinterpretations of interpersonal intentions in cross-cultural settings. This is known as *pragmatic failure* (Leech, 2016). Previous research demonstrates that social norms surrounding the use of prosocial lies exist in many cultures, that they are considered socially acceptable or even expected in many cultures (Camden et al., 1984; Moreno et al., 2016) and are often associated with polite behavior (Goffman, 1967; Camden et al., 1984; Talwar et al., 2007). Several studies have indicated that there are no differences in politeness between countries from the East and West (Usami, 2002 as cited in Fukada and Asato, 2004; Spencer-Oatey and Kádár, 2016). For example, Chen et al. (2013) found similar requesting behavior between Japanese, Canadian, and American adults concluding that there are no fundamental differences between these countries in terms of politeness norms. However, another body of research demonstrates that social norms differ across these cultures as evidenced by differences in the perception and use of requests, apologies, inferences, compliments, deception, and disagreements between people from different cultures (House and Kasper, 1981; Holtgraves and Joong-Nam, 1990; Aune and Waters, 1994; Yu, 2005; Marti, 2006; Stadler, 2006). For example, a developmental study found that Chinese children more often use prosocial lies to protect a *group*, whereas Canadian children do so to protect an *individual* (Lee et al., 1997). In the current study, we investigated whether

cultural differences influence how prosocial lies are received and interpreted when viewing social interactions involving Anglophone Canadian actors, allowing insight into potential difficulties in an *inter-cultural* settings.

Different cultures have varied attention to face, or face preservation. Face is a concept first proposed by Goffman (1967), which includes positive face and negative face, both must be maintained during communication (Brown and Levinson, 1987). Negative face describes one's desire for actions or attention to be uninterrupted or unhindered, and to be free from imposition. Positive face refers to the positive self-image a person has, and includes one's desire for this self-image to be accepted, appreciated, understood, approved of, and liked (Brown and Levinson, 1987). Positive face is most important for prosocial lies (Nakkouzi, 2011). Preserving positive face motivates being dishonest, since prosocial lies involve intentionally hiding true negative feelings to avoid face-threatening acts. Cultures¹ that are mainly collectivist in nature, such as Chinese (Lee et al., 1997), seem to display greater face concerns (Holtgraves, 1999) when compared to individualist cultures, such as Canadian (Gao and Ting-Toomey, 1998). This collectivist attention to face may favor violation of the Maxim of Quality to prioritize face maintenance in relationships. Holtgraves (1999) and others (Goffman, 1967; Brown and Levinson, 1987) suggest that maintaining or preserving face is often achieved through the linguistic mechanism of indirectness. Indirectness occurs when the sentence meaning differs from the speaker meaning. For example "Can you shut the door" has a speaker meaning—a request to shut the door, but the sentence meaning is asking someone their ability to shut a door. This is an example of an indirect request (Holtgraves, 1999). The use of indirectness can also manifest through the use of prosocial lies. Alternatively, some cultures have been shown to prefer direct or blunt communication, for example German culture (House and Kasper, 1981; Houck, 1992; House, 1996). In this culture the use of prosocial deception would be endorsed to a lesser extent due to a reduced attention to face maintenance when compared to cultures that emphasize politeness or face preservation. Instead, a direct, possibly face threatening and honest response would be favored. As such, it is expected that culturally shaped social communication preferences, will influence the evaluation of prosocial lies.

CURRENT STUDY

Motivated by these concepts, we systematically investigated how cultural membership affects the evaluation and interpretation of prosocial lies. Participants from three cultural backgrounds—Anglophone Canadian, Chinese, and German—viewed short video vignettes in English and subsequently evaluated politeness, social appropriateness, and predicted usage of prosocial lies expressed at the end of a leading remark. Since immigration is prevalent across the world, the likelihood of pragmatic failure (Leech, 2016) is very high. For this reason we decided to test non-native English speakers with limited experience in their current (Canadian-anglophone) culture to mirror real-life

¹Our definition of culture is largely based on (Spencer-Oatey, 2008, p. 4): "Culture is a fuzzy set of attitudes, beliefs, behavioral conventions, and basic assumptions and values that are shared by a group of people, and that influence each member's behavior and each member's interpretations of the 'meaning' of other people's behavior."

scenarios and gain insight into present miscommunications. Politeness is said to be universal (Holtgraves and Joong-Nam, 1990), so ratings of politeness are expected to be relatively similar across cultures. However, we do not predict that measures of social appropriateness and predicted usage of prosocial lies will be similar across cultures. As Meier (1995) explained, socially appropriate behavior is not synonymous with polite behavior, since polite behavior is viewed as a result of overly politic, and marked behavior (Watts, 2003). Additionally, dimensions of social communication such as individualism/collectivism and directness/indirectness are known to differ cross-culturally and are expected to influence the perceived social appropriateness and usage of prosocial lies. We predicted that the participants in the German sample on average will display a higher predicted frequency of usage and judged appropriateness of blunt responses compared to prosocial lie responses, due to their demonstrated preference for direct communication affording less attention to face-preservation (House and Kasper, 1981; Houck, 1992; House, 1996). Canadian and Chinese speakers have both been shown to prefer a more indirect communication style (Holtgraves, 1999; Jonasson and Lauring, 2012). However, since Canadians are described as individualist while Chinese are believed to be more collectivist, these groups are expected to differ in other ways. East Asian culture has been shown to employ display-rules that favor social harmony (Ishii et al., 2003; Liu et al., 2015)—with an emphasis on group harmony. As Aune and Waters (1994) suggest, deceiving in order to save face may be more acceptable in collectivist cultures. Informed by these ideas, we predict that participants in the Chinese group will find prosocial lies more appropriate and predict using them more frequently than blunt truths.

METHODS

Participants

The experiment included three cultural groups: Anglophone Canadian, Chinese, and German. Sixty participants ($n = 20$ per cultural group) ranging in age from 18–35 years ($M = 23.36$ years, $SD = 4.57$ years) participated in the study (see **Table 1** for demographic information). All participants reported good hearing and had normal or corrected-to-normal vision. Canadian participants were native English speakers who were born and raised in Canada. Given the multicultural nature of Canada, for Canadian participants we also collected information regarding their second language (see **Table 1**). Participants in the German and Chinese groups were second language (L2) English speakers who had lived in their home country (Germany or mainland China, respectively) until at least 18 years of age, and had lived in Canada for a maximum of 24 months (to minimize effects of cultural assimilation on L2 participants; Liu et al., 2015). At time of testing, Chinese participants ($M = 461.90$, $SD = 190.00$) had spent significantly more days in Canada than German participants ($M = 209.45$, $SD = 229.66$; $t = 3.28$, $p < 0.01$). Analyses showed that the cultural samples also differed significantly in Age [$F_{(2, 58)} = 11.56$, $p < 0.001$] and Years of Education [$F_{(2, 58)} = 3.93$, $p < 0.05$]. German participants were significantly older

than both Canadian ($p < 0.01$) and Chinese participants ($p < 0.001$) and had more years of formal education than Chinese participants ($p < 0.05$).

L2 English proficiency for Chinese and German participants was screened by obtaining a second language cloze test (**Table 1**). A significant difference in L2-cloze scores was found between the German and Chinese groups ($p < 0.0001$), with higher L2 proficiency in English for the German participants. In addition, self-ratings across six domains (listening comprehension, reading comprehension, pronunciation, speaking fluency, vocabulary, grammatical ability) using a 7-point Likert scale (1 = not proficient at all, 7 = like a native speaker; Jackson and Bobb, 2009) were collected. Participants with self-ratings lower than 3 in any domain were excluded from the study to ensure that basic language processing deficits did not interfere with the evaluation of spoken interactions conducted in English. All participants rated their listening comprehension at 5 points or higher (Blumenfeld et al., 2016).

Materials

Stimuli were short videos selected from the Relational Inference in Social Communication (RISC) database (Rothermich and Pell, 2015). The RISC videos depict conversations between two actors speaking Canadian-English in varied social situations. After that, a leading remark or question is posed by one actor and the “speaker” responds with a statement that communicates some form of literal or non-literal meaning. Five different responses were developed for each leading remark, allowing five distinct interpretations of the speaker’s final response: literal positive, blunt, sarcastic, jocular/teasing, or white lie (prosocial lie). The identification of these intentions was validated by a group of Anglophone-Canadian listeners (see Rothermich and Pell, 2015). Half of the videos begin with a verbal context that reveals the true intentions of the speaker (question-response dyads). Rothermich and Pell presented 960 videos to participants whose task was to categorize each video using a forced-response paradigm, selecting one of five possible intentions (literal positive, blunt, prosocial lie, jocular or sarcasm). Results showed that participants correctly categorized responses into each of the four possibilities well-above chance level. The identification of prosocial lies well-above chance level indicates that the viewers were aware that the videos depicted prosocial lies. The relationship of the actors (couple, friends, boss, colleagues) was also manipulated for each scene (see Rothermich and Pell, 2015 for more details), although this variable was not of theoretical interest in the current study.

For this study we included scenes in the intentions of interest (prosocial lie and blunt truth) as well as 3 non-literal filler intentions (sarcasm, jocular, literal position). We included 7 scenes all with verbal context (see **Appendix**), which were accurately identified as blunt or prosocial lie 95.39% ($SD = 4.06$) and 93.43% ($SD = 4.52$) of the time in the original validation study (see Rothermich and Pell, 2015 for details). We then included 7 scenes without verbal context as filler items. Finally, each of the 14 scenes included exemplars which presented the same conversation but varied the social relationship of the two actors (couple, boss/employee, friends), resulting in 210 experimental trials in total (14 scenes \times

TABLE 1 | Demographic information for all three cultural groups (Canadian, Chinese, German, $N = 60$).

Demographics	Cultural Group		
	Canadian ($n = 20$)	Chinese ($n = 20$)	German ($n = 20$)
M:F	8:12	7:13	7:12
Native language	English	Mandarin	German
Second languages	French ($n = 14$); Mandarin ($n = 1$); Hebrew ($n = 1$); NA ($n = 4$)	English	English
Age (years)	22.5 (3.7)	20.8 (2.7)	26.6 (4.9)
Years of formal education	15.5 (2.0)	14.7 (2.0)	17.3 (4.2)
L2 Cloze Test (/30)	NA	23.2 (1.9)	26.0 (1.9)
Self rated english proficiency (scale 1–7)	7.0 (0.1)	5.4 (0.8)	5.9 (0.7)
Duration in Canada (months)	NA	14.9 (6.2)	7.1 (7.3)

5 intentions \times 3 relationships). For the analysis, 42 items were included (21 prosocial lies and 21 blunt truths: 7 scenes [see **Appendix**] \times 2 intentions [blunt, lie] \times 3 relationships [couple, friends, boss/employee]). The mean duration of stimuli was 10.41 s ($SD = 3.30$ s).

Procedure

The study was approved by the McGill Faculty of Medicine Institutional Review Board and informed written consent was obtained in English prior to testing. The experiment was conducted in a quiet laboratory environment. Video stimuli were presented to participants individually on a 23-inch computer screen controlled by SuperLab 5.0 (Cedrus, Arizona) and pseudo-randomized in 14 separate blocks to ensure that each leading remark appeared only once per block. Participants were randomly assigned to one of four pseudo-randomized lists containing all 210 videos to control for order effects and possible fatigue. The experiment was self-paced with the option of taking breaks after each block.

Each experimental trial was composed of a 500 ms fixation cross projected in the center of a blank screen, followed by a video conversation ending in a question prompting a prosocial lie, blunt, literal positive, sarcastic, or jocular response. For expository purposes, we will refer to the main conditions of theoretical interest as LIE (prosocial lie), or BLUNT, respectively. At the offset of each video, participants saw a series of rating scales and were required to indicate the politeness and appropriateness of the final remark, and their personal tendency to use the same strategy in the context they viewed. Politeness and appropriateness were each rated consecutively on a Likert scale from 1 to 5, prompted by the questions, “How polite is the speaker’s response?” and “How socially appropriate is the speaker’s response?” Participants then indicated their tendency to respond in the same manner (e.g., “Usage”) by means of a Yes/No response to the question “Would you respond in a similar way?” After participants rated whether or not they would answer similarly (i.e., using a lie or the blunt response), the percentage of “Yes” responses was computed for analysis. The study lasted ~ 75 min in total and participants received \$20 CAD for their involvement.

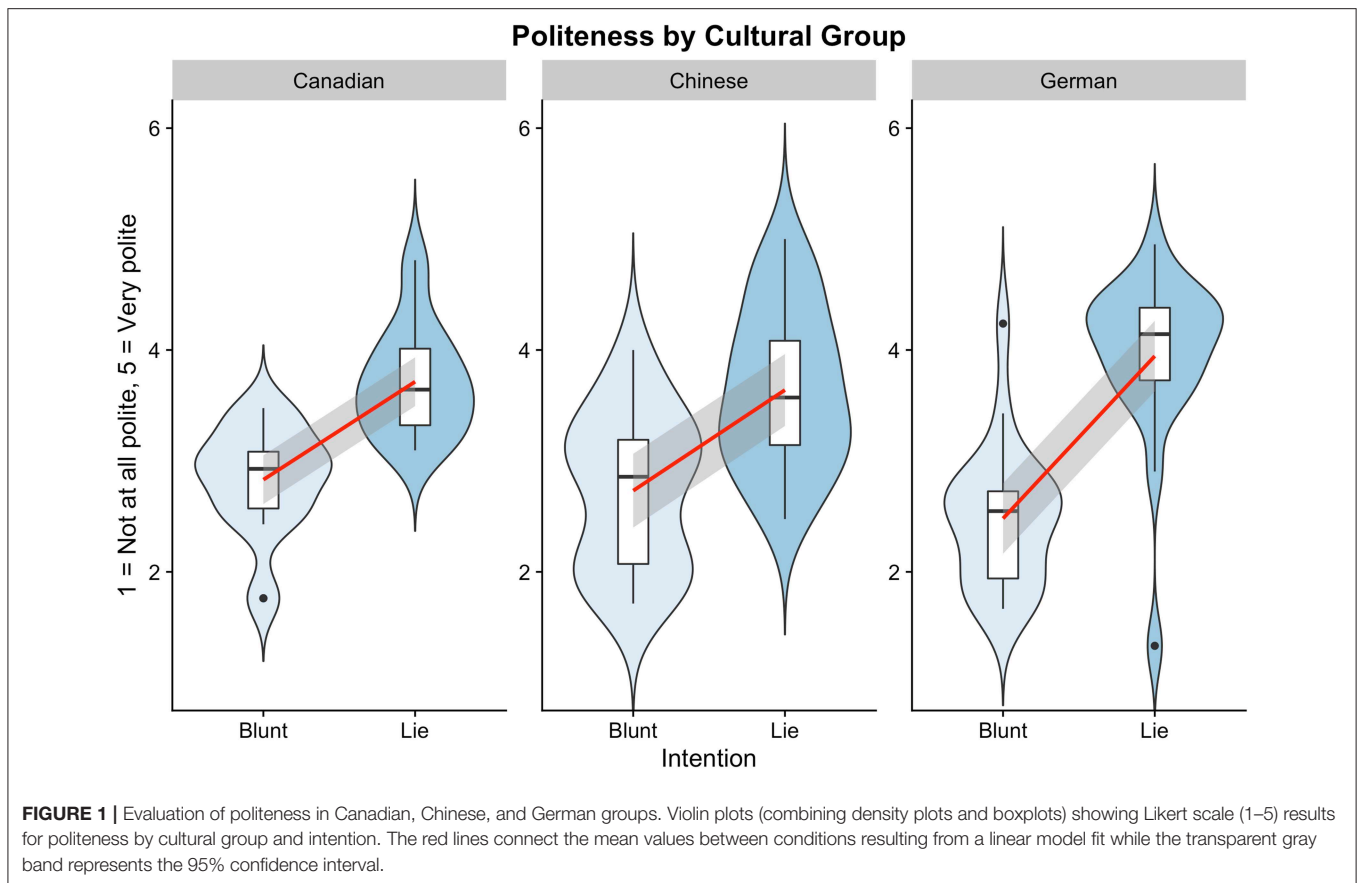
Data Analysis

While there is some debate in the literature on the best analytical approach to analyzing ordinal data such as Likert scales (Kizach, 2014), linear mixed models have been shown to be precise even when assumptions are violated (Norman, 2010; Gibson et al., 2011). All measures were analyzed in R (R Core Team, 2013) by means of linear mixed effects analysis (LME) using lme4 (Bates et al., 2014). We applied the Satterthwaite (1946) approximation for computing p -values for t -statistics, as implemented in the lmerTest package version 2.0-6 (Kuznetsova et al., 2017). Separate LME models were built for dependent variables of perceived (a) politeness, (b) appropriateness, and (c) usage. In all cases, we first defined a base model, which included only one random effect (Subject); refined models were then identified by performing comparisons using the ANOVA function in R, and systematically comparing the full model with the model reduced by random and fixed effects in turn (see similar approach in Valuch et al., 2015). Our fixed effects included Intention (LIE, BLUNT) and Cultural Group (Canadian, Chinese, German), Age, Cloze, Education, Self-Rating Language Scores, and Duration in Canada. Random effects included intercepts for Subjects and Scenes, as well as by-subject slopes for the effect of Intention, Age, and Education for all participants, as well as Self-Rating Duration in Canada, and Cloze for models only including Chinese and German participants. Additionally, we included by-scenes slopes for Intention, Age, and Education for all participants, as well as Duration in Canada, Self-Rating, and Cloze for models only including Chinese and German participants. Models were compared based on χ^2 , Akaike information criterion (AIC; Hu, 2007), and p -values. *Post-hoc* comparisons were performed using the lmerTEST package and we report β -, t -, and p -values.

RESULTS

Perceived Politeness of Prosocial Lies

Random effects included intercepts for Subjects and Scenes, as well as by-subject slopes for the effect of Intention, Age, and Education; and by-scenes slopes for Intention, Age, and Education. No main effect of Cultural Group was found on ratings of politeness ($\chi^2 = 0.19$, $p = 0.91$). However, we found a main effect for Intention ($\chi^2 = 64.39$, $p < 0.001$) when comparing



the minimal model (AIC = 6,806) to an Intention model (AIC = 6,743; **Figure 1**). When running the same models for Chinese and German participants only, including the random slopes for Self-Rating Duration in Canada and Cloze, we found no main effect of Cultural Group on ratings of politeness ($\chi^2 > 0.001$, $p = 0.99$). A main effect was found for Intention ($\chi^2 = 44.49$, $p < 0.001$) when comparing the minimal model (AIC = 4,520) to an Intention model (AIC = 4,478; **Figure 1**). In terms of politeness ratings, all cultural groups rated lies as more polite than blunt truths.

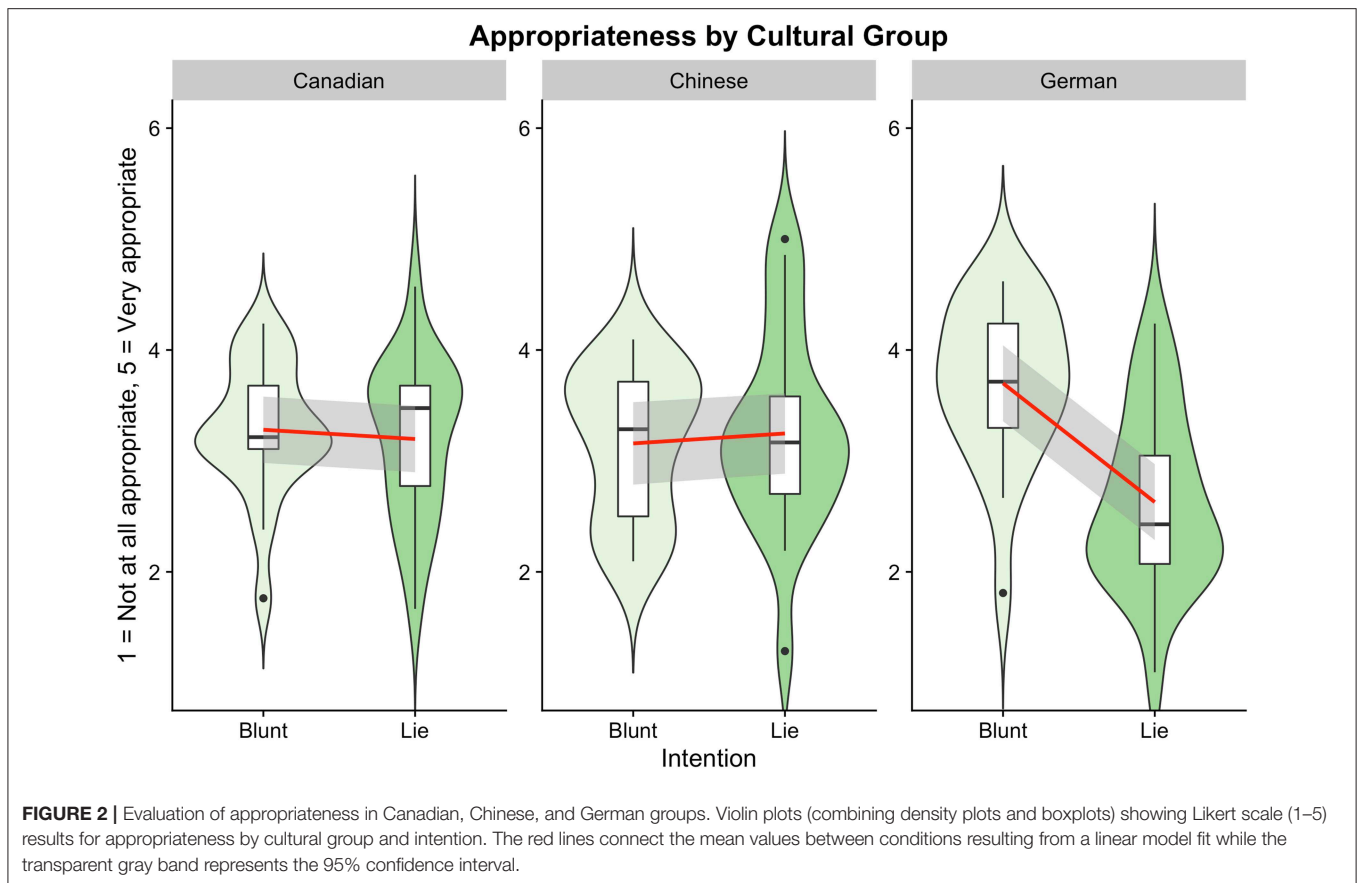
No effects were found when including the fixed factors Education ($\chi^2 = 1.28$, $p = 0.26$), Age ($\chi^2 = 0.01$, $p = 0.91$) for all cultural groups, and Cloze ($\chi^2 = 0.002$, $p = 1$), Self-Rating ($\chi^2 = 1.54$, $p = 0.98$), and Duration in Canada ($\chi^2 = 0.112$, $p = 1$) for Chinese and German subjects.

Perceived Appropriateness and Reported Usage of Prosocial Lies

Random effects included intercepts for Subjects and Scenes, as well as by-subject slopes for the effect of Intention, Age, and Education; and by-scenes slopes for Intention, Age, and Education. A main effect of Intention was found on ratings of appropriateness ($\chi^2 = 6.32$, $p = 0.02$) and usage ($\chi^2 = 16.79$, $p < 0.001$). This was tested by comparing a minimal model (appropriateness: AIC = 7,007, usage: AIC = 3,140) to an Intention model (appropriateness: AIC = 7,003, usage: AIC = 3,125). Reported appropriateness ($\chi^2 = 14.36$, $p < 0.001$)

and usage ($\chi^2 = 10.78$, $p < 0.001$) were significantly different when comparing the Intention model (AIC = 4,631, usage: AIC = 3,125) to a model including a 2-way interaction between Intention x Cultural Group (appropriateness: AIC = 4,621; **Figure 2**; usage: AIC = 3,118; **Figure 3**). Appropriateness and usage differed between cultural groups in the following ways. In terms of appropriateness ratings, German participants judged BLUNT scenes to be more appropriate than LIES (BLUNT > LIE; $\beta = 1.07$, $t = 4.60$, $p < 0.001$). No significant differences were found for Chinese ($p = 0.71$) or Canadian subjects ($p = 0.72$).

When running the same models for Chinese and German participants only, including the random slopes for Self-Rating Duration in Canada and Cloze, a main effect of Intention was found on ratings of appropriateness ($\chi^2 = 5.79$, $p = 0.02$) and usage ($\chi^2 = 12.58$, $p < 0.001$). This was tested by comparing a minimal model (appropriateness: AIC = 4,635, usage: AIC = 2,052) to an Intention model (appropriateness: AIC = 4,631, usage: AIC = 2,041). Reported appropriateness ($\chi^2 = 14.44$, $p < 0.001$) and usage ($\chi^2 = 10.88$, $p = 0.03$) were significantly different when comparing the Intention model (AIC = 7,002, usage: AIC = 3,125) to a model including a 2-way interaction between Intention x Cultural Group (appropriateness: AIC = 6,996; **Figure 2**; usage: AIC = 3,122; **Figure 3**). Appropriateness and usage differed between cultural groups in the following ways. In terms of appropriateness ratings, German participants judged BLUNT scenes to be more appropriate than LIES (BLUNT > LIE;



$\beta = 1.07$, $t = 4.60$, $p < 0.001$). No significant differences were found for Chinese ($p = 0.71$) or Canadian subjects ($p = 0.72$).

For appropriateness, no effects were found when including the fixed factors Education ($\chi^2 = 0.78$, $p = 0.26$), Age ($\chi^2 = 0.01$, $p = 0.93$), Cloze ($\chi^2 = 0.13$, $p = 0.71$), Self-Rating ($\chi^2 = 0.60$, $p = 0.44$), and Duration in Canada ($\chi^2 = 0.72$, $p = 0.39$). For usage, German subjects predicted using BLUNT remarks more frequently than LIES (BLUNT > LIE; $\beta = 0.40$, $t = 5.10$, $p < 0.001$). Although all groups predicted that they would use lies less frequently, no significant differences were found for Chinese ($p = 0.48$) or Canadian subjects ($p = 0.09$). Additionally, no effects were found when including the fixed factors Education ($\chi^2 = 0.51$, $p = 0.47$), Age ($\chi^2 = 1.23$, $p = 0.27$), Cloze ($\chi^2 = 0.05$, $p = 0.82$), Self-Rating ($\chi^2 = 0.32$, $p = 0.58$), and Time Spent in Canada ($\chi^2 = 0.51$, $p = 0.47$).

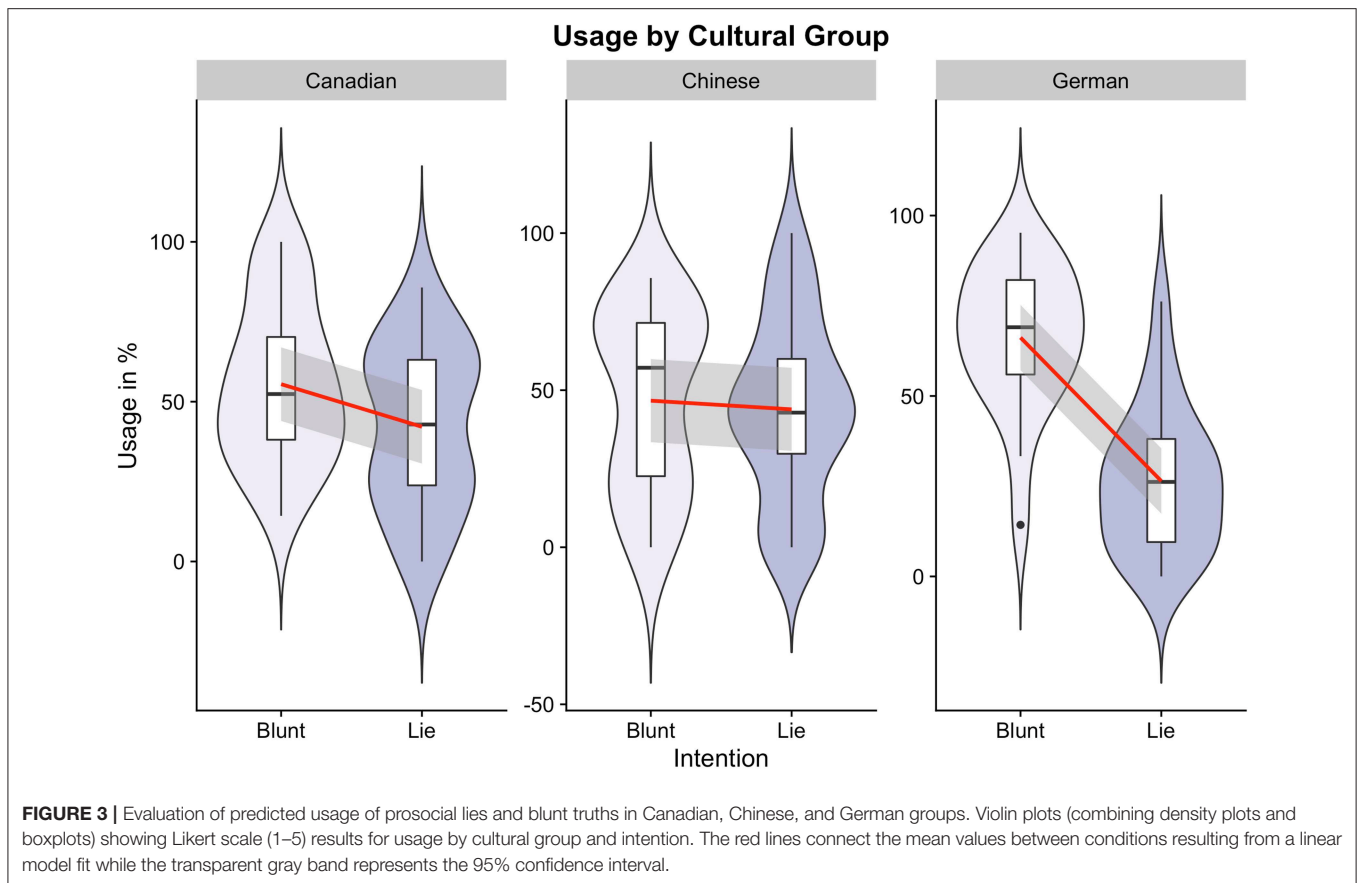
DISCUSSION

Few studies have empirically examined differences in the perception of prosocial lies across cultures during conversation. Moreover, little research has addressed these questions using video stimuli with high ecological validity that resemble face-to-face communication in daily conversations (Rothermich and Pell, 2015). Our results are therefore useful in beginning to understand how individuals who have recently arrived in a foreign country perceive others in an unfamiliar cultural environment, in a polite

and socially appropriate manner. Our data may also shed light on ways that cultural variability in perceptions, expectations, and underlying assumptions about prosocial lies leads to intercultural miscommunication and misunderstandings, also known as pragmatic failure (Gao and Ting-Toomey, 1998; Stadler, 2006; Leech, 2016).

Our results show that group factors such as cultural background influence to an extent whether prosocial lies or blunt responses are perceived as socially appropriate or useable in conversation. While prosocial lies were rated as more polite than blunt responses by participants of all groups, we noted cultural differences in the perceived appropriateness and predicted usage of particular responses. These data add to existing discussions of how cultural features such as individualism/collectivism and directness/indirectness influence these forms of communication and will be discussed below.

Previous literature emphasizes that politeness is difficult to precisely define and that its relationship to appropriateness is not always transparent (Meier, 1995). It has been suggested that adults universally possess an abstract concept of polite behavior, however what actually “counts” as polite is culture- and language-specific, shaped by shared values, cultural norms, and expectations (Gu, 1990; Watts et al., 2008; Spencer-Oatey and Kádár, 2016). Maintaining politeness is cited as a motivation for deviating from the Gricean Maxim of Quality that governs communication (Brown and Levinson, 1987). Communicators



may also choose not to satisfy the Maxim of Quality—be truthful—in order to preserve the face of the person to whom they are speaking. Our data show that prosocial lies were rated as more polite than blunt responses, irrespective of the cultural background of the participant (see **Figure 1**). Since prosocial lies were unanimously perceived as more polite than blunt responses (which express the speaker's true beliefs), our results corroborate previous findings that politeness norms with respect to prosocial lies are similar (or “universal”) across cultures (Holtgraves and Joong-Nam, 1990), and are not governed by individualist/collectivist or face-preserving dimensions of culture.

In contrast to politeness, we observed significant cultural effects on the perceived appropriateness, and predicted usage of prosocial lies. In the empirical literature, minimal work informs the relationship between cultural (in) directness and prosocial lies, although research suggests that American English and German speakers prefer *direct* communication (Gao and Ting-Toomey, 1998; Holtgraves, 1999), whereas Chinese and British English speakers prefer *indirect* communication (Gao and Ting-Toomey, 1998). In light of these claims and given that the Canadian and Chinese groups did not differ from each other nor did they show a preference for blunt vs. lies in the current study, it seems that Anglophone-Canadian speakers favor ways of communicating indirectly, more similar to what has been reported for British English and Chinese participants (Gao and

Ting-Toomey, 1998). The lack of preference for blunt truths over lies in Canadian participants is in contrast with previous studies showing that individualist cultures (i.e., American) favor honest, open communication over deception (Kim et al., 2008). In the literature different English-speaking groups (i.e., Anglophone-Canadian vs. American-English) have been shown to vary in their preference for open vs. deceptive communication, therefore our data reinforce the importance of culture, rather than language, in guiding pragmatic decisions in communication, such as when to use a prosocial lie (Ishii et al., 2003). Directness and indirectness may be one of the cultural dimensions playing a role in evaluating the appropriateness or predicted usage of a prosocial lie. Both American and Canadian cultures are deemed individualist, however Americans are direct (Gao and Ting-Toomey, 1998; Holtgraves, 1999), and Canadians are indirect (Holtgraves, 1999; Jonasson and Laurant, 2012). Consequently, Canadian cultures may favor a face-preserving deceptive alternative—an indirect response, over a blunt truth—a direct response—that may threaten an interlocutors face. This preference for indirectness seems to be found in both Canadian and Chinese cultures with respect to prosocial lies and may explain the trends seen in the Canadian dataset. On the other hand, German participants reported a predicted preference for using blunt comments over prosocial lies in their daily lives (**Figure 3**), and they rated blunt comments as being more appropriate than lies in these situations (**Figure 2**). Our results substantiate existing studies that conclude

that German communication style is rather *direct* (House and Kasper, 1981; Houck, 1992; House, 1996). These promising ideas involving the interplay of numerous cultural dimensions (individualism/collectivism, [in] directness) merit more detailed study involving different groups in new communicative settings, and future work should gather additional measures of *individual* and *regional* communication style to advance work in this area. This area of research could benefit from further study of other English-speaking groups (i.e., Hong Kong, Australia) with varied politeness and social appropriateness norms. It may also be beneficial to compare smaller communities and/or regional differences. In a previous study, regional differences were also found in the use of sarcasm in which American college students in Tennessee vs. New York (Dress et al., 2008) exhibit different uses of this form of speech. This suggests that regional differences, or communities of practice may also influence the evaluation of non-literal speech including but not limited to prosocial lies and sarcasm.

A unique aspect of our study is that, for participants in two of our cultural groups (Chinese, German), impressions were derived from social interactions that unfolded in their second language and a culture different to their own. Chinese and German participants evaluated the politeness of Canadian (“out-group”) speakers, after spending only a number of months living in Canada. The purpose of this study design was to investigate how newcomers may be interpreting social interactions differently to members of the dominant culture. We expected the Chinese group to rate prosocial lies as more appropriate and to predict using them more, but this was not found. Instead, we found that the Chinese group was rating the videos similar to the Canadian group. The Chinese group, may have adapted their disposition to judge the politeness of prosocial lies/blunt remarks to what they believed reflects *Canadian* or anglophone standards of politeness, as displayed in the video stimuli. A previous study found East Asian (Korean) participants to have more malleable dispositions and personality traits, which may reflect greater sensitivity to situational influence (Norenzayan et al., 2002). The observed sensitivity to situational influence has been found in East Asian cultures and may begin to explain the similarity of Canadian and Chinese datasets and/or the lack of preferences for prosocial lies as expected. Additionally, Chinese participants have been spending more time in Canada on average compared to German participants. A study by Rafieyan et al. (2015) found that there is a strong positive relationship between degree of acculturation attitude toward a target language culture and pragmatic comprehension ability. Another study (Taguchi, 2011) found that in a pragmatic listening task, language proficiency but not time spent abroad, affected response time while response accuracy was sometimes affected by time abroad and other times not affected. It appears that the effect of time spent in a foreign country on outcome measures is not straightforward. For our study, including “Duration in Canada” as a factor in our analysis did not significantly alter the results. Further research could test the Chinese and German groups in their home countries and compare these results with newly integrated immigrant groups in Canada to further assess possible effects of cultural experience on social communication.

Of noteworthy discussion are the results demonstrating that despite participants of all cultural groups recognizing lies as more polite, the recognition of politeness did not correspond with significantly higher predicted frequency of use for lies. Instead, participants seem to rate the use of lies in parallel with the judged appropriateness. For example, German participants rated blunt truths as more appropriate, as well as a higher predicted usage of blunt truths. What is socially appropriate is largely governed by expectation and norms derived from beliefs about behavior (Spencer-Oatey, 2005). Within communities of practice these norms are negotiable (Mills, 2009), however at the level of cultural group, communicators depend on a certain level of overlap in their expectations in order to communicate (Culpeper, 2008). Our data suggest that politeness, despite its universality, does not exclusively govern all aspects of how we act, but rather, our actions or use of deception is governed by ideas of social appropriateness that are shaped by culture among other factors. However, further studies with larger sample sizes and testing participants within a community of practice are needed to expand the generalizability of our results.

CONCLUSIONS AND FUTURE DIRECTIONS

Our data provide new information on the perception and use of non-literal speech across cultural groups. While our results provide some interesting insights, the topic would benefit from further investigation with larger sample sizes, more controlled age, and education of cultural groups. Our study indicated cross-cultural differences in the perception of prosocial lies in an intercultural setting which is useful when considering immigration and globalization. Moreover, as Chao and Moon (2005) concluded, each individual has a “unique collage of multiple cultural identities” which results in non-homogeneous cultural groups. Thus, greater attention needs to be paid to how individual participant characteristics simultaneously influence social perception and pragmatic language processing in context (e.g., Matsumoto, 2007; Rothermich and Pell, 2015; Jiang et al., 2017). Within our Canadian sample in particular, several participants were first-generation Canadians who had likely experienced heterogeneity in their exposure to different cultural practices. As Bousfield (2008) has emphasized, cultures gravitate toward the use of similar communication strategies, but individuals within these cultures vary and may not reliably follow certain culture-specific patterns. Comparing larger groups with even more restricted linguistic and cultural backgrounds will assist in parsing apart group differences.

In summary, we have found that when young adults evaluate everyday social interactions in English, cultural group membership (community of practice) has an effect on the perceived appropriateness and predicted usage of prosocial lies depending on the speech intention in question. Although our three cultural groups had the same impression of how polite it was to lie in particular contexts, they varied in how appropriate they considered prosocial lies and in what conditions they would tend to tell a prosocial compared to the blunt truth. Our

study provides a first step into understanding cross-cultural communication using ecologically valid, audio-visual stimuli that are close to real world situations. Future studies should elaborate on these results in reference to other cultural and regional groups, while examining how further attributes of the social context (e.g., power distance, Holtgraves and Joong-Nam, 1990) influence particular communication choices and their evaluation through the cultural lens. It may also be useful to examine cultural differences in the perception and use of other forms of non-literal speech, for example sarcasm, in order to compare and contrast findings.

DATA AVAILABILITY

The datasets generated for this study are available on request to the corresponding author.

ETHICS STATEMENT

The study was approved by the McGill Faculty of Medicine Institutional Review Board and informed written consent was obtained in English prior to testing.

REFERENCES

- Argo, J. J., Dahl, D. W., and White, K. (2011). Deceptive strategic identity support: misrepresentation of information to protect another individual's public self-image 1. *J. Appl. Soc. Psychol.* 41, 2753–2767. doi: 10.1111/j.1559-1816.2011.00843.x
- Aune, R. K., and Waters, L.L. (1994). Cultural differences in deception: motivations to deceive in samoans and North Americans. *Int. J. Intercult. Relat.* 18, 159–172. doi: 10.1016/0147-1767(94)90026-4
- Backbier, E., Hoogstraten, J., and Kouwenhoven, K.M. T. (1997). Situational determinants of the acceptability of telling lies 1. *J. Appl. Soc. Psychol.* 27, 1048–1062. doi: 10.1111/j.1559-1816.1997.tb00286.x
- Bates, D., Mächler, M., Bolker, B., and Walker, S. (2014). Fitting linear mixed-effects models using lme4. *arXiv preprint arXiv:1406.5823*. doi: 10.18637/jss.v067.i01
- Blumenfeld, H. K., Bobb, S. C., and Marian, V. (2016). The role of language proficiency, cognate status and word frequency in the assessment of Spanish-English bilinguals' verbal fluency. *Int. J. Speech Lang. Pathol.* 18, 190–201. doi: 10.3109/17549507.2015.1081288
- Bousfield, D. (2008). *Impoliteness in Interaction (Vol. 167)*. Amsterdam: John Benjamins Publishing.
- Brown, P., and Levinson, S. C. (1987). *Politeness: Some Universals in Language Usage*, Vol. 4. Cambridge: Cambridge University Press.
- Brown, R., and Gilman, A. (1989). Politeness theory and Shakespeare's four major tragedies. *Lang. Soc.* 18, 159–212. doi: 10.1017/S0047404500013464
- Camden, C., Motley, M. T., and Wilson, A. (1984). White lies in interpersonal communication: a taxonomy and preliminary investigation of social motivations. *West. J. Speech Commun.* 48, 309–325. doi: 10.1080/10570318409374167
- Cappelen, A. W., Sørensen, E. Ø., and Tungodden, B. (2013). When do we lie? *J. Econ. Behav. Organ.* 93, 258–265. doi: 10.1016/j.jebo.2013.03.037
- Chakravarty, S., Ma, Y., and Maximiano, S. (2011). "Lying and friendship," in *Working Papers 1008*. West Lafayette, IN: Purdue University; Department of Consumer Sciences.
- Chao, G. T., and Moon, H. (2005). The cultural mosaic: a metatheory for understanding the complexity of culture. *J. Appl. Psychol.* 90:1128. doi: 10.1037/0021-9010.90.6.1128

AUTHOR CONTRIBUTIONS

RG, KR, and MP all contributed to establishing the design of the study. RG and lab members collected the data. KR primarily conducted the statistical analysis with assistance from RG. RG and KR wrote the first draft of the manuscript with all authors contributing to editing.

FUNDING

This research was funded by an Insight Grant to MP from the Social Sciences and Humanities Research Council of Canada (Grant #435-2017-0885).

ACKNOWLEDGMENTS

We would like to thank Joanna Liu and Ella Zetler for their contributions to data collection, and Yondu Mori for her comments on earlier versions of this manuscript. We would also like to thank Brenda Toro for her assistance with editing and preparing this manuscript.

- Chen, R., He, L., and Hu, C. (2013). Chinese requests: in comparison to American and Japanese requests and with reference to the East-West divide. *J. Pragmat.* 55, 140–161. doi: 10.1016/j.pragma.2013.05.012
- Culpeper, J. (2008). "Reflections on impoliteness, relational work and power," in *Impoliteness in Language*, eds D. Bousfield and M. Locher (Berlin: Mouton de Gruyter), 21:17.
- DePaulo, B. M., Kashy, D. A., Kirkendol, S. E., Wyer, M. M., and Epstein, J. A. (1996). Lying in everyday life. *J. Pers. Soc. Psychol.* 70:979. doi: 10.1037//0022-3514.70.5.979
- DePaulo, B. M., Lindsay, J. J., Malone, B. E., Muhlenbruck, L., Charlton, K., and Cooper, H. (2003). Cues to deception. *Psychol. Bull.* 129:74. doi: 10.1037//0033-2909.129.1.74
- Dress, M. L., Kreuz, R. J., Link, K. E., and Caucci, G. M. (2008). Regional variation in the use of sarcasm. *J. Lang. Soc. Psychol.* 27, 71–85. doi: 10.1177/0261927X07309512
- Ennis, E., Vrij, A., and Chance, C. (2008). Individual differences and lying in everyday life. *J. Soc. Pers. Relat.* 25, 105–118. doi: 10.1177/0265407507086808
- Ferns, U., and Thorn, D. P. (2001). Moral development of black and white South African adolescents: evidence against cultural universality in Kohlberg's theory. *South Afr. J. Psychol.* 31, 38–47. doi: 10.1177/008124630103100405
- Fu, G., Xu, F., Cameron, C. A., Heyman, G., and Lee, K. (2007). Cross-cultural differences in children's choices, categorizations, and evaluations of truths and lies. *Dev. Psychol.* 43:278. doi: 10.1037/0012-1649.43.2.278
- Fukada, A., and Asato, N. (2004). Universal politeness theory: application to the use of Japanese honorifics. *J. Pragmat.* 36, 1991–2002. doi: 10.1016/j.pragma.2003.11.006
- Gao, G., and Ting-Toomey, S. (1998). *Communicating Effectively With the Chinese*, Vol. 5. Thousand Oaks, CA: Sage Publications.
- Gibson, E., Piantadosi, S., and Fedorenko, K. (2011). Using mechanical turk to obtain and analyze english acceptability judgments. *Lang. Linguist. Compass* 5, 509–524. doi: 10.1111/j.1749-818X.2011.00295.x
- Goffman, E. (1967). *2005. Interactional Ritual: Essays in Face to Face Behaviour*. Oxford, UK: New Brunswick, NJ.
- Grice, H. P. (1975). "Logic and Conversation," in *Syntax and Semantics 3: Speech Acts*, eds C. Peter and M. Jerry (New York, NY: Academic Press), 41–58.
- Gu, Y. (1990). Politeness phenomena in modern Chinese. *J. Pragmat.* 14, 237–257. doi: 10.1016/0378-2166(90)90082-O

- Holtgraves, T. (1999). Comprehending indirect replies: when and how are their conveyed meanings activated? *J. Mem. Lang.* 41, 519–540. doi: 10.1006/jmla.1999.2657
- Holtgraves, T., and Joong-Nam, Y. (1990). Politeness as universal: cross-cultural perceptions of request strategies and inferences based on their use. *J. Pers. Soc. Psychol.* 59:719. doi: 10.1037/0022-3514.59.4.719
- Houck, N. (1992). Cross-cultural pragmatics: requests and apologies Blum-Kulka Shoshana, House Juliane, and Kasper Gabriele, Eds Norwood, NJ: Ablex, 1989. Pp. ix+ 300. \$45.00. *Stud. Second Lang. Acqu.* 14, 217–218. doi: 10.1017/S0272263100010846
- House, J. (1996). Contrastive discourse analysis and misunderstanding: the case of German and English. *Contribut. Sociol. Lang.* 71, 345–362. doi: 10.1515/9783110811551.345
- House, J., and Kasper, G. (1981). Politeness markers in english and German. *Convers. Routine* 157185, 157–186. doi: 10.1515/9783110809145.157
- Hu, S. (2007). Akaike information criterion. *Center Res. Sci. Comput.* 93. Available online at: https://www.researchgate.net/profile/Shuhua_Hu/publication/267201163_Akaike_Information_Criterion/links/599f662aa6dfc5941f894b/Akaike-Information-Criterion.pdf
- Ishii, K., Reyes, J.A., and Kitayama, S. (2003). Spontaneous attention to word content versus emotional tone: differences among three cultures. *Psychol. Sci.* 14, 39–46. doi: 10.1111/1467-9280.01416
- Jackson, C. N., and Bobb, S. C. (2009). The processing and comprehension of wh-questions among second language speakers of German. *Appl. Psycholinguist.* 30, 603–636.
- Jiang, X., Sanford, R., and Pell, M.D. (2017). Neural systems for evaluating speaker (Un) believability. *Hum. Brain Mapp.* 38, 3732–3749. doi: 10.1002/hbm.23630
- Jonasson, C., and Lauring, J. (2012). Cultural differences in use: the power to essentialize communication styles. *J. Commun. Manage.* 16, 405–419. doi: 10.1108/13632541211279030
- Kim, M.-S., Kam, K.Y., Sharkey, W. F., and Singelis, T. M. (2008). Deception: moral transgression or social necessity?: cultural-relativity of deception motivations and perceptions of deceptive communication. *J. Int. Intercult. Commun.* 1, 23–50. doi: 10.1080/17513050701621228
- Kizach, J. (2014). “Analyzing Likert-scale data with mixed-effects linear models: a simulation study,” *Poster Presented at Linguistic Evidence Tuebingen.*
- Kuznetsova, A., Brockhoff, P. B., and Christensen, R. H. B. (2017). lmerTest package: tests in linear mixed effects models. *J. Stat. Softw.* 82.
- Lee, K., Cameron, C. A., Xu, F., Fu, G., and Board, J. (1997). Chinese and canadian children’s evaluations of lying and truth telling: similarities and differences in the context of pro-and antisocial behaviors. *Child Dev.* 68, 924–934. doi: 10.1111/j.1467-8624.1997.tb01971.x
- Leech, G. N. (2016). *Principles of Pragmatics.* Abingdon, UK: Routledge.
- Liu, P., Rigoulot, S., and Pell, M. D. (2015). Culture modulates the brain response to human expressions of emotion: electrophysiological evidence. *Neuropsychologia* 67, 1–13. doi: 10.1016/j.neuropsychologia.2014.11.034
- Marti, L. (2006). Indirectness and politeness in Turkish–German bilingual and Turkish monolingual requests. *J. Pragmat.* 38, 1836–1869. doi: 10.1016/j.pragma.2005.05.009
- Matsumoto, D. (2007). Culture, context, and behavior. *J. Pers.* 75, 1285–1320. doi: 10.1111/j.1467-6494.2007.00476.x
- Meier, A. J. (1995). Defining politeness: universality in appropriateness. *Lang. Sci.* 17, 345–356. doi: 10.1016/0388-0001(95)00019-4
- Mills, S. (2009). Impoliteness in a cultural context. *J. Pragmat.* 41, 1047–1060. doi: 10.1016/j.pragma.2008.10.014
- Moreno, E. M., Casado, P., and Martín-Loeches, M. (2016). Tell me sweet little lies: An event-related potentials study on the processing of social lies. *Cognit. Affect. Behav. Neurosci.* 16, 616–625. doi: 10.3758/s13415-016-0418-3
- Nakkouzi, R. (2011). *White Lies Telling in Lebanese Discourse.* (c2011) (PhD dissertation) Beirut.
- Norenzayan, A., Choi, I., and Nisbett, R.E. (2002). Cultural similarities and differences in social inference: evidence from behavioral predictions and lay theories of behavior. *Personal. Soc. Psychol. Bull.* 28, 109–120. doi: 10.1177/0146167202281010
- Norman, G. (2010). Likert scales, levels of measurement and the laws of statistics. *Adv. Health Sci. Educ.* 15, 625–632. doi: 10.1007/s10459-010-9222-y
- Perkins, S. A., and Turiel, E. (2007). To lie or not to lie: to whom and under what circumstances. *Child Dev.* 78, 609–621. doi: 10.1111/j.1467-8624.2007.01017.x
- R Core Team (2013). *R: A Language and Environment for Statistical Computing.* 201.
- Rafieyan, V., Behnammohammadian, N., and Orang, M. (2015). Relationship between acculturation attitude and pragmatic comprehension. *J. Lang. Teach. Res.* 6, 504–512. doi: 10.17507/jltr.0603.05
- Rothermich, K., and Pell, M. D. (2015). Introducing RISC: a new video inventory for testing social perception. *PLoS ONE* 10:e0133902. doi: 10.1371/journal.pone.0133902
- Satterthwaite, F. E. (1946). An approximate distribution of estimates of variance components. *Biomet. Bull.* 2, 110–114. doi: 10.2307/3002019
- Shany-Ur, T., Poorzand, P., Grossman, S.N., Growdon, M. E., Jang, J. Y., Ketelle, R. S., et al. (2012). Comprehension of insincere communication in neurodegenerative disease: lies, sarcasm, and theory of mind. *Cortex* 48, 1329–1341. doi: 10.1016/j.cortex.2011.08.003
- Spencer-Oatey, H. (2005). (Im) Politeness, face and perceptions of rapport: unpacking their bases and interrelationships. *J. Politen. Res. Lang. Behav. Cult.* 1, 95–119. doi: 10.1515/jplr.2005.1.1.95
- Spencer-Oatey, H., and Kádár, D. Z. (2016). The bases of (im) politeness evaluations: culture, the moral order and the East-West debate. *East Asian Pragmatics* 1, 73–106. doi: 10.1558/eap.v1i1.29084
- Spencer-Oatey, H. ed. (2008). *Culturally Speaking Second Edition: Culture, Communication and Politeness Theory.* London, UK: Bloomsbury Publishing.
- Stadler, S. A. (2006). *Multimodal (im) politeness: the verbal, prosodic and non-verbal realization of disagreement in German and New Zealand English* (PhD dissertation). Auckland: ResearchSpace@ Auckland.
- Taguchi, N. (2011). The effect of L2 proficiency and study-abroad experience on pragmatic comprehension. *Lang. Learn.* 61, 904–939.
- Talwar, V., Murphy, S.M., and Lee, K. (2007). White lie-telling in children for politeness purposes. *Int. J. Behav. Dev.* 31, 1–11. doi: 10.1177/0165025406073530
- Valuch, C., Pflüger, L.S., Wallner, B., Laeng, B., and Ansoerge, U. (2015). Using eye tracking to test for individual differences in attention to attractive faces. *Front. Psychol.* 6:42. doi: 10.3389/fpsyg.2015.00042
- Watts, R.J., Ide, S., and Ehlich, K. (eds.) (2008). *Politeness in Language: Studies in its History, Theory and Practice.* Berlin: Walter de Gruyter.
- Watts, R. J. (2003). *Politeness.* Cambridge: Cambridge University Press.
- Yu, M. (2005). Sociolinguistic competence in the complimenting act of native Chinese and American english speakers: a mirror of cultural value. *Lang. Speech* 48, 91–119. doi: 10.1177/00238309050480010501

Conflict of Interest Statement: 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.

Copyright © 2019 Giles, Rothermich and Pell. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

APPENDIX

Verbal context, question, and responses used in the current study.

Verbal context	Question	Final Remark (Blunt/Lie)
Yeah, I was a bit disappointed in Lisa's/Peter's performance. Ehm, I gotta go, bye!	So how did you like my performance?	Blunt: You could've done better. Lie: I thought it was amazing.
And I don't really wanna go there. OK' I'll talk to you later, bye!	You have to come sing karaoke with us tonight...	Blunt: I don't think so, I hate singing. Lie: Sure, you know how much I love karaoke.
And that cafe? Oh my god, that place was so strange. Ok, I'll talk to you later, bye!	Did you like that cafe I recommended?	Blunt: It wasn't for me. Lie: I loved the place.
And I don't really wanna go anyway. Alright, bye.	Are you going to come with me to Sarah's wedding?	Blunt: Nope, weddings aren't really my thing. Lie: Yeah, it's gonna be fun.
And he/she brought his/her new friend Mike, oh my god, what a jerk. Ehm, ok, I'll talk to you later, bye.	So, what do you think of him?	Blunt: I don't really like him. Lie: He's a nice guy.
And that hotel that he/she recommended, it was awful. Ok, we'll talk later, bye!	So how did you like it? (refers to hotel)	Blunt: I have to say; I was not pleased. Lie: I have to say it was amazing.
And then he/she made us go that hideous play. Oh, here he/she comes. Bye!	That play was really good, don't you think?	Blunt: I wasn't amused at all. Lie: Yeah, the acting was well done.