The stereotyper and the chameleon: the effects of stereotype use on perceivers' mimicry

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Abstract

Interpersonal dynamics may play a crucial role in the perpetuation of stereotypes. In an experimental study, participants interacted with a confederate who provided either stereotype-consistent or stereotype-inconsistent descriptions about the elderly. Based on the assumption that mimicry represents a social glue that fosters interpersonal liking and affiliation, we assessed the extent to which participants mimicked the nonverbal behaviors of the confederate as a function of the stereotypicality of the descriptions. Results showed that nonconscious mimicry was more likely when the speaker relied on stereotypes rather than on stereotype-inconsistent information. In Study 2 the effect was replicated in relation to national stereotypes. This finding indicates that stereotypers are faced with subtle nonverbal cues from the audience that can retroactively reinforce their behaviors and thus make stereotype dismissal so difficult to be achieved.

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Stereotypes are very resistant to change. Indeed, intraindividual cognitive processes tend to selectively enhance the encoding and memory for stereotype-consistent information (see Fiske, 1998), and interpersonal communication processes tend to favor stereotype-consistent information (Lyons & Kashima, 2003; Ruscher, 1998; see Kashima, Klein, & Clark, 2007, for a review). For instance, when a story is transmitted through communication chains, it rapidly undergoes very specific transformation such that stereotype-consistent information is retained whereas stereotype-inconsistent information tends to be omitted (Lyons & Kashima, 2001, 2003). In this way, recipients of communication are finally left with biased descriptions of persons and events. In addition, stereotype-consistent and –inconsistent information is transmitted at different levels of abstraction, and the use of abstract language in the case of stereotypical information further conveys the idea that stereotypes do generalize across situations and group members (Wigboldus, Semin, & Spears, 2000).

Interpersonal communication indubitably plays a key role in the perpetuation of stereotypical representations about social groups. However, little is known as to what specific social processes actually reinforce and sustain the use of stereotypes during each single social interaction. In other words, there is ample evidence that sources of communication rely more heavily on stereotype-consistent information as compared to stereotype-inconsistent information, but the role of the recipients is yet unclear. Thus far, the audience has been mainly considered in terms of passive recipients who do not intervene in the course of the interaction. However, it is likely that the audience sends back to the source various feedbacks that either reinforce or discourage his/her style of communication. Indeed, communication processes imply interactive dynamics in which the listener retroactively informs the speaker about the intelligibility and appropriateness of what he/she is transmitting.

In the present work, we will thus examine the subtle feedbacks that are sent back to individuals who either use stereotypes or not. This is especially relevant because individuals often report an overt disapproval about the use of stereotypes (Castelli, Vanzetto, Sherman, & Arcuri, 2001; Castelli, Zecchini, Sherman, & De Amicis, 2005; Castelli, Zogmaister, & Arcuri, 2003). If in fact people explicitly disapprove those who use stereotypes, why are stereotypes so resistant to change? Previous research demonstrated that despite an explicit disapproval, stereotypers do often elicit more positive implicit evaluations, in comparison to individuals relying on counterstereotypical information, as assessed through later cognitive measures (Castelli et al., 2001, 2003, 2005). For instance, it has been shown that stereotypers are implicitly considered more similar to oneself as compared to individuals using stereotype-inconsistent information (Castelli et al., 2003). In a flanker task, it was shown that self relevant pronouns were more easily matched with the name of an ingroup member using stereotypical rather than counterstereotypical information (Castelli et al., 2003, Study 2). In a similar way, it was shown that the observation of behaviors that mark intergroup differences further enhanced the perceived self-ingroup similarity (Platow, Grace, Wilson, Burton, & Wilson, 2008; see also Castelli, Tomelleri, & Zogmaister, 2008). This suggests that the behaviors that ingroup members perform in relation to intergroup setting may influence our perception of those ingroup members and of the ingroup as a whole.

As for the specific case of stereotype use, one of the major goals of interpersonal communication is to achieve and maintain common ground, and the use of stereotypes may enable the interactants to reach this goal insofar as stereotypes represent shared knowledge among group members (Ruscher, 1998; Tajfel, 1981), even when they are not consciously endorsed. As such, spontaneous positive responses toward stereotypers were predicted and found, especially when the perceiver held strong stereotypical representations (Castelli et al., 2005). In sum, whereas explicit responses toward stereotypers are mainly negative, spontaneous responses signal a preference for those ingroup members who use stereotypes.

Thus far, the analysis was confined to rather fictitious situations in which information was presented on a computer screen and responses were assessed through cognitive measures. However, we expected that even during social interactions different subtle behaviors might be displayed toward those who either do or do not express stereotypical views, with stereotypers receiving more positive social responses. As mentioned above, ingroup members who rely on common knowledge - such as stereotypes – should be maximally valued. On this basis, we predicted that in the course of the interaction the recipients of stereotypical descriptions would send subtle messages that such common ground is indeed established. In particular, we explored the potential role of nonconscious mimicry as a way to retroactively provide positive feedbacks to stereotypers.

Mimicry in social interactions

Recently, research has shown that when we perceive the expressions, postures, or behaviors of others, there is the tendency to automatically and nonconsciously mimic those behaviors (Chartrand & Bargh, 1999; Chartrand, Maddux, & Lakin, 2005). Hence, mere perception may lead to the reproduction of the observed behaviors. Importantly, however, it has been demonstrated that such nonconscious mimicry can also fulfill key social goals and represents a potential strategy to get along with others (Chartrand et al., 2005; Lakin & Chartrand, 2003; Lakin, Jefferis, Chang, & Chartrand, 2003; Maddux, Mullen, & Galinsky, 2008). Indeed, mimicry has been conceived as a kind of social glue that enhances interpersonal liking and affiliation (Lakin & Chartrand, 2003). In general, mimicking others' behaviors allows the mimic to become more similar to those others, and this, in turn, may increase mutual liking. For instance, Chartrand and Bargh (1999) demonstrated that participants provided more positive evaluations about confederates who mimicked their behaviors, and they also reported that the interaction was more smooth and harmonious. If, on the one hand, individuals like the interaction partners who mimic them, on the other hand, mimicry is more likely shown when there is a desire to be liked by the partners (Chartrand et al., 2005; Karremans & Verwijmeren, 2008; Lakin & Chartrand, 2003). The presence of an affiliation goal does indeed significantly increase the likelihood that mimicry will appear. In addition, social

attitudes and group membership appeared to modulate mimicry (Bourgeois & Hess, 2008; Likowski, Mülberger, Seibt, Pauli, &Weyers, 2008; Yabar, Johnston, Miles, & Peace, 2006). Overall, all these studies support the idea that mimicking the mannerisms of other persons does play a crucial role in the regulation of social interactions, and that mimicry may function as a tool to communicate to the interaction partner that everything is going well.

In the first study, we will thus manipulate the content of what is transmitted by a speaker who could either provide stereotype-consistent or stereotype-inconsistent descriptions about the elderly. To the extent that stereotype use is a way to reaffirm shared bonds and knowledge during communication (Clark & Kashima, 2007), we predicted that a stereotyper would indeed be mimicked more as compared to an individual who casts doubts about the validity of the shared stereotypes. In total, our argument is that the more similar listeners feel the speakers are, they are more likely to mimic the speakers; because of the shared stereotypes, listeners regard stereotypers as more similar than counter-stereotypers at an implicit level as the previous studies have shown (Castelli et al., 2003); and therefore listeners are more likely to mimic a stereotyper than a counter stereotyper. Note that these processes are assumed to occur nonconsciously, and therefore this does not have to be "motivated" in the sense of conscious motivation though it may serve implicit affiliation motives.

Study 1

Participants. Seventy-five first-year psychology students at the University of Padova took part in the study (67 female, 8 male) for partial course credits.

Procedure. Upon their arrival at the laboratory, participants were greeted by a female experimenter who explained that the main purpose of the study was to give them a chance to practice their interviewing skills. The experimenter asked participants to sign a written consent in order to videotape the interview. It was explained that they had to carefully examine four questions about the elderly that they were next going to ask to another student (who was actually a female

confederate). The four questions concerned different aspects of the life of the elderly: initiatives to help the elderly, their health, their free time, and their reactions to the changing society.

The participant was then seated in front of the confederate and asked, one after the other, the 4 questions. Depending on the experimental condition, the responses of the confederate were either consistently stereotypical or counter-stereotypical. In the stereotypical condition the elderly were described as dependent, with a poor memory, alone, and closed to change. In contrast, in the counter-stereotypical condition the elderly were portrayed as socially, mentally, and physically active, independent, and open to change. The confederate responded according to a fixed script (see the Appendix for an example). In addition, the confederate was trained to perform two specific behaviors while responding to each question, namely touching her face and crossing her legs. Thus, during each response the confederate touched the face and crossed the legs once. At the end of the alleged interview, participants went through a second phase which is not relevant for the aims of the present study. Finally, participants were required to report how stereotypical were the responses of the confederate (i.e., manipulation check) on a 7-point Likert scale (1 = not at all; 7=very much). Participants were then thanked for their participation and debriefing was made collectively at the end of the study during a class section.

Results

The manipulation check demonstrated that the two conditions were indeed perceived differently in terms of their stereotypicality, $t(73) = 7.77$, $p<.001$, $M = 6.12$, $SD = .82$, and $M = 4.12$, $SD = 1.35$ in the stereotypical and counter-stereotypical condition, respectively.

Video registrations were coded for the presence of imitative behaviors after the confederate had performed her first critical behaviors (i.e., crossing the legs and rubbing her face; see Chartrand & Bargh, 1999). A chi-square analysis demonstrated that mimicry, as expected, was more likely in the stereotypical than counter-stereotypical condition, $\chi2 (1) = 6.21$, $p = .013$. Indeed, 87% of respondents in the stereotypical condition showed at least one imitative behavior whereas only 62% did so in the counter-stereotypical condition. Further analyses were performed on the number of

imitative behaviors displayed by each participant. A 2 (type of behavior: touching face vs. crossing legs) X 2 (condition: stereotypical vs. counter-stereotypical) mixed-design ANOVA showed a main effect of type of behavior, $F(1,73) = 10.89$, $p = .001$, $\eta_p^2 = .13$, indicating that participants were more likely to touch their face rather than crossing their legs. Most importantly, there was also a significant main effect of condition, $F(1,73) = 7.60$, $p = .007$, $\eta_p^2 = .094$, demonstrating that participants mimicked the confederate more when she used stereotypes rather stereotype-inconsistent information (see Figure 1). The interaction effect was not significant, $F<1$, indicating that the effect was consistent across both types of behavior.

Discussion

As predicted, participants showed increased mimicry when the interaction partner relied on shared stereotypical knowledge rather than on stereotype-inconsistent information. This result provides preliminary support to our hypothesis that a different nonverbal feedback is provided to ingroup members depending on their reliance on stereotypes. In the following study, we will aim to replicate this basic finding in a different domain, namely in relation to national stereotypes. In addition, we will examine a potential alternative explanation to the current findings. Indeed, results from Study 1 could reasonably stem from differences in empathy toward the confederate. In the stereotypical condition, the confederate mentioned the difficulties faced by the elderly in general and by her grandparents in particular. Therefore, the stereotypical answers could have particularly fostered empathy which is known to increase mimicry (Bavelas, Black, Lemery, & Mullett, 1987). For this reason, in Study 2 we controlled for the empathy felt toward the speaker in both the stereotypical and counter-stereotypical conditions.

Study 2

Participants. Forty-nine first-year psychology students at the University of Padova took part in the study (39 female, 10 male) for partial course credits.

Procedure. Participants were requested to watch a video and warned that afterwards a series of questions would be asked. Then, they were randomly shown a video in which the female actor either expressed stereotype-consistent or -inconsistent information about English, German, and Spanish people. For instance, in the stereotypical condition, English were described as reserved and with a unique sense of humor, Germans as organized and hardworking, and Spanish as outgoing and open-minded. In the counterstereotypical condition the opposite image was conveyed. In the video, the actress was asked to answer to three questions, one for each national group, about the perceived characteristics of the group. After each response, participants were allowed 30 seconds to write down the content of the confederate's answer. Most important for our purpose, during the fictitious interview, the actress touched her face fourteen times and crossed her legs six times both in the stereotype-consistent and -inconsistent condition. As in Study 1, the extent to which our participants performed these two behaviors represented our index of mimicry.

At the end of the presentation of the video, a questionnaire was administered. In all cases, responses were provided along 7-point Likert scales (1 = not at all; 7=very much). First, the stereotypicality of the description related to each of the three national groups was assessed. The following 4 questions tapped the explicit perception of the target in terms of likeability, desire to interact with, friendliness, and similarity. Three questions were aimed to assess the empathy toward the speaker (e.g., *To what extent do you empathize with the girl in the video?*) and, finally, three questions asked the willingness to help the speaker in fictitious situations of need (e.g., *Imagine this situation. You're standing in the queue waiting your turn to make a photocopy and the person who answered to the questions asks you if she can pass ahead because she has a lesson starting in 5 minutes and she doesn't want to arrive late. To what extent are you willing to let her pass?*). Finally, participants were thanked and asked for suspicion. None guessed the aim of the study. Debriefing was made collectively at the end of the study during a class section.

Results

The manipulation check demonstrated that in the stereotypical condition the descriptions about English, $t(47) = 3.96$, $p <.001$, German, $t(47) = 5.63$, $p <.001$, and Spanish people, $t(47) = 6.86$, $p <.001$, were actually perceived as more stereotype-consistent than in the other condition.

A preliminary inspection of the data showed that almost all participants (90%) rubbed their face at least once. For this reason, when considering the number of people who mimicked the target, only the other target behavior (i.e., crossing legs) was considered. A chi-square analysis showed the expected difference, $\chi^2 (1) = 8.32$, $p <.005$, with mimicry being more likely in the stereotypical (i.e., 50%) rather than counterstereotypical condition (i.e., 8%).

Further analyses were performed on the number of all imitative behaviors displayed by each participant. Both face touching and leg crossing were examined in this case. A 2 (type of behavior: touching face vs. crossing legs) X 2 (condition: stereotypical vs. counter-stereotypical) mixed-design ANOVA showed a main effect of type of behavior, $F(1,47) = 43.79$, $p < .001$, $\eta_p^2 = .48$. As in Study 1, participants were more likely to touch their face rather than crossing their legs. Most importantly, there was also a significant main effect of condition, $F(1,47) = 4.40$, $p <.05$, $\eta_p^2 = .086$. In line with the prediction, participants mimicked the confederate more when she used stereotypes rather than stereotype-inconsistent information (see Figure 2). The interaction effect was not significant, $F(1,47) = 1.82$, $p >.18$.

As for the explicit perception of the actor a single index was computed ($\alpha = .91$). A t-test showed no significant effect of the experimental conditions, and mean values were not different in the two conditions, $t(47) = .77$, ns. The analyses on the index of empathy ($\alpha = .86$) and on the index of willingness to help ($\alpha = .78$) did not reveal any effect of the experimental conditions, $t(47) = .53$, ns, and $t(47) = .25$, ns. In sum, empathic reactions toward the speaker cannot account for the observed differences in mimicry[1].

Discussion

Results from both studies clearly showed that participants mimicked more the interaction partner who used stereotypes rather than stereotype-inconsistent information. For instance, when the confederate described the elderly as forgetful, dependent, and closed to change, she elicited more imitative behaviors as compared to the condition in which the elderly were described as active, independent and open to change. This means that speakers who rely on stereotypes are more likely faced with an audience who reproduces their nonverbal behaviors. This finding has important implications. First, it further confirms that stereotypers are perceived differently as compared to sources who use stereotype-inconsistent information (Castelli et al., 2001, 2003), and that stereotypers automatically elicit more positive spontaneous reactions. Most importantly, it is here shown that these more positive reactions go beyond mere intrapersonal processes but do translate into observable behaviors that may modify interpersonal processes. As noted earlier, individuals seem to rely on the use of stereotypes in order to rapidly reaffirm shared bonds and knowledge during communication (Clark & Kashima, 2007). For instance, Clark and Kashima (2007) demonstrated that the more stereotype-consistent information is perceived as socially connective, the more it is also used during communication. As such, it is clear that individuals select stereotype-consistent information because it is subjectively considered as a tool for enhancing social connectivity. However, it was still unclear whether stereotype use did actually enable to achieve such a goal and what the consequences were for the interpersonal interaction. The results of the present studies suggest that the reliance on stereotypes is indeed effective in order to increase social connectivity. In fact, it is here shown that stereotype use triggers nonconscious imitative behaviors from the interaction partner which are known to affect the quality of the interaction and the perceived bonds between people (Chartrand & Bargh, 1999; Lakin & Chartrand, 2003). In short, stereotype use emerges as an effective strategy for giving rise to subtle processes that may positively impact on the ongoing interaction.

The two sides of communication

The research during the last twenty years has shed great light on the communication of information about social groups. A lot is now known about what people typically communicate (see Kashima, Klein, & Clark, 2007; Ruscher, 1998; Schaller, Conway, & Tanchuk, 2002), how the conveyed information is shaped (e.g., Maass, 1999; Wigboldus, Semin, & Spears, 2000), and about the socially situated nature of this communication (Clark & Kashima, 2007; Smith & Semin, 2004). As such, the role of both the speaker and the context in the transmission of stereotypical knowledge to peers has been deeply investigated. In contrast, as mentioned above, the role of the recipients in the course of interactions has not been fully addressed yet. In the analysis of the communication dynamics, however, both the path from speakers to recipients and the reverse path from the recipients to the speakers should be taken into account, and the examination of the latter pathway (i.e., feedbacks to the speaker) might prove to be crucial for understanding why certain social information (i.e., stereotype-consistent information) continues to be so pervasively transmitted.

In general, according to a functional view, social behaviors are expected to be perpetuated as long as they are reinforced within a social context (Brewer, 2004; Kashima, Peters, & Whelan, 2008) and serve some kind of underlying motive at the individual and group level. Behaviors that are not reinforced, or even condemned, would be quickly abandoned and undergo extinction. In this perspective, it is essential to identify the retroactive processes that sustain the repeated exhibition of specific social behaviors. As said, stereotype use might prove to be functional in order to enhance connectivity through the establishment of a common ground and mimicry is hypothesized to be one of the key mean enabling factor to signal that such goal has been achieved. In other words, we suggest that in the course of social interactions, spontaneous imitative behaviors may represent subtle feedbacks that inform the speakers about the appropriateness of their communicative acts.

In general, it could be predicted that being mimicked while conveying some verbal information would strengthen the endorsement of such contents. In this way, in the specific domain of intergroup perception, stereotypers could be more likely to further transmit stereotypical

descriptions. Future studies will definitely have to address this issue and identify the role of

mimicry as a tool to reinforce personal beliefs and knowledge structures, both in relation to

stereotypes and other attitude domain. The conclusion that can be drawn from the present studies is

that stereotypers are more likely confronted with chameleons who, even nonconsciously, send back

positive feedbacks. The endeavor for future studies is to determine how the observed mimicry can

actually reinforce the behavior of stereotypers, and this, in the end, could further shield stereotypes

against a change or dismissal from everyday communications.

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Footnote

[1] Including felt empathy as a covariate in the analysis of the frequency of imitative behaviors did not change the significant main effect of the experimental condition. In addition, in an independent study (Kashima, Parkes, Dynon, & Castelli, unpublished data) we ruled out another possible alternative explanation. Because stereotypical descriptions often tend to be more negative than counter-stereotypical ones, this difference in valence could potentially be responsible for the observed effects on mimicry. For this reason, an Australian sample (N = 45) was presented with a video in which a person described an Australian Aboriginal person in either a stereotypical or counter-stereotypical way. The two descriptions were matched in terms of valence. Results nicely replicated the findings from Study 1 and 2, showing stronger mimicry when the speaker relied on stereotypes.

Appendix

Question:

Health is very important in the life of the elderly. There are now several campaigns in television, radio, and in the magazines that are aimed at providing information to the elderly as well as suggestions about the behaviors they should follow. How do you evaluate such campaigns?

Stereotype-consistent answer:

In my view, the idea behind these campaigns is positive because a good health is more and more important as the age increases. The problem is that most elder persons do not care about these campaigns, and even if they are informed they nonetheless need for direct help. For instance, my grandfather needs someone who reminds him what medicine he has to take and when, otherwise he either forgets to take them or makes mistakes with the doses. Unfortunately, the elderly no longer have a good memory and tend to confound the medicines they have to take. The elderly do often complain about their health and, at times, they exaggerate in order to attract the attention.

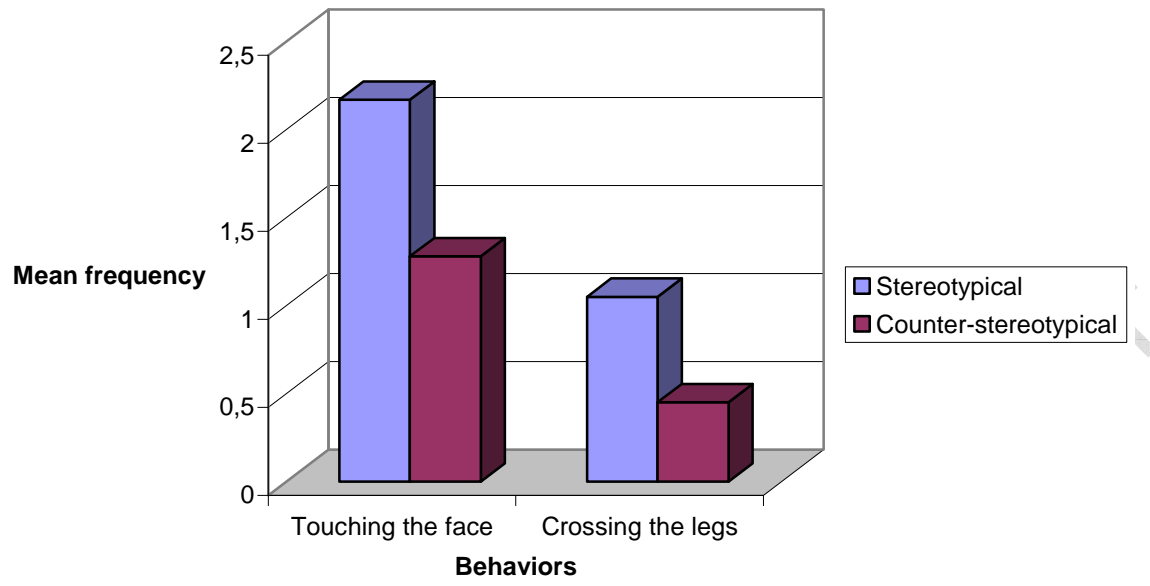*Stereotype-inconsistent answer:*

In my view, the idea behind these campaigns is positive because the elderly can take good advices, especially regarding how to feed properly and exercising. Thus, following these suggestions the elderly can keep a good health. For instance, my grandparents follow courses of soft gymnastic which are attended by several other old persons. In addition, such campaigns provide them with a number of information which enables them to actively interact with their doctor. Indeed, they do not ask to other members of the family to be accompanied because they are able to manage everything by themselves. In fact, they often ask for further information to the doctor, express their concerns, and demonstrate to have a good knowledge.
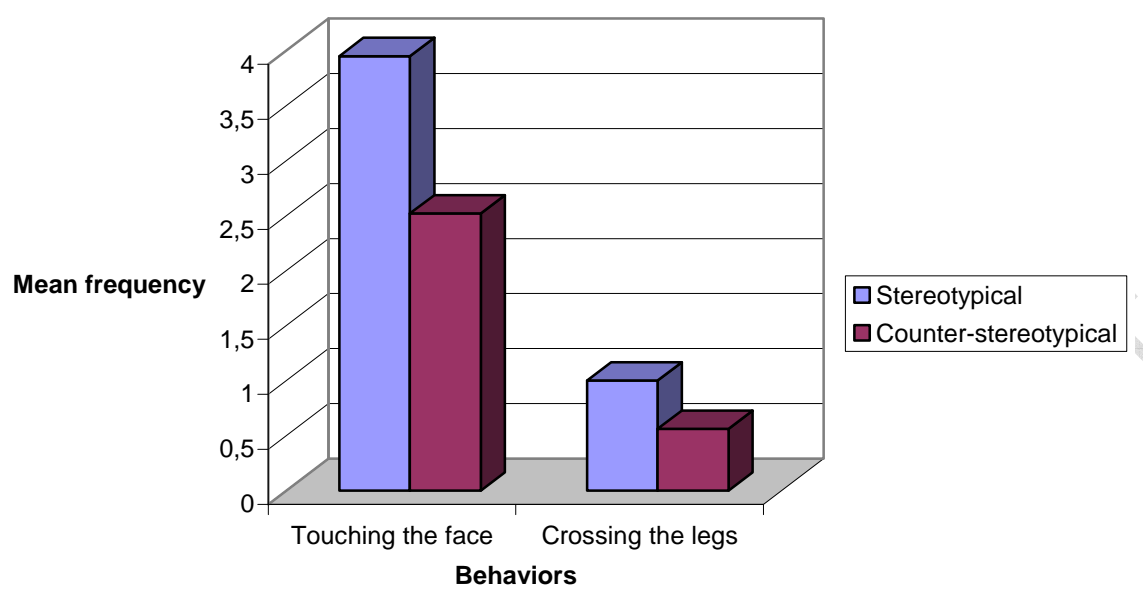
Figure Captions

Figure 1: Mean frequency of imitative behaviors as a function of type of behavior and experimental condition (Study 1).

Figure 2: Mean frequency of imitative behaviors as a function of type of behavior and experimental condition (Study 2).