The Impact of Implicit Prejudice about the Elderly on the Reaction to Stereotype Confirmation and Disconfirmation

LUIGI CASTELLI, ALEXIA ZECCHINI, AND LEYLA DEAMICIS
University of Padova, Italy

STEVEN J. SHERMAN
Indiana University

Previous research demonstrated that perceivers explicitly condemn ingroup members who use racial stereotypes but that they are implicitly more likely to favor those ingroup members rather than ingroup members who do not use racial stereotypes (Castelli et al., 2001). The present study has two main goals. First, we want to investigate whether the same effects can be detected in the domain of ageism. In particular, we predicted that young adults would implicitly but not explicitly favor a young male who describes an old man in a stereotype-consistent way rather than in a stereotype-inconsistent way. Most importantly, we hypothesized that this tendency is related to participants' prejudice level as assessed through an implicit measure (IAT, Greenwald et al., 1998), so that high prejudice individuals will implicitly favor stereotypers and derogate ingroup members who use stereotype-inconsistent information. Results provide general support for the hypotheses, and their implications for stereotype maintenance and change are discussed.

Despite the optimistic message that often comes from surveys and questionnaire studies, stereotyping and discrimination still affect Western societies (see Bodenhausen, Macrae, & Garst, 1998). Many prevailing theories (e.g., Gaertner & Dovidio, 1986; McConahay, 1986) suggest that prejudiced attitudes are still widespread but that they are more likely to emerge in subtle and indirect ways. Indeed, different pictures emerge when examining intergroup attitudes adopting different kinds of measures (see Maass, Castelli, & Arcuri, 2000). Respondents usually endorse egalitarian attitudes at an explicit verbal level, whereas with less controllable responses it appears that individuals are particularly prone to activate negative feelings toward outgroup members (Blascovich et al., 2001; Fazio et al., 1995; Greenwald et al., 1998). Either for social desirability concerns (Crosby, Bromley, & Saxe, 1980; Dunton & Fazio, 1997) or for a lack of introspective ability about one's own "true" attitudes (Greenwald & Banaji, 1995; Nisbett & Wilson, 1977), explicit and implicit indexes of prejudice are often only weakly correlated. Hence, current models about attitudes assume the existence of a dual component (Greenwald et al., 2002; Wilson, Lindsey, & Schooler, 2000).

Current Psychology: Developmental • Learning • Personality • Social. Summer 2005, Vol. 24, No. 2, pp. 134-146.

Recently, we started to investigate the possibility that, in intergroup contexts, the perceiver might develop a dual attitude both with regard to the outgroup and with regard to the ingroup members who are involved (Castelli, Arcuri, & Zogmaister, 2003; Castelli et al., 2001). Take the case of a white perceiver who sees another white person talking about a black person in a stereotypical way. It is likely that the perceiver will explicitly provide negative evaluations about that ingroup member, and this is exactly what empirical data show (Castelli et al., 2001; see also Simon & Greenberg, 1996). Participants openly dislike the White target who uses racial stereotypes, prefer to avoid contacts with him, and report feeling very dissimilar to him. In general, it seems that the social norm that prescribes intergroup fairness impacts both explicit judgments about outgroup members and the judgments about ingroup members who violate the norm.

However, across a series of studies we found that an ingroup member who used stereotypes to describe a North African was preferred on implicit measures as compared to an ingroup member who used stereotype-inconsistent information in his description. For instance, participants were more likely to conform to the stereotyper's suggestions about an unrelated task (Castelli et al., 2001, Study 1; Castelli et al., 2003, Study 1) and were more likely to consider as true the factual statements that he read (Castelli et al., 2001, Study 2). In addition, we found that participants perceived themselves implicitly as more similar to the racist ingroup member than to the ingroup member who used stereotype-inconsistent information (Castelli et al., 2003; Study 2). Hence, on a variety of different difficult-to-control measures, we consistently found evidence of a subtle preference for the ingroup member who used stereotypes.

Thus far, in all the experiments that have been carried out, the derogated outgroup members were North Africans. Little is known about the extent to which the obtained results can be generalized to other social groups. Indeed, one possibility is that the effects are peculiar to racial and ethnic groups, that is groups that are now particularly "protected" by social norms against discrimination but that have faced a long history of past discrimination. For this reason, we attempted to extend previous results to the perception of another social group, namely the elderly.

THE PERCEPTION OF ELDERLY ADULTS

Age-based categorization is probably a basic process that is automatically accomplished (Brewer, 1988). Most importantly, it has significant consequences. Indeed, previous research showed that the elderly are often victims of stigmatization. Stereotypic beliefs about the elderly are mainly negative, including physical, cognitive, and interpersonal deficiencies (see Montepare & Zebrowitz, 2002; Pasupathi, Carstensen, & Tsai, 1995; Zebrowitz & Montepare, 2000). The interaction with an aged person is often characterized by the adoption of an oversimplified and patronizing language (Caporael, 1981; Caporael, Lucaszewski, & Culbertson, 1983; see also Montepare, Steinberg, & Rosenberg, 1992). In a related way, elder adults are less likely to be provided with important information than young adults (Rubin & Brown, 1975) and are also less likely to receive adequate medical treatment (Butler, 1975; Grant, 1996; Hillerbrand & Shaw, 1989). Other laboratory studies have shown that simple linguistic labels referring

to the elderly automatically activate negative affective responses (Perdue & Gurtman, 1990; see also Hense, Penner, & Nelson, 1995). Moreover, in our laboratory we found evidence that pictures portraying young people automatically activated approach motor responses whereas pictures portraying old people automatically activated avoidance motor responses (Castelli & Paladino, 2002). Even though all the aforementioned studies clearly show that elder adults are negatively evaluated, and frequently face discrimination, at the same time it is also considered socially important to value and respect the elderly. At least in the social context in which the data from the present study have been collected, individuals consider respect for the elderly to be one of the most socially valuable behaviors (Castelli & Zogmaister, unpublished data).

What makes aged-related stereotypes particularly interesting is that they emerge very early in life. Montepare and Zebrowitz (2002) have recently reviewed the existing literature and concluded that children's stereotypes about elderly adults are very similar to those expressed by young adults. In addition, it appears that children as young as three years old show a clear preference for young adults over older adults (Miller, Blalock, & Ginsburg, 1984; Seefeldt et al., 1977). Given the level of stigmatization of the elderly that is apparent even in very young children, we expect that on implicit, but not explicit, attitude measures participants will display prejudice toward the elderly (Perdue & Gurtman, 1990). In addition to negative implicit responses toward the elderly, we also predict that young adults will show subtle preference for those who use stereotypes rather than those who do not when describing an old man.

IMPLICIT PREJUDICE AND THE FAVORITISM TOWARD STEREOTYPERS

In the present paper, we will thus investigate how young people perceive a young man who actually makes use of stereotypic beliefs to describe an old man. In accordance with previous studies, it is expected that he will receive negative explicit judgments but that he will be subtly favored on other measures. The analysis of such perception of ingroup members is crucial to understanding the processes involved in stereotype maintenance. Indeed, it is mainly through interpersonal communications within the ingroup that stereotypes are constantly disseminated (see Thompson, Judd, & Park, 2000); hence, it becomes particularly important to delineate how ingroup members who spread stereotype-consistent or inconsistent information are perceived and treated. In our view, it is likely that racial and age-related stereotypes may still circulate because the explicit condemnation of those who use them is merely a public response that is counteracted by a subtle favoritism. This is the first issue that will be examined in the present paper.

In addition, we want to shed better light on the relation between the prejudice level of participants and the perception of ingroup members who confirm or disconfirm the stereotype through what they say. In a previous study (Castelli et al., 2003, Study 1), we found that the extent to which participants conformed to a stereotyper on a stereotype-irrelevant task was related to participants' prejudice level as assessed through the Subtle/Blatant Prejudice Scale (Pettigrew & Meertens, 1995; see also Arcuri & Boca, 1996). In other words, high-prejudice participants were also more likely to be influenced by someone who described a North African in a highly stereotypical way. In that study, however,

the prejudice measure was based on self-reports (e.g., a questionnaire) with the limitations associated with this kind of methodology. In addition, a condition in which the source used stereotype-inconsistent information was not included. For these reasons, the second aim of the present study is to measure both conformity toward a stereotyper and the level of implicit prejudice of the participants. It is predicted that the higher the implicit prejudice the stronger the subtle conformity toward a stereotyper should be. In contrast, in the case of an ingroup member not using stereotypic statements we expect that high prejudice individuals will be less prone to conform to him.

The Implicit Association Test (IAT; Greenwald et al., 1998) will be employed in order to measure individual differences in prejudice level. The IAT enables the measurement of the automatic associations between attitude objects and evaluative terms. This tool has already been widely used to measure prejudice toward a variety of social groups including age-based groups (see Dasgupta et al., 2000; Greenwald et al., 1998; Hummert et al., 2002; Ottaway, Hayden, & Oakes, 2001; Rudman et al., 1999). In addition, the IAT is often correlated with other implicit measures (Cunningham, Preacher, & Banaji, 2001; see also Rudman, Ashmore, & Gary, 2001), with psychophysiological responses (Phelps et al., 2000), and with behavioral responses (McConnell & Leibold, 2001). Hence, the validity of this research tool appears well-established (but see Brendl, Markman, & Messner, 2001; Karpinski & Hilton, 2001).

METHOD

Participants

Eighty-six young participants (70 females and 16 males), between 20 and 30 years of age, took part in the experiment on a voluntary basis. Most of them were students at the University of Padova.

Material

The traits used in the present study were selected through an extensive pre-test. First, ten university students were asked to freely report all the traits that are culturally associated to elderly adults and the traits that are not associated with them. From this phase, 101 stereotypical items and 70 counter-stereotypical items were derived. Synonyms and sentences (e.g., "they have difficulties remembering things") were removed, leaving 21 stereotypical and 19 counter-stereotypical items. These traits were then rated by 11 university students on a 7-point scale ranging from "not stereotypical at all" to "extremely stereotypical." On the basis of mean ratings and standard deviations, we finally selected ten stereotypical traits (abandoned, dependent, forgetful, grumbler, lonely, passive, tired, traditionalist, wise, of fixed habits) and ten counter-stereotypical traits (active, agile, casual, confident, creative, dynamic, healthy, independent, modern, strong). Importantly, the mean rating of stereotypical items was significantly greater than the scale midpoint [$M = 5.51$; $t(10) = 7.17$; $p < .001$], whereas the mean rating of counter-stereotypical items was significantly lower [$M = 2.51$; $t(10) = -5.39$; $p < .001$]. The

following items were used as either merely descriptive or irrelevant with respect to the stereotype: grandfather, retired, Venetian, bald, ex-railwayman, 78 years old, catholic, widowed, thin, generous.

Procedure and Design

The procedure closely resembles the one employed in our previous studies (Castelli et al., 2001; Castelli et al., 2003). Participants were informed that a list of traits and personal information would appear on the computer screen. They were told that those were the words used by a young man—named Marco—to describe an undefined elderly person. Participants' task was to form an impression about the aged person. Each participant was presented with 20 pieces of information. In one condition, the description contained the ten stereotypic traits and the ten stereotype-irrelevant pieces of information (i.e., stereotype-consistent condition; see Material). In the other condition, the description comprised ten stereotype-inconsistent traits and the same ten stereotype-irrelevant information (i.e., stereotype-inconsistent condition). Each piece of information remained on the screen for three seconds, and presentation order was randomized.

Importantly, participants were told that we were also interested in how people form an impression in sub-optimal conditions, as for instance while having to continuously switch to another task. They were told that between one piece of information and the next, a page with a series of letter "A's" would appear on the screen and that their task was to judge as quickly as possible the exact number of letters that appeared. This page remained on the screen for only five seconds and it was thus impossible to count the letters. A response was required as soon as the page disappeared. At the top of the page, however, participants could see the estimate of the number of letters that was provided by Marco—the same person who was describing the elderly person—when he performed the same task. The images with the "A's" and the fictitious estimates were the same in both experimental conditions. To summarize, participants had to look at the letters and to say aloud how many of them they thought there were on the screen, and we measured the extent to which participants' estimates were affected by the estimates provided by Marco.

Next, participants went through the Implicit Association Test (Greenwald et al., 1998) aimed at measuring individual differences in the attitudes toward the elderly. Six positive words (i.e., love, peace, paradise, honesty, happiness, loyalty), six negative words (i.e., homicide, disgusting, earthquake, vomit, disaster, cockroach), eight pictures portraying young males and eight pictures portraying old males were used. The test included five phases. In the first block, participants judged whether the words had a positive or negative meaning. Next, participants were asked to categorize the pictures as portraying either young or old people. The third block combined the previous two blocks, so that a single response key (the letter "D" on the keyboard) was used both for positive words and young persons, whereas another response key (the letter "K" on the keyboard) was used for negative words and old persons. This is the prejudice-congruent phase. The fourth block was identical to the second except that the relative position of the response keys was reversed. The fifth block was similar to the third, but this time a

single key was used both for positive words and old persons and the other key was used for negative words and young persons. This is the prejudice-incongruent phase. A summary is presented in Table 1. In all phases it was stressed that fast responses were required and that occasional errors were tolerated. Participants were instructed to keep two fingers on the response keys in order to facilitate responses. Instructions were all presented through the computer software. Different from the standard IAT procedure, we did not counterbalance the order of the prejudice-congruent and prejudice-incongruent phases. Because it has been often demonstrated that the latencies in the fifth phase might be considerably slower due to the procedure, it is crucial to counterbalance order if the main goal is to measure the absolute level of prejudice in the sample (see Greenwald et al., 1998, Study 1; Ottaway, Hayden, & Oakes, 2001, Study 2). However, we were mainly interested in individual differences and, in particular, in correlating responses with other dependent measures. For this reason, we decided to keep constant the relative order of the prejudice-consistent and prejudice-inconsistent phases (see also, McConnell & Leibold, 2001).

At the end of the IAT, participants were asked six simple questions about their attitude toward Marco (i.e, the source who initially provided the description): Do you like Marco? Would you like to meet him? Would you like to interact with him? Do you think Marco is a pleasant person? Would you like to be a friend of Marco? Do you feel similar to Marco? Responses to these six items were provided on 9-point Likert scales ranging from "Not at all" (-4) to "Very much" (+4). Finally, participants were thanked and debriefed.

RESULTS

Conformity

As stated above, we hypothesize that participants would conform more to the source

TABLE 1
Trial Blocks Used in the IAT

Block	Type of Judgment	Left Key	Right Key	Number of Trials
1	Adjective Discrimination	Positive	Negative	12
2	Age Discrimination	Young	Old	16
3	Prejudice Consistent Combination	Young or Positive	Old or Negative	48
4	Age Discrimination	Old	Young	16
5	Prejudice Inconsistent Combination	Old or Positive	Young or Negative	48

who used stereotype-consistent information rather than stereotype-inconsistent information to describe the elderly man. To test this hypothesis, for each participant we computed the absolute value of the difference between her/his estimates and the estimates provided by Marco as possible anchors. Hence, the lower this value the higher the conformity with Marco. An independent sample t-test showed that conformity was different in the two experimental conditions [$t(84) = 2.25$; $p<.05$]. Indeed, participants were more likely to conform to the source who used stereotypes rather than to the one who did not [M = 67.2 and 86.1, respectively]. This result confirms those obtained in previous research in which the target was a Northern African (Castelli et al., 2003; Castelli et al., 2001). It thus seems that implicit conformity toward stereotypers emerges in different domains, both when the stereotyped group is a racial group and the elderly.

IAT

Trials in which participants made a categorization error (4.3% of the trials) were excluded from the analyses. Extreme latencies were recoded according to the criteria suggested by Greenwald et al. (1998), so that latencies shorter than 300 ms were scored as 300 ms and latencies longer than 3000 ms were scored as 3000 ms.

Next, we subtracted the mean response latency for the prejudice consistent block (third block) from the mean response latency for the prejudice inconsistent block (fifth block). The resulting IAT index is an implicit measure of prejudice level: The higher the score on the IAT, the stronger the negative attitude toward the elderly and the positive attitude toward the younger. The mean IAT score was extremely high ($M = 246$) and significantly different from zero [$t(85) = 14.17$; $p <.001$]. Also the IAT effect size was extremely large (Cohen's $d = 1.54$; see Cohen, 1988). As previously discussed, because we did not counterbalance the order of the congruent and incongruent blocks, it is necessary to be cautious in interpreting the resulting IAT score as an absolute index of prejudice in our sample. However, the effect size for the IAT was so large that it is extremely unlikely to be exclusively due to the adopted procedure. Indeed, inspection of the existing literature on the IAT suggests that the order of the compatible/incompatible tasks does not always impact the resulting IAT score, and when it does, its effect size is not strong enough to account for the large IAT effect obtained in the present study.

A t-test showed that the IAT score was not affected by the experimental manipulation ($p > .85$). In other words, participants exposed either to a stereotype-congruent or stereotype-incongruent description presented identical responses on the IAT ($M = 248$ ms and 242 ms, respectively; but see Dasgupta & Greenwald, 2001).

EXPLICIT JUDGMENTS

As in our previous studies (Castelli et al., 2001), we computed an index of evaluation (Do you like Marco? Do you think Marco is a pleasant person?; $r = .64$), an index about the willingness to interact (Would you like to meet Marco? Would you like to interact

with him? Would you like to be a friend of Marco? *r*s ranging from .50 to .57), and an index of perceived similarity (Do you feel similar to Marco?).[1]

As can be seen in Table 2, on all measures there was a tendency to judge more positively the source who used stereotype-inconsistent information than the source who used stereotype-consistent information. However, this effect was weak and approached significance only for the evaluation measure.

ASSOCIATIONS BETWEEN THE DIFFERENT MEASURES

Of primary interest in the present study is the relation between implicit prejudice, as assessed through the Implicit Association Test, and the conformity score. Hence, we separately correlated the IAT score with the conformity score in the stereotype-consistent and in the stereotype-inconsistent conditions. We hypothesize that, in the stereotype-consistent condition, high-prejudice individuals would show the highest degree of conformity with the source because the source made actual use of stereotypes. In contrast, in the same condition we expect that low-prejudice individuals would be more prone to distance themselves from such a source. Hence the resulting correlation between IAT and conformity should be negative, that is the higher the prejudice the lower the distance between the participant's estimates and Marco's estimates. Opposite predictions are made for the stereotype-inconsistent condition. Here, it is expected that high-prejudice individuals would distance themselves from a source who disconfirms the stereotypes, whereas low-prejudice individuals would be more prone to conform to him. Hence, the resulting correlation between the two indexes is expected to be positive.

In the stereotype-consistent condition, the zero-order correlation between the IAT and conformity was negative, as expected, but not statistically significant [$r(42) = -.107$, ns]. In contrast, the correlation was statistically significant in the stereotype-inconsistent condition [$r(41) = .311$; $p<.05$]. This demonstrates that the higher the prejudice level the lower the conformity toward a source using stereotype-inconsistent information.

As for the explicit measures, in the stereotype-consistent condition these measures did not correlate with the conformity measure or with the IAT score (all *ps*>.59). In the

TABLE 2
The Explicit Measures (Explicit Judgments about the Source Depending on the Information He Used)

	Information			
Measure	Stereotype-consistent	Stereotype-inconsistent	*t*	*p*
Evaluation	.85	1.25	1.69	.09
Willingness to Interact	1.06	1.36	1.15	.25
Similarity	.15	.56	1.26	.20

stereotype-inconsistent condition, the conformity score did not correlate with any explicit index (all *ps*>.24), but the evaluation score correlated with the IAT score [$r(41) = -314$; $p<.05$], suggesting that high prejudice individuals were less likely to provide positive explicit evaluations about Marco. Given the observed pattern of correlations in the stereotype-inconsistent condition, a partial correlation analysis between IAT and conformity controlling for the explicit evaluation was carried out. The correlation coefficient did not substantially change, dropping from .31 to .27.

GENERAL DISCUSSION

There is little doubt that stereotypes fulfill important functions at very different levels. Indeed, they regulate both cognitive and motivational intrapersonal processes (Allport, 1954; Fein & Spencer, 1997; Macrae, Milne, & Bodenhausen, 1994), as well as the dynamics of intergroup perception (Hamilton & Sherman, 1994). In addition, stereotypes are largely communicated and transmitted within one's own social group (Brauer, Judd, & Jacquelin, 2001; Ruscher, 1998; Wigboldus, Semin, & Spears, 2000). Stereotypes allow the creation of a shared reality among group members (Yzerbyt, Rocher, & Schadron, 1997), and lead to the perpetuation of the existing structures and hierarchies within the social system (Jost & Banaji, 1994). Despite the impact that stereotypes have on intra-group communications and the relevance for group cohesion and functioning, thus far little is known about how stereotypers are perceived (for exceptions see Blanchard, Lilly, & Vaughn, 1991; Greenberg & Pyszczynski, 1985). As discussed in the introduction section, ingroup members who use racial stereotypes are openly and firmly condemned (Castelli et al., 2003; Castelli et al., 2001). However, those ingroup members are also more likely to influence participants in an unrelated task suggesting that they are somehow subtly preferred. In general, the influence exerted by ingroup members depends on whether they use either stereotype-consistent or stereotype-inconsistent information. In the case of age stereotypes, the present data clearly demonstrate that a young adult who describes an elder adult using stereotypical traits like forgetful or lonely is more influential than a young adult who disconfirms the stereotype by using traits like active and dynamic. Thus far, the effect has been shown in the case of an elder male target, but similar processes should also be at work in the case of female targets. Future research will have to shed light on this issue and to test whether the reported effects might become stronger when there is a match or a mismatch between the perceiver's gender and the target's gender.

Despite the fact that stereotypers are explicitly condemned, these results demonstrate that stereotype use may be a "useful" intragroup behavior allowing stereotypers to be more influential within the group also in different domains which are not related to social judgment. On the other side of the coin, disconfirming stereotypes may be detrimental. Indeed, when the ingroup member used stereotype-inconsistent information he was later less influential. Participants did not guess the relation between the impression formation and the dot estimation task, and considered the latter task simply as an interfering task, but they were nonetheless subtly influenced by what specific information the source communicated. In line with the recent literature on dual-attitudes (Greenwald

& Banaji, 1995; Wilson et al., 2000), verbal judgments about the source did not correlate with actual conformity whereas implicit attitudes did.

Many studies have investigated the effects of providing stereotype-disconfirming information as a tool for achieving stereotype change (e.g., Weber & Crocker, 1983). It appears that, at least under some conditions, being exposed to counterstereotypes may modify crystallized group representations. Our point, however, is that communicating stereotype-inconsistent rather than stereotype-consistent information may also change how the source is perceived and treated. Being the spokesman of stereotype-disconfirming information can ultimately lead to various forms of implicit disapproval and rejection. In a similar vein, it appears that very young children aged between four and seven years not only discriminate racial outgroups (Aboud, 1988), but also discriminate those ingroup members who entertain positive relations with outgroup members (Castelli, De Amicis, & Sherman, 2005). The overall picture suggests that stereotyping and ingroup bias are just one aspect of intergroup differentiation and that another crucial aspect has to do with the evaluation of ingroup members who actually use stereotypes and discriminate the outgroup. This latter phenomenon may prevent that individuals from actually initiating more open intergroup relations and spread less stereotypic descriptions about the outgroups.

Results also provide good support for the second hypothesis according to which the phenomenon under study is strictly related to the individual's prejudice level. Indeed, the discredit of ingroup members who disconfirm the stereotypes is particularly strong in the case of high-prejudice individuals. Förster and his colleagues (Förster, Higgins, & Strack, 2000) suggest that stereotype disconfirmation can be experienced as a personal threat that poses into question the value system and the worldview of the individual (see also Greenberg et al., 1992). Accordingly, in the present study the higher the implicit prejudice level as measured through the IAT (Greenwald et al., 1998), the lower the conformity toward the source who disconfirmed the stereotype. This can be interpreted as a subtle way to distance from such an ingroup member and discredit what he/she says. Contrary to our prediction, prejudice level did not predict conformity toward the stereotyper (Castelli et al., 2003). One possibility for this weak relation is that stereotypes about the elderly are so widespread and endorsed (Montepare & Zebrowitz, 2002; Zebrowitz & Montepare, 2000), that using stereotype-consistent information is considered the default option by almost everyone. In contrast, the strongest effect appears in the case of stereotype-inconsistent descriptions, so that low-prejudice individuals may be more willing than high-prejudice individuals to consider and accept stereotype disconfirmation (Förster et al., 2000).

To conclude it emerges that among the various strategies that the social perceiver holds in order to preserve stereotypic representations, we have to include specific processes aimed at subtly discrediting those who disconfirm the stereotype rather that confirm it.

ENDNOTES

1. Despite the fact that in the sample there was only a limited number of male participants, we carried out exploratory analyses including participants' gender. No main effect or interaction effect involving

gender emerged on any of the dependent measures (i.e., conformity, IAT, explicit judgments; all *ps*>.19). This lack of results, however, should be taken with caution given the aforementioned difference between the number of male and female participants.

NOTES

Preparation of this paper was supported by a research grant from the University of Padova to the first author (CPDG018859).

Address for correspondence: Luigi Castelli, Dipartimento di Psicologia dello Sviluppo e della Socializzazione, Via Venezia, 8, 35131 Padova, Italy. E-mail: castelli.luigi@unipd.it.

REFERENCES

Aboud, F. (1988). *Children and prejudice.* Oxford: Basil Blackwell.

Allport, G.W. (1954). The nature of prejudice. Cambridge, MA: Addison-Wesley.

Arcuri, L., & Boca, S. (1996). Pregiudizio e affiliazione politica: destra e sinistra di fronte all'immigrazione dal terzo mondo (Prejudice and political affiliation: Left and right confronting immigration from the Third World). In P. Legrenzi & V. Girotto (Eds.), *Psicologia e politica* (pp. 241-274). Milano: Raffaello Cortina.

Blanchard, F.A., Lilly, T., & Vaughn, L.A. (1991). Reducing the expression of racial prejudice. *Psychological Science, 2,* 101-105.

Blascovich, J., Mendes, W.B., Hunter, S.B., Lickel, B., & Kowai-Bell, N. (2001). Perceiver threat in social interactions with stigmatized others. *Journal of Personality and Social Psychology, 80,* 253-267.

Bodenhausen, G.V., Macrae, C.N., & Garst, J. (1998). Stereotypes in thought and deed: The social-cognitive origins of intergroup discrimination. In C. Sedikides, J. Schopler, & C.A. Insko (Eds.), *Intergroup cognition and intergroup behavior* (pp. 311-335). Mahwah, NJ: Erlbaum.

Brauer, M., Judd, C.M., & Jacquelin, V. (2001). The communication of social stereotypes: The effects of group discussion and information distribution on stereotype appraisals. *Journal of Personality and Social Psychology, 81,* 463-475.

Brendl, C.M., Markman, A.B., & Messner, C. (2001). How do indirect measures of evaluation work? Evaluating the inference of prejudice in the Implicit Association test. *Journal of Personality and Social Psychology, 81*, 760-773.

Brewer, M.B. (1988). A dual process model of impression formation. In T.K. Srull & R.S. Wyer (Eds), *Advances in Social Cognition* (Vol. 1, pp. 1-36). Hillsdale, NJ: Erlbaum.

Butler, R.N. (1975). *Why survive? Being old in America.* New York: Harper & Row.

Caporael, L.R.(1981). The paralanguage of caregiving: Baby talk to the institutionalized aged. *Journal of Personality and Social Psychology, 40*, 876-884.

Caporael, L.R., Lucaszewski, M.P., & Culbertson, G.H. (1983). Secondary baby talk: Judgments by institutionalized elderly and their caregivers. *Journal of Personality and Social Psychology, 44*, 746-754.

Castelli, L., Arcuri, L., & Zogmaister, C. (2003). Perceiving ingroup members who use stereotypes: Implicit conformity and similarity. *European Journal of Social Psychology, 33,* 163-175.

Castelli, L., De Amicis, L., & Sherman, S.J. (2005). The loyal member effect: On the preference for ingroup members who engage in exclusive relations with the ingroup. Manuscript submitted for publication.

Castelli, L., & Paladino, M.P. (2002). Spontaneous behavioral tendencies in intergroup perception. Unpublished manuscript.

Castelli, L., Vanzetto, K., Sherman, S. J., & Arcuri, L. (2001). The explicit and implicit perception of ingroup members who use stereotypes: Blatant rejection but subtle conformity. *Journal of Experimental Social Psychology, 37,* 419-426.

Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Erlbaum.

Crosby, F., Bromley, S., & Saxe, L. (1980). Recent unobtrusive studies of black and white discrimination and prejudice: A literature review. *Psychological Bulletin, 87,* 546-563.

Cunningham, W.A., Preacher, K.J., & Banaji, M.R. (2001). Implicit attitude measures: Consistency, stability, and convergent validity. *Psychological Science, 12,* 163-170.

Dasgupta, N., & Greenwald, A. G. (2001). On the malleability of automatic attitudes: Combating automatic prejudice with images of admired and disliked individuals. *Journal of Personality and Social Psychology, 81,* 800-814.

Dasgupta, N., McGhee, D.E., Greenwald, A.G., & Banaji, M.R. (2000) Automatic preference for white Americans: Eliminating the familiarity explanation. *Journal of Experimental Social Psychology, 36,* 316-328.

Dunton, B.C. & Fazio, R.H. (1997). An individual difference measure of motivation to control prejudiced reactions. *Personality and Social Psychology Bulletin, 23,* 316-326.

Fazio, R.H., Jackson, J.R., Dunton, B.C., & Williams, C.J. (1995). Variability in automatic activation as an unobtrusive measure of racial attitudes: A bona fide pipeline? *Journal of Personality and Social Psychology, 69,* 1013-1027.

Fein, S., & Spencer, S.J. (1997). Prejudice as self-image maintenance: Affirming the self through derogating others. *Journal of Personality and Social Psychology, 73,* 31-44.

Förster, J., Higgins, E.T., & Strack, F. (2000). When stereotype disconfirmation is a personal threat: How prejudice and prevention focus moderate incongruency effects. *Social Cognition, 18,* 178-197.

Gaertner, S.L. & Dovidio, J.F. (1986). The aversive form of racism. In J.F. Dovidio & S.L.

Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 61-89). Orlando, FL: Academic Press.

Grant, L. (1996). Effects of ageism on individual and health care providers' responses to healthy aging. *Health and Social Work, 21,* 9-15.

Greenberg, J., & Pyszczynski, T. (1985). The effect of an overheard ethnic slur on evaluations of the target: How to spread a social disease. *Journal of Experimental Social Psychology, 21,* 61-72.

Greenberg, J., Simon, L., Pyszczynski, T., Solomon, S., & Chatel, D. (1992). Terror management and tolerance: Does mortality salience always intensify negative reactions to others who threaten one's worldview? *Journal of Personality and Social Psychology, 63,* 212-220.

Greenwald, A.G., & Banaji, M.R. (1995). Implicit social cognition: Attitudes, self-esteem, and stereotypes. *Psychological Review, 102,* 4-27.

Greenwald, A.G., Banaji, M.R., Rudman, L.A., Farnham, S.D., Nosek, B.A., & Mellott, D.S. (2002). A unified theory of implicit attitudes, stereotypes, self-esteem, and self-concept. *Psychological Review, 109,* 3-25.

Greenwald, A.G., McGhee, D.E., & Schwartz, J.L.K. (1998). Measuring individual differences in implicit cognition: The Implicit Association Test. *Journal of Personality and Social Psychology, 74,* 1464-1480.

Hamilton, D.L., & Sherman, J.W. (1994). Stereotypes. In R.S. Wyer & T.K Srull (Eds.), *Handbook of social cognition* (2nd ed., Vol. 2, pp. 1-68). Hillsdale, NJ: Erlbaum.

Hense, R.L., Penner, L.A., & Nelson, D.L. (1995). Implicit memory for age stereotypes. *Social Cognition, 13,* 399-415.

Hillerbrand, E., & Shaw, D. (1989). Age bias in a general hospital: Is there ageism in psychiatric consultation? *Clinical Gerontologist, 9,* 3-13

Hummert, M.L., Garstka, T.A., O'Brien, L.T., Greenwald, A.G., & Mellott, D. S. (2002). Using the implicit association test to measure age differences in implicit social cognition. *Psychology and Aging, 17*, 482-495.

Jost, J.T. & Banaji, M.R. (1994). The role of stereotyping in system justification and the production of false consciousness. *British Journal of Social Psychology, 33,* 1-27.

Karpinski, A., & Hilton, J.L. (2001). Attitudes and the Implicit Association Test. *Journal of Personality and Social Psychology, 81,* 774-788.

Maass, A., Castelli, L., & Arcuri, L. (2000). Measuring prejudice: Implicit vs. explicit techniques. In D. Capozza & R. Brown (Eds.), *Social identity processes: Trends in theory and research* (96-116). London: Sage Publication.

Macrae, C.N., Milne, A.B., & Bodenhausen, G.V. (1994). Stereotypes as energy-saving devices: A peek inside the cognitive toolbox. *Journal of Personality and Social Psychology, 66,* 37-47.

McConahay, J.B. (1986). Modern racism, ambivalence, and the Modern Racism Scale. In J.F. Dovidio & S.L. Gaertner (Eds.), *Prejudice, discrimination, and racism* (pp. 91-125). Orlando, FL: Academic Press.

McConnell, A.R., & Leibold, J.M. (2001). Relations among the Implicit Association Test, discriminatory behavior, and explicit measures of racial attitudes. *Journal of Experimental Social Psychology, 37*, 435-442.

Miller, S.M., Blalock, J., & Ginsburg, H.J. (1984). Children and the aged: Attitudes, contact, and discriminative ability. *International Journal of Aging and Human Development, 19,* 47-53.

Montepare, J.M., Steinberg, J., & Rosenberg, B. (1992). Characteristics of vocal communication between young adults and their parents and grandparents. *Communication Research, 19*, 479-492.

Montepare, J. M., & Zebrowitz, L. A. (2002). A social-developmental view of ageism. In T. Nelson (Ed.), *Ageism* (pp. 77-125). Cambridge, MA: MIT Press.

Nisbett, R.E., & Wilson, T.D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review, 84,* 231-259.

Ottaway, S.A., Hayden, D.C., & Oakes, M.A. (2001). Implicit attitudes and racism: Effects of word familiarity and frequency on the Implicit Association Test. *Social Cognition 19,* 97-144.

Pasupathi, M., Carstensen, L. L., & Tsai, J. L. (1995). Ageism in interpersonal settings. In B. Lott & D. Maluso (Eds.), *The social psychology of interpersonal discrimination* (pp. 160-182). New York: Guilford.

Perdue, C.W., & Gurtman, M.B. (1990). Evidence for the automaticity of ageism. *Journal of Experimental Social Psychology, 26*, 199-216.

Pettigrew, T.F., & Meertens, R.W. (1995). Subtle and blatant prejudice in Western Europe. *European Journal of Social Psychology, 25,* 57-75.

Phelps, E.A., O'Connor, K.J., Cunningham, W.A., Funayama, E.S., Gatenby, J.C., Gore, J.C., & Banaji, M.R. (2000). Performance on indirect measures of race evaluation predicts amygdala activation. *Journal of Cognitive Neuroscience, 12*, 729-738.

Rubin, K.H., & Brown, I.D. (1975). A life-span look at person perception and its relationship to communicative interaction. *Journal of Gerontology, 30,* 461-468.

Rudman, L.A., Ashmore, R.D., & Gary, M.L. (2001). "Unlearning" automatic biases: The malleability of implicit prejudice and stereotypes. *Journal of Personality and Social Psychology, 81*, 856-868.

Rudman, L.A., Greenwald, A.G., Mellott, D.S., & Schwartz, J.L.K. (1999). Measuring the automatic components of prejudice: Flexibility and generality of the Implicit Association Test. *Social Cognition, 17,* 437-465.

Ruscher, J.B. (1998). Prejudice and stereotyping in everyday communication. In M.P. Zanna (Ed.), *Advances in experimental social psychology* (Vol. 30, pp. 241-307). New York: Academic Press.

Seefeldt, C., Jantz, R.K., Galper, A., & Serock, K. (1977). Using pictures to explore children's attitudes toward the elderly. *Gerontologist, 17*, 506-512.

Simon, L., & Greenberg, J. (1996). Further progress in understanding the effects of derogatory ethnic labels: The role of preexisting attitudes toward the targeted group. *Personality and Social Psychology Bulletin, 22,* 1195-1204.

Thompson, M.S., Judd, C.M., & Park, B. (2000). The consequences of communicating social stereotypes. *Journal of Experimental Social Psychology, 36,* 567-599.

Weber, R., & Crocker, J. (1983). Cognitive processes in the revision of stereotypic beliefs. *Journal of Personality and Social Psychology, 45*, 961-977.

Wigboldus, D.H.J., Semin, G.R., & Spears, R. (2000). How do we communicate stereotypes? Linguistic bases and inferential consequences. *Journal of Personality and Social Psychology, 78*, 5-18.

Wilson, T. D., Lindsey, S., & Schooler, T. Y. (2000). A model of dual attitudes. *Psychological Review, 107,* 101-126.

Yzerbyt, V., Rocher, S., & Schadron, G. (1997). Stereotypes as explanations: A subjective essentialistic view of group perception. In R. Spears, P. J. Oakes, N. Ellemers & S.A. Haslam (Eds), *The social psychology of stereotyping and group life* (pp. 20-50). Oxford, UK: Blackwell.

Zebrowitz, L.A., & Montepare, J.M. (2000). "Too young, too old": Stigmatizing adolescents and elders (pp. 334-373). In T.F. Heatherton, R.E. Kleck, M.R. Hebl, & J.G. Hull (Eds.) *Stigma.* New York: Guilford.