

IMPACT OF CONTEXT EFFECTS ON ATTITUDES AND CONTACT: EVIDENCE OF THE VALIDITY OF SELF-REPORTS OF INTERGROUP CONTACT

MELANIE SHARP
MILES HEWSTONE
UNIVERSITY OF OXFORD

Most studies of intergroup contact rely on potentially context-dependent self-report measures of contact. Two studies investigated whether self-reports are resistant to the effects of context. Study 1 required participants to recall a positive or negative encounter with an outgroup member, either immediately prior to, or following, self-reports of attitudes and contact with the outgroup. Recalling an outgroup encounter immediately prior to reporting attitudes affected reported attitudes in accordance with the valence of the encounter, while reported contact was unaffected. Study 2 provided primed participants with a newspaper story involving a positive vs. negative intergroup encounter. When compared to a control condition in which group membership of the story's characters was unknown, attitudes were affected in accordance with the valence of the prime, while self-reports of contact were not. Overall, these findings show, for the first time, that self-reports of contact are resistant to at least some types of context effects, and increase the confidence with which conclusions can be drawn from research relying on such self-report measures of intergroup contact.

Key words: Validity of self-reports; Priming; Context effects.

Correspondence concerning this article should be addressed to Miles Hewstone, Department of Experimental Psychology, University of Oxford, South Parks Road, Oxford OX1 3UD, UK. E-mail: m.hewstone@psy.ox.ac.uk

CONTEXT EFFECTS AS A POTENTIAL THREAT TO THE VALIDITY OF SELF-REPORTS OF CONTACT¹

A vast amount of literature exists which supports Allport's (1954) claim that under certain "key conditions" (i.e., equal status, cooperation, common goals, institutional support), contact will reduce prejudice (for a meta-analytic review, see Pettigrew & Tropp, 2006). A great deal of research has focussed on the benefits of individuals forming direct friendships with outgroup members (for a review, see Turner, Hewstone, Voci, Paolini, & Christ, 2008) or simply having the knowledge that other ingroup members have outgroup friends ("indirect" or "extended" contact; Wright, Aron, McLaughlin-Volpe, & Ropp, 1997). However, one potentially serious threat to the validity of the impressive body of research in support of the beneficial effects of contact comes from the fact that the vast majority of this work has relied on self-report measures. Pettigrew and Tropp's (2006) meta-analysis of over 500 studies on intergroup contact found that 81% of studies relied on self-report measures of contact. The potential seriousness of this limitation is perhaps highlighted by the fact that the strength of the effect of contact in studies using self-reports of contact ($r = .210$) was significantly smaller than in studies using directly observed measures of contact ($r = .246$).

Limitations of Self-Reports

It would appear unavoidable that research on intergroup contact continues to make use of self-reports to assess such essential aspects of contact as its quantity and quality, and both direct and indirect cross-group friendships (for a discussion see Hewstone, Sharp, & Judd, 2010). As yet, no alternative method (such as implicit measures) exists to get at the aspects of contact which require respondents' knowledge and reporting of their own prior experience, and for this we must continue, for now, to rely on self-reports. However, as has been pointed out frequently by researchers in both personality and social psychology, self-reports suffer from systematic response biases such as *socially desirable responding*, *acquiescence*, and *extreme responding* (Paulhus, 1991). Respectively, these refer to the tendency of participants to be inclined to present an idealised view of themselves, to agree (or disagree) with any questions posed (Dicken, 1963; Lentz, 1938), or to use only the extremes, or only the centre, of a scale (Paulhus, 1991). Unsystematic biases such as random responding, carelessness and misunderstanding (Tellegen, 1988) can also affect responses on questionnaires, and uncertainty over how to respond (or simple lack of self-knowledge; Haddock, Rothman, Reber, & Schwarz, 1999) can exacerbate other response biases (Konstabel, 2006). The current research was conducted to test, for the first time, whether self-reports can also be distorted by the effects of context.

Context Effects

It has long been apparent that attitude measurement is extremely context-dependent (Schwarz, 1999). Preceding questions have frequently been shown to influence the answers to subsequent questions (Schwarz & Sudman, 1992). Contact is very rarely studied in isolation and contact measures are therefore presented, in most cases, along with other measures. It is therefore important to test the susceptibility of self-report measures of contact to context effects. If self-report measures of contact are not resistant to context effects, this would call into question the validity of much research on contact which has not taken context effects into account when presenting contact measures after or alongside other measures.

Schwarz and Bless's (1992) inclusion-exclusion model outlines how question order affects responses. They suggest that an evaluative judgement requires both a target stimulus and a standard by which to evaluate it. A mental representation of either the target stimulus or the standard of comparison cannot realistically be based on all available information and must necessarily be affected most strongly by the most easily accessible information. Two important determinants of accessibility are the frequency with which information is accessed and how recently it has been accessed (for a review see Schwarz & Strack, 2007). "Chronically accessible information," the most frequently accessed, and "temporarily accessible information," for example that information most recently accessed in order to answer a previous question, are therefore most likely to affect responses.

How responses will be affected depends on whether the information forms part of the target stimulus or of the standard of comparison. If it forms part of the target stimulus, it results in "assimilation effects," that is positive information results in positive judgements. Salancik and Conway (1975), for example, used "priming" questions to manipulate the salience of either pro- or anti-religious behaviors. When they primed pro-religious behaviors they found participants

subsequently reported more positive attitudes toward religion in general than when anti-religious behaviors were primed. If the information forms part of the standard of comparison, however, this effect is reversed, and the information results in “contrast effects” (i.e., positive information results in negative judgements). Strack, Schwarz, and Gschneidinger (1985) found that judgements of current well-being were influenced by preceding questions concerning recall of past and current life events. Recalling current life events generally influenced responses in the direction of the valence of the event. Recall of a positive event from the present led to more positive reports of current well-being. If the event was in the past, however, the effect was reversed, as the event was used as a standard of comparison. Recall of a past positive event would cause participants to evaluate their current well-being comparatively negatively.

Schwarz et al. (1991) found another way in which information can be used. If information is difficult to recall, it can lead participants to believe it should be weighted less heavily in subsequent evaluative judgements. Schwarz et al. found that if participants were asked to recall 12, rather than six, examples of assertive behaviors, they subsequently described themselves as less assertive. Haddock et al. (1999) similarly asked participants to think of three (easy) or seven (hard) arguments either supporting or opposing their own views on doctor-assisted suicide. Responses of participants who held extreme attitudes were found to be resistant to context effects, but participants who held moderate attitudes prior to the task subsequently reported their attitudes to be more intense, more personally important, and more certain when they had been asked to think of either three supporting arguments or seven opposing arguments, but not in the other conditions where they had been asked to think of three opposing arguments or seven supporting arguments.

Contact Self-Reports and Context Effects

It is apparent that context affects attitudinal responses, at least when there is a degree of subjectivity in the questions, but it remains to be seen whether contact measures are also affected by such context effects. In theory, whereas attitudes are quintessentially subjective and evaluative responses, and hence one would expect them to be subject to context effects, self-reports of contact should be factual and objective (at least when assessing dimensions of contact such as its quantity, duration, or number of friends). Yet, it is plausible that recalling encounters with an outgroup might increase the accessibility of such experiences and thereby affect self-reports of contact (Schwarz & Strack, 2007). It is equally plausible that if recalling such an event is difficult (Haddock et al., 1999; Schwarz et al., 1991), or if more events can be recalled from some time ago than from recent times (Strack et al., 1985), participants will be led to assume that their own contact is relatively low, and, as such, reported contact will be deflated. If found, either of these effects would significantly undermine contact research which has relied on self-reports and has not taken context effects into account. Thus the current research evaluated the effect of priming on self-reports of attitudes compared with intergroup contact.

STUDY 1

Our first study required participants to recall an event from their life in which they had experienced contact with the outgroup. Based on the method used by Wojciszke (1994, Study 2;

2005) in his studies of competence and morality, we asked half the participants to recall a positive encounter, and the other half to recall an occasion of negative contact. Half the participants were subsequently presented with self-report measures of contact, and half received the measures before they were asked to recall the event; thus half the participants were “primed” and half were not. This method yielded a 2 (valence of recalled experience: positive vs. negative) × 2 (order: primed vs. unprimed) factorial design. Participants were also asked how long ago the event had taken place, given that previous research has suggested that if a recalled event took place some time ago, the information it provided might be used as a standard of comparison rather than to provide information on current levels of contact; were this the case, recalling the event might have an opposite effect to that intended (Strack et al., 1985). Similarly, participants were asked how easy the event was to recall, in order to control for availability effects (Schwarz et al., 1991).

We hypothesised that, when controlling for how long ago the event took place and ease of recall, attitudes toward the outgroup would be more positive in the positive-prime than in the negative-prime condition, compared with the unprimed condition. This would replicate a good deal of previous research (e.g., Salancik & Conway, 1975). In contrast, we hypothesised that if self-reports of contact were more objective responses, there would be no difference in self-reported contact in the positive and negative conditions, whether primed or unprimed; in other words, contact self-reports would prove to be resistant to context effects.

Method

Participants

A total of 165 White students (94 female and 67 male, 4 undisclosed; mean age = 20.15, $SD = 1.94$) took part in the research.

Procedure

The questionnaire consisted of “recall” items, measures of contact with and attitude toward an ethnic outgroup (Asians), and standard demographic questions. Following the demographic questions, half the participants received the recall questions followed by the attitude and contact measures (primed condition), and half received the reverse order (unprimed condition). Participants filled in the questionnaire in separate rooms or in separate parts of a large room.

Measures

Following demographic questions, participants were given the instruction: “You may now move on to the main part of the study. Please complete each page before turning to the next and do not return to pages you have completed previously once you have moved on. For the following questions, please note that the term *Asians* refers to people living in the UK who are of Indian, Pakistani or Bangladeshi origin, rather than Chinese/Japanese/Korean etc.” It was impor-

tant that participants move only forwards through the questionnaire, so that we could make certain that primed participants were primed and non-primed participants were not.

Recall Items

Half the participants were asked to recall a positive and half a negative encounter with a member of the outgroup. The following instructions were given: “We would like you to recall a situation in which you had a [positive/negative] encounter with an Asian person. This may or may not have been someone you knew, and the fact that the person was Asian need not have been relevant to the event. Please could you describe what happened to you? What exactly took place? What was said and done? What were the consequences? For example: *I was sitting on a bench when she came over and said...*” Participants were then given 20 lines on which to describe their experience.

Subjective recency of the recalled event was measured by asking participants to estimate how many months ago the event happened.

Ease of recall was measured with two items; “How difficult or easy did you find it to recall this [positive/negative] experience?” and “How difficult or easy did you find it to write about this [positive/negative] experience?”, with answers given on seven-point scales anchored at *difficult* and *easy*. These two items were significantly positively correlated ($r = .41, p < .001$) and averaged to form a measure in which higher scores indicated higher ease of recall.

Contact/Attitude Items

Contact was measured with four items, two referring to contact in participants’ home towns, and two referring to contact while at university. Participants were asked “About how many of your friends [at home/at university] are Asian?”, with answers given on a seven-point scale labelled with *None, A few, Less than half, About half, More than half, Most* and *All*. Participants were also asked: “How often do you spend time with friends [at home/at university] who are Asians?”, and answers were given on a seven-point scale labelled with *Never, Rarely, Sometimes, Quite a bit, Often, Very often* and *All the time*. The four items were averaged together to produce a reliable (Cronbach’s $\alpha = .80$) index of contact with Asians on which a high score indicated more contact.

Attitudes were measured using a “feeling thermometer” (a 100 point scale anchored at 0, *cold*, and 100, *warm*), with instructions to rate feelings toward Asians, and a set of five bi-polar adjectives on seven-point scales preceded by the instruction: “Based on your experience rate the extent to which you have each of the following feelings about Asians in general. (Please circle one number on each scale).” Bi-polar adjectives were Negative-Positive, Friendly-Hostile, Suspicious-Trusting, Respect-Contempt and Admiration-Disgust (Wright et al., 1997). One of Wright et al.’s items, Warm-Cold, was not included as it was rendered redundant by the feeling thermometer. After reversing items Hostile, Contempt and Disgust and transforming the feeling thermometer score from a 100 to a seven-point scale, all six items were averaged together to produce a reliable (Cronbach’s $\alpha = .82$) index of attitude to Asians on which a high score indicated a more positive attitude.

The order of the Contact and Attitude measures was counterbalanced (there were no reliable effects of order).

Results and Discussion

The main results are shown in Table 1. Before performing analyses to discover whether attitude judgements and reported contact would be affected by recalling positive or negative out-group encounters, before or after the contact self-reports, it was necessary to conduct some preliminary analyses. First, we ascertained how recency and ease of recall affected the data. Previous research suggests that events which happened a long time ago or are hard to recall would be used as a standard of comparison, and would have an opposite priming effect than that hypothesised (Schwarz et al., 1991; Strack et al., 1985). It was only necessary to examine the primed data, as the unprimed could not be affected in any way by either the recency of the event or the ease of recall. We therefore computed a one-way analysis of variance (ANOVA) on just the primed data, in order to discover any effects of the prime on “ease of recall.” If, for example, negative events were deemed harder to recall than positive events, this would complicate the effect of the prime on attitude and contact judgements, and ease of recall would have to be controlled for in the main analysis. However, we found that ease of recall was the same whether the prime was positive or negative; $F(1, 74) = .07$, ns. Negative events were no harder to recall than positive ones.

TABLE 1
 Mean Attitude and Contact as a function of presence and valence of prime

	Primed (Recall then judgement)		Unprimed (Judgement then recall)	
Valence of Prime	Negative ($N = 31$)	Positive ($N = 42$)	Negative ($N = 41$)	Positive ($N = 38$)
Mean Attitude (SD)	3.53 (1.35)	4.68 (1.25)	3.91 (1.37)	3.97 (1.49)
Mean Contact (SD)	2.72 (1.25)	1.90 (1.19)	1.93 (0.97)	1.86 (1.21)

Note. Standard deviations in parentheses.

Second, we compared how long ago the recalled positive and negative events occurred. Negative events occurred an average of 36.57 months ago while positive events occurred an average of only 15.46 months ago. It appeared that when asked to recall a positive event, participants were more inclined to report a recent event than when asked to recall a negative event. Thus we included the recency variable as a covariate in the main analysis, below.

We computed a 2 (prime: present vs. absent) \times 2 (valence: positive vs. negative) \times 2 (type of measure: contact vs. attitudes) mixed-model analysis of covariance (ANCOVA), with repeated measures on the last factor, and recency of recalled event as a covariate; the dependent measures were the contact self-reports and the attitude scores. This ANCOVA revealed only a significant three-way interaction between presence and valence of prime and type of measure (attitudes vs. contact), $F(1, 141) = 4.33$, $p = .04$. The prime by valence interaction was significant for attitudes, $F(1, 159) = 6.68$, $p = .01$, but not for contact, $F(1, 159) = 3.44$, ns. As shown by the means reported in Table 1, data were in line with the hypothesis: attitudes were affected by the prime while contact was not. Attitudes were found to be more positive after a positive prime ($M = 4.68$) than after a negative prime ($M = 3.53$), $F(1, 71) = 5.88$, $p = .02$. Thus, recalling an out-group encounter immediately prior to reporting attitudes affected attitudes in a manner consistent with the valence of the encounter (see Table 1). No similar effects were found for contact, indi-

cating that contact self-reports are resistant to priming effects. Recalling an outgroup encounter immediately prior to reporting level of contact did not affect those reports.

STUDY 2

Our second study improved on the first in a number of ways. Study 1 gave participants the freedom to pick any event from their lives to describe, which, we felt, was quite realistic, but of course did not allow control over the type of event chosen to serve as the prime, or its historical recency. Indeed, we found effects of recency (although not of ease of recall). Because participants were able to choose an event from any time in their life, we could only control statistically for these effects, post hoc. An improvement would be to prevent them occurring.

In order to exercise control over these aspects, Study 2 dispensed with the method of asking participants to recall an event from their own lives. Instead, we presented participants with an encounter between a member of their own ingroup and a member of the outgroup. As such we were able to exert complete control over the priming event, manipulating both its valence and when it occurred, thus ensuring its suitability for the purposes of our study.

We also changed the target outgroup in our second study. Because our first study used Asians as an outgroup, it is possible that some participants controlled their self-reports of a prior experience with an ethnic outgroup, for reasons of social desirability or political correctness. As it is more socially acceptable to express negative attitudes toward a rival university than to an ethnic outgroup, our second study used students from another university in the same town as the participants' university.

For Study 2 we used a one-factor design, with three levels of the independent variable (positive outgroup experience vs. negative outgroup experience vs. control). Finally, since the measure of contact used in Study 1 was quite intimate, namely with outgroup friends, we added to these measures of contact (proportion of outgroup friends and the amount of time spent with them) additional measures of quantity of contact, to yield a more representative measure of participants' self-reported contact.

Method

Participants

A total of 118 White students (63 female and 55 male; mean age = 20.31, *SD* = 1.45) took part in the research.

Procedure

Participants read a passage, ostensibly taken from a student newspaper, which described one of three events depending on the condition. The "positive prime" condition involved a passage describing an event in which an ingroup member (student at the participant's university) was attacked and injured by an unknown assailant, and was taken to hospital by an outgroup member

(student of another university in the same town). The “negative prime” condition involved a passage describing an event in which the same ingroup member was attacked and injured by an outgroup member, and taken to hospital by an unidentified individual. The passage read in the control condition simply involved an unidentified victim being attacked by an unknown assailant and taken to hospital by “a person” who was not described further.

Participants then filled in a questionnaire, in separate rooms or in separate parts of a large room. The questionnaire included questions which ostensibly examined comprehension of the passage, but which actually functioned as a manipulation check.

Measures

The questionnaire consisted of “manipulation check” items, measures of quantity of contact and direct cross-group friendship, attitude toward the outgroup (rival university), and standard demographic questions.

The manipulation check items comprised three questions, asking for a description of the three people who had filled the roles of assailant, victim, and rescuer. All participants correctly identified the ingroup and outgroup when group membership was specified in the “newspaper article.”

The order of the contact and attitude measures was counterbalanced (there were no reliable effects of order). Direct cross-group friendship measures were: “About how many of your friends are students from [the other university]?”, and “How often do you spend time with friends who are students from [the other university]?”; answers were given on a seven-point scale labelled with *None*, *A few*, *Less than half*, *About half*, *More than half*, *Most*, and *All*. These two items were highly correlated ($r = .74, p < .001$) and thus were averaged to form a measure in which higher scores indicated a higher degree of direct cross-group friendship.

Quantity of contact was measured with two questions: “How often do you meet students from [the other university] in your everyday life?”, and “How often do you spend time with people who are students [at the other university]?” Answers were given on a seven-point scale labelled with *Never*, *Rarely*, *Sometimes*, *Quite a bit*, *Often*, *Very often*, and *All the time*. These two items were highly correlated ($r = .89, p < .001$) and thus were averaged to form a measure in which higher scores indicated higher quantity of contact.

Measures of direct cross-group friendship and quantity of contact were aggregated to produce a global measure of contact, Cronbach’s $\alpha = .89$.

Attitudes were measured using a “feeling thermometer” and the same five bi-polar adjectives, rated on seven-point scales, used in Study 1 (after Wright et al., 1997). After again reversing three items (“Hostile”, “Contempt”, and “Disgust”) and transforming the feeling thermometer score from a 100 to a seven-point scale, all six items were averaged together to produce a reliable index of attitude to the student outgroup (Cronbach’s $\alpha = .88$) on which higher score indicated more positive attitudes.

Results and Discussion

Main results are shown in Table 2. We computed a 3 (condition: positive prime vs. negative prime vs. control) \times 2 (type of measure: contact vs. attitudes) mixed-model analysis of vari-

ance (ANOVA), with repeated measures on the last factor. The only reliable effect was a significant interaction between condition and type of measure, $F(2, 115) = 4.52, p = .01$. Simple main effects tests revealed that the interaction was due to a significant effect of condition on attitudes, $F(2, 115) = 5.37, p = .01$; there was no effect of condition on contact, $F(2, 115) = .49, ns$.²

TABLE 2
Mean Attitude and Contact as a function of level of prime manipulation

	Negative ($N = 40$)	Positive ($N = 39$)	Control ($N = 39$)
Mean Attitude (SD)	4.39 (.76)	5.07 (1.07)	4.73 (.91)
Mean Contact (SD)	2.37 (.96)	2.31 (.85)	2.62 (1.23)

Note. Standard deviations in parentheses.

Post-hoc tests revealed that attitudes in the positive condition ($M = 5.07$) were significantly more positive than attitudes in the control condition ($M = 4.73, p = .04$). Attitudes in the negative condition ($M = 4.39$) were also significantly less positive than attitudes in the control condition ($p = .04$). Finally, attitudes in the negative condition were also significantly less positive than attitudes in the positive condition ($p < .001$). There was no effect of “condition” on self-reports of contact.

In summary, those participants who read an account of a positive intergroup interaction subsequently reported more positive attitudes, and those who read about a negative intergroup interaction reported more negative attitudes. However, their self-reports of contact were not influenced in the same manner; participants did not exaggerate their intergroup contact as a result of the positive experience, nor did they underreport their contact as a result of reading about a negative interaction. These results again testify to the robustness of self-reports as a measure of contact, if they fail to be influenced by a prime which affects attitudes in a predictable manner.

GENERAL DISCUSSION

In two studies, we confirmed our hypothesis that self-reports of contact, being of a more objective nature, would be resistant to context effects, while self-reported attitudes, being a good deal more subjective, would not be. We discuss these findings in terms of priming effects on attitudes versus contact, limitations of the reported research, and the implications of our findings for conclusions that can be drawn from research on the contact hypothesis.

Both our studies found that when participants were primed to consider a positive or negative intergroup encounter, their subsequent attitudes were in accordance with the valence of the encounter, in comparison to controls, while their reported contact remained unaffected. These findings occurred in Study 1 when the prime was operationalized by asking participants to recall a positive versus negative encounter with a member of the outgroup, but could not be explained in terms of subjective differences between positive and negative intergroup encounters in terms of either recency of the recalled event (see Schwarz & Strack, 2007), or ease of retrieving the event (Haddock et al., 1999; Schwarz et al., 1991). We replicated this effect in Study 2 by ma-

nipulating the prime directly, when presenting participants with an event in which a member of the outgroup behaved positively or negatively toward the ingroup (Study 2). These results for attitudes are consistent with a large literature showing that attitude measurement is context-dependent (e.g., Schwarz, 1999; Schwarz & Sudman, 1992).

In contrast, to our knowledge no previous research has investigated the effects of context on self-reports of intergroup contact. Although the results across both studies suggest that self-reports of contact are quite robust in the face of priming manipulations, we should be cautious in view of the absence of other studies, and because we have, of course, thus far considered only a small subset of possible context effects. Both studies investigated the effects of the *valence* of a remembered (Study 1) or presented (Study 2) intergroup encounter on the reported degree of contact. It should be noted, however, that the primed information (i.e., a positive or negative encounter) is not directly applicable to the contact questions asked, and that numerous other aspects of priming could be investigated. For example, Higgins and Brendl (1995) showed the importance of factors such as whether stimulus behaviors in the prime are weakly or strongly related to the to-be-primed construct, short versus long priming-to-stimulus delay, and participants' high versus low levels of chronic accessibility of the to-be-primed construct. Alternatively, rather than prime participants with valence-related information, one could prime them with numeric information, which, it might be argued, would be more applicable to self-reports of the quantity (but presumably not the quality) of self-reported contact. In a series of studies Mussweiler and Englich (2005) demonstrated the power and ubiquity of judgmental anchoring effects, even when presented subliminally.

Taken together, these two studies provide substantial support for the continued use of self-reports in contact research. Whereas attitude self-reports revealed by now well-established priming or context effects, self-reports of contact appear to be more robust to context effects, at least in the forms of priming thus far considered. However, clearly more research is needed, with a broader range of manipulations to operationalize context effects, to confirm whether contact self-reports are immune to context effects more generally. These findings are consistent with other research we have conducted, showing that self-reports of contact are not responses distorted in the direction of social desirability, but can be validated using observer reports (see Hewstone et al., 2010). This is heartening news for advocates of intergroup contact, and those who apply it in social interventions, given the very high reliance on self-report measures in the voluminous literature on intergroup contact (see Pettigrew & Tropp, 2006).

NOTES

1. This research was funded, in part, by a doctoral research award to Melanie Sharp from the Economic and Social Research Council.
2. Performing separate analyses using each contact measure separately rather than the global measure of contact, as a repeated measure with attitudes, yielded similar results. We found the same significant condition \times type of measure interaction with both cross-group friendship as the contact measure, $F(2, 115) = 3.15, p < .05$, and with quantity of contact as the contact measure, $F(2, 115) = 5.27, p = .01$. In neither case was there a significant main effect of condition on the measure of contact; for cross-group friendship, $F(2, 115) = .25, ns$, and for quantity of contact, $F(2, 115) = .78, ns$.

REFERENCES

Allport, G. (1954/1979). *The nature of prejudice*. Reading, UK: Addison-Wesley.

- Dicken, C. (1963). Good impression, social desirability, and acquiescence as suppressor variables. *Educational and Psychological Measurement*, 23, 699-720.
- Haddock, G., Rothman, A. J., Reber, R., & Schwarz, N. (1999). Experiences forming judgments of attitude certainty, intensity, and importance: The role of subjective experiences. *Personality and Social Psychology Bulletin*, 25, 771-782.
- Hewstone, M., Sharp, M. S., & Judd, C. M. (2010). Validating self-reports of intergroup contact using observer ratings: A round-robin analysis. *Manuscript under review*.
- Higgins, E., & Brendl, C. M. (1995). Accessibility and applicability: Some “activation rules” influencing judgment. *Journal of Experimental Social Psychology*, 31, 218-243.
- Konstabel, K., (2006). *The structure and validity of self- and peer-reported personality traits*. Doctoral dissertation, University of Tartu, Tartu, Estonia: Tartu University Press.
- Lentz, T. F. (1938). Acquiescence as a factor in the measurement of personality. *Psychological Bulletin*, 35, 659.
- Mussweiler, T., & Englich, B. (2005). Subliminal anchoring: Judgmental consequences and underlying mechanisms. *Organizational Behavior and Human Decision Processes*, 98, 133-143.
- Paulhus, D. L. (1991). Measurement and control of response bias. In J. P. Robinson, P. R. Shaver, & L. S. Wrightsman (Eds.), *Measures of personality and social psychological attitudes* (pp. 17-59). San Diego, CA: Academic Press.
- Pettigrew, T., & Tropp, L. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality and Social Psychology*, 90, 751-783.
- Salancik, G. R., & Conway, M. (1975). Attitude inferences from salient and relevant cognitive content about behavior. *Journal of Personality and Social Psychology*, 32, 829-840.
- Schwarz, N. (1999). Self-reports: How the questions shape the answers. *American Psychologist*, 54, 93-105.
- Schwarz, N., & Bless, H. (1992). Constructing reality and its alternatives: Assimilation and contrast effects in social judgment. In L. L. Martin & A. Tesser (Eds.), *The construction of social judgments* (pp. 217-245). Hillsdale, NJ: Erlbaum.
- Schwarz, N., & Strack, F. (2007). Thinking about your life: Healthy lessons from social cognition. In M. Hewstone, H. A. W. Schut, J. B. F. de Wit, K. van den Bos, & M. Stroebe (Eds.), *The scope of social psychology: Theory and applications* (pp. 121-136). Philadelphia, PA: Psychology Press.
- Schwarz, N., & Sudman, S. (Eds.) (1992). *Context effects in social and psychological research*. New York: Springer Verlag.
- Schwarz, N., Bless, H., Strack, F., Klumpp, G., Rittenauer-Schatka, H., & Simons, A. (1991). Ease of retrieval as information: Another look at the availability heuristic. *Journal of Personality and Social Psychology*, 61, 195-202.
- Strack, F., Schwarz, N., & Gschneidinger, E. (1985). Happiness and reminiscing: The role of time perspective, affect, and mode of thinking. *Journal of Personality and Social Psychology*, 49, 1460-1469.
- Tellegen, A. (1988). The analysis of consistency in personality assessment. *Journal of Personality*, 56, 621-663.
- Turner, R. N., Hewstone, M., Voci, A., Paolini, S., & Christ, O. (2008). Reducing prejudice via direct and extended cross-group friendship. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 18, pp. 212-255). Hove, UK: Psychology Press.
- Wojciszke, B. (1994). Multiple meanings of behavior: Construing actions in terms of competence or morality. *Journal of Personality and Social Psychology*, 67, 222-232.
- Wojciszke, B. (2005). Morality and competence in person- and self-perception. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 16, pp. 155-188). Hove, UK: Psychology Press.
- Wright, S. C., Aron, A., McLaughlin-Volpe, T., & Ropp, S. A. (1997). The extended contact effect: Knowledge of cross-group friendships and prejudice. *Journal of Personality and Social Psychology*, 73, 73-90.