Is the Interdependent Self More Sensitive to Question Context Than the Independent Self? Self-Construal and the Observation of Conversational Norms

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Question answering requires close attention to the common ground to determine what the questioner wants to know. Because attentiveness to others is more likely to be a self-defining goal when the self is thought of as interdependent with others rather than independent of others, we predicted that self-construal influences attentiveness to the common ground. In Experiment 1, participants’ temporary self-construal was manipulated through a priming technique. As predicted, interdependence-primed participants were more likely than independence-primed participants to take the recipient’s knowledge into account and avoided providing redundant information in a self-administered questionnaire. Drawing on chronic differences in self-construal, Experiment 2 replicated these findings with participants from independent (Germany) and interdependent (China) cultures. Throughout, participants’ differential attentiveness to the common ground resulted in differential question order effects, raising important methodological issues for cross-cultural research.

Successful communication requires that listeners go beyond the literal meaning of a speaker’s utterance to infer its pragmatic meaning (Clark, 1985). To do so, communicators rely on a set of tacit assumptions conceptualized in Grice’s (1975) logic of conversation and Sperber and Wilson’s (1995) relevance theory of conversational conduct. One implication of these principles of cooperative conversational conduct is that speakers should provide information that is new to the recipient rather than reiterate information that the recipient already has (Clark & Haviland, 1977). To satisfy this expectation, communicators need to monitor the common ground of the conversation, taking the recipient’s likely knowledge into account when they design their own utterances. This aspect of cooperative conversational conduct is particularly relevant in the case of question answering. For example, when asked on a trip abroad “Where are you from?,” we may plausibly answer with our country of residence. When the questioner already has this information, however, it is uninformative to reiterate it and we are likely to provide new information, such as our hometown.

The current research explores whether communicators’ sensitivity to these requirements of successful communication depends on their self-construal at the time of communication. Cross-cultural research suggests that being attentive to others figures more prominently in interdependent than in independent construals of the self (for a review, see Oyserman, Coon, & Kemmelmeier, in press). If so, we may expect that individuals with interdependent self-concepts are more likely to observe the maxims of cooperative conversational conduct than are individuals with independent self-concepts.
We test this hypothesis in a domain that is particularly relevant to psychological research, namely individuals’ interpretation of standardized questions in research settings.

In natural conversations, a listener who has any doubts about the intended meaning of a question may ask the speaker for clarification. This opportunity, however, is often not available in standardized research settings, forcing participants to pay particular attention to the context of the question to arrive at a meaningful interpretation (Strack & Schwarz, 1992). As numerous studies have demonstrated, participants’ use of contextual information in research settings follows Gricean conversational norms, indicating that they bring the tacit assumptions underlying the conduct of conversation to the research situation (for reviews, see Schwarz, 1994, 1996). The current studies extend this line of research by testing whether interdependent individuals are more likely to attend to conversational norms than are independent individuals. This possibility would have important implications for the methodology of cross-cultural research. Most notably, cultural differences in the question-answering process may invite misleading conclusions about substantive differences between cultures, based on the differential answers obtained.

To address these theoretical and methodological issues, we relied on chronic as well as temporary differences in self-construal. In Experiment 1, we manipulated the temporary self-construals of participants from an independent culture (Germany) through a priming procedure. In Experiment 2, we compared participants from independent and interdependent cultures, namely Germany and China, relying on chronic differences in self-construal. Throughout, our findings converge on the conclusion that individuals with temporary or chronic interdependent self-construals are more likely to attend to the common ground, and to take the questioner’s knowledge into consideration, than are individuals with temporary or chronic independent self-construals.

**Independent versus Interdependent Self-Construals**

Recent research in cultural psychology has identified two distinct perspectives on the self. Cultures that emphasize an independent perspective on the self foster construals in which the self is seen as fundamentally distinct from others and defined in terms of internal features such as attributes, abilities, and attitudes (e.g., Markus & Kitayama, 1991; Oyserman, 2001; Oyserman & Markus, 1996). Cultures that emphasize an interdependent perspective on the self foster construals in which the self is seen as fundamentally connected to others, and identity is primarily defined in terms of relationships, group memberships, and social roles. Maintaining the interdependence of the self requires pervasive attentiveness to others in the social context. We may therefore conjecture that interdependent individuals are more likely than independent individuals to attend closely to what others are directly or indirectly communicating. Although recent research in cultural psychology has documented numerous differences between interdependent and independent cultures (for reviews, see Fiske, Kitayama, Markus, & Nisbett, 1998; Miller, 2001; Oyserman et al., in press), the implications of these self-construals for conversational conduct and question answering in standardized research settings have not been systematically addressed.

Much of the research into self-construals has focused on comparisons between Western (independent) and Eastern (interdependent) cultures, potentially confounding differences in chronic self-construal with numerous other variables that differ between the respective cultures in unknown ways (for a critical discussion, see Oyserman et al., in press). To avoid these ambiguities, we used a converging research strategy and relied on chronic (Experiment 2) as well as temporary (Experiment 1) differences in the accessibility of independent and interdependent self-construals. Theoretically, any individual’s self-concept includes some independent as well as interdependent elements, and differences in their relative number and accessibility are at the heart of differential self-construals. To increase the temporary accessibility of independent or interdependent components of their self-concepts, we used a priming procedure developed by Gardner and colleagues (Brewer & Gardner, 1996; Gardner, Gabriel, & Lee, 1999; for an alternative procedure, see Kühnen & Hannover, 2000; Trafimow, Triandis, & Goto, 1991). This procedure requires participants to circle either first-person singular or plural pronouns in a short text provided to them. Gardner et al. (1999) observed that focusing on pronouns such as *I, me,* and *myself* made independent self-knowledge more accessible, whereas focusing on pronouns such as *we, us,* and *ourselves* drew attention to a person’s embeddedness in a collective and thus made interdependent self-knowledge more accessible. To the extent that the results of experimental manipulations of this type converge with the differences observed in cross-cultural studies, the findings confirm that differences in self-construal, rather than other differences between cultures, are at the heart of the observed phenomena.

**The Present Research**

In Experiment 1, conducted with German participants, we used Brewer and Gardner’s (1996) pronoun-circling task to prime either independent or interdependent self-knowledge. We expected that participants primed for interdependence would be more sensitive to the requirements of cooperative conversational conduct than would participants primed for independence. To test this hypothesis, we asked participants two redundant questions. If interdependence-primed participants pay closer attention to the common ground of the conversation than do independence-primed participants, the former should be more likely to notice this redundancy. They should therefore interpret the second question as a
request for new information, resulting in a shift in the obtained answers as detailed below. Experiment 2 provides a conceptual replication with participants from Germany (an independent culture) and China (an interdependent culture), relying on chronic rather than temporary differences in self-construal.

**EXPERIMENT 1**

Our first experiment builds on a study by Strack, Schwarz, and Wänke (1991), in which participants were asked to report their happiness and their satisfaction with life. In one condition of their study, participants received two questionnaires, allegedly written by two different researchers. The happiness question was presented as the last question of Questionnaire 1, and the satisfaction question was presented as the first question of Questionnaire 2. Under this condition, the answers to both questions were highly correlated ($r = .96$), suggesting that participants interpreted both questions as referring to pretty much the same thing in different words. This was not the case when both questions were presented as the last two questions on the same questionnaire, introduced by a lead-in that read, “Now, we have two questions about your life.” In this case, the correlation dropped significantly to $r = .75$, suggesting that participants were sensitive to the potentially redundant nature of both questions. Not expecting to be asked the same thing twice, they inferred that the questioner must have meant something twice, they inferred that the questioner must have some redundancy. When both questions are presented in the same questionnaire, thus rendering them potentially redundant. When both questions are presented in different questionnaires, directed to different recipients, no redundancy problem arises and the nature of the priming task should make no difference.

**Method**

**Participants and design.** A total of 69 psychology undergraduates of the University of Heidelberg, Germany, participated in this experiment to fulfill a course requirement. They were randomly assigned to the conditions of a 2 (independence vs interdependence priming) × 2 (same vs different questionnaire) factorial design.

**Procedure.** Participants received three questionnaires. The first questionnaire was presented as a language comprehension task and asked participants to complete a German adaptation of Brewer and Gardner’s (1996) pronoun-circling task (which has been successfully used with German participants by Kühen, Hannover, & Schubert, 2001). Participants assigned to the independence priming condition received a paragraph with singular pronouns (I, me, etc.), whereas participants assigned to the interdependence priming condition received a paragraph with plural pronouns (we, our, etc.). The second questionnaire was labeled “Survey: How do students live today?” Following some filler questions, participants rated their happiness and satisfaction with life. In the one-questionnaire condition, both questions were presented at the very end of the survey–questionnaire and were introduced by “Now we have two questions about your life.” In the two-questionnaires condition, only the happiness question was presented at the end of the survey–questionnaire, introduced by “Now we have a question about your life.” The satisfaction question was then presented as the first question of an ostensibly unrelated third questionnaire, titled “Frequency of emotions.” Both questions were answered on 11-point rating scales ranging from not happy [satisfied] at all to very happy [satisfied].

**Results and Discussion**

Theoretically, the two questions about happiness and life satisfaction pose no redundancy problem when they are presented in two questionnaires, with the answers directed to different recipients. Accordingly, participants’ self-construals should not affect their question interpretation under this condition. Consistent with this prediction, the answers to both questions were highly correlated when they were presented in two different questionnaires, as shown in Table 1 ($p$’s < .01 for both correlations). Moreover, no significant difference emerged between the two priming conditions, $z = 1.80$, ns.

By contrast, the two questions pose a redundancy problem when they are presented in the same questionnaire, with the answers directed to the same recipient. If interdependence-primed participants are indeed more sensitive to the common ground than are independence-primed participants, they should be more likely to notice this redundancy prob-

**TABLE 1**

<table>
<thead>
<tr>
<th>Recipient</th>
<th>Independent</th>
<th>Interdependent</th>
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<tr>
<td>Different (two questionnaires)</td>
<td>.89 (18)</td>
<td>.97 (17)</td>
</tr>
<tr>
<td>Same (one questionnaire)</td>
<td>.83 (17)</td>
<td>.55 (17)</td>
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_Note._ Shown are Pearson correlations. _N_’s are in parentheses. $p < .01$ for all correlations, except $r(17) = .55$, $p < .05$.
lem. Hence, interdependence-primed participants should provide new and nonredundant information in response to the second question, resulting in an attenuated correlation relative to the one-questionnaire condition. Independence-primed participants, on the other hand, might not notice the redundancy problem, resulting in similar correlations across the one-questionnaire and two-questionnaires conditions.

As shown in Table 1, the data are consistent with this prediction. For interdependence-primed participants, the correlation between the happiness and satisfaction questions dropped from $r(17) = .97$ to $r(17) = .55$; $z = 3.91$, $p < .001$, for the difference. The answers provided by independence-primed participants, however, were as highly correlated in the one-questionnaire condition as in the two-questionnaires condition, $z = 0.63$, ns.

In sum, these findings indicate that interdependence-primed participants paid closer attention to the common ground of the research conversation, and were more likely to avoid redundant answers, than were independence-primed participants, but only when both answers were directed to the same recipient. A $z$ test confirms the overall reliability of this predicted interaction pattern, $z = 2.39$, $p < .02$. Experiment 2 provides a conceptual replication of these findings and extends our exploration from temporary to chronic differences in self-construal.

**EXPERIMENT 2**

Investigating the emergence of context effects in self-reports, Schwarz, Strack, and Mai (1991; see also Tournageau, Rasinski, & Bradburn, 1991) asked participants to report their marital satisfaction and their general life satisfaction in different orders. When the life satisfaction question preceded the marital satisfaction question, the answers correlated $r = .32$, yet this correlation increased to $r = .67$ when the question order was reversed. This increase reflects that answering the marital satisfaction question first rendered marriage-related information highly accessible, which participants drew on in evaluating their lives in general. For other participants, both questions were introduced by a joint lead-in designed to evoke the conversational norm of non-redundancy. This lead-in informed them, “We now have two questions about your life. The first pertains to your marital satisfaction and the second to your general life satisfaction.” Under this condition, the correlation dropped from $r = .67$ to $r = .18$. Apparently, the latter participants interpreted the general life satisfaction question as a request for new information pertaining to aspects of their lives on which they had not yet reported. Confirming this interpretation, a condition in which the general life satisfaction question was reworded to read, “Aside from your marriage, which you already told us about, how satisfied are you with other aspects of your life?”, resulted in a nearly identical correlation of $r = .20$. Experiment 2 builds on this study. In a pilot experiment, 41 German students completed either the independence or the interdependence priming task used in Experiment 1 in a classroom setting. Following the priming task, they first reported their satisfaction with their academic lives and subsequently their satisfaction with their lives as a whole. If interdependence-primed participants are more sensitive to the common ground of the conversation, they should be more likely to notice the partially redundant nature of this question sequence. Accordingly, they should interpret the second question as a request for new information and should be less likely than independence-primed participants to draw on academic aspects of their lives in answering the general life satisfaction question. The results confirmed this prediction. Apparently, the independence-primed participants drew on the academic aspects of their lives, brought to mind by the preceding question, resulting in a correlation of $r(20) = .76$, $p < .01$. By contrast, the independence-primed participants were less likely to do so, with a correlation of $r(21) = .34$, $p = .12$. This difference in correlations, $z = 1.91$, $p < .06$, provides a conceptual replication of Experiment 1 and draws attention to a potentially important methodological issue.

As a thought experiment, suppose that the questions about academic satisfaction and general life satisfaction were posed to participants from independent and interdependent cultures, say Germany and the People’s Republic of China. Assuming that the influence of chronic differences in self-construal parallels the effects of priming manipulations, we would observe a higher correlation between academic and general life satisfaction in the German sample than in the Chinese sample. This difference in correlation would suggest that satisfaction with one’s studies figures more prominently in the lives of German than in those of Chinese students and hence contributes differentially to their respective general life satisfaction. A substantive explanation could easily be generated, and we might propose that individual achievement plays a more important role in independent cultures than in interdependent cultures, thus rendering one’s academic performance more central to German students than to Chinese students. Yet such a substantive interpretation might very well be misleading because the differential correlations may merely reflect differential attentiveness to the common ground, as suggested by the pilot results.

Note, however, that attention to the common ground should affect participants’ responses only when the questions asked are potentially redundant. This is the case when the specific question about academic satisfaction precedes the general question about life satisfaction. In this case, respondents may hesitate to consider their academic satisfaction, on which they have just reported, when evaluating their general life satisfaction. Such a redundancy problem does not arise when the general life satisfaction precedes the academic satisfaction question. One may be satisfied with
one’s life as a whole for many different reasons, and having reported that one is does not bear in any clear way on one’s academic satisfaction (for more detailed discussions, see Schwarz, 1996; Schwarz et al., 1991). Accordingly, the predictions of the above thought experiment hold only when the academic satisfaction question precedes the general life satisfaction question. In this case, both questions are potentially redundant, and Chinese students should be more likely than German students to avoid this redundancy in their answers. The resulting difference in correlations should not be obtained, however, when the question order is reversed and hence poses no redundancy problem.

Experiment 2 tested these predictions with students at the University of Heidelberg, Germany, and Beijing University, China. Recent meta-analyses indicate that Germans are indistinguishable from European Americans in terms of independence as well as interdependence. Moreover, Germans (and European Americans) are higher in independence, and lower in interdependence, than Chinese in the People’s Republic of China (Oyserman et al., in press). Participants in both countries reported their academic satisfaction and general life satisfaction, either in the academic–life or the life–academic order. This design provides a direct test of the methodological implications of differential conversational conduct for cross-cultural research. In addition, it extends our research from experimentally induced temporary differences in self-construal to chronic differences in self-construal, allowing us to address the external validity of the experimental manipulations.

Methods

Participants and design. A total of 58 students at the University of Heidelberg and 109 students at Beijing University participated in this experiment. They were randomly assigned to one of two order conditions, resulting in a 2 (Culture) × 2 (Question Order) factorial design.

Procedures. Participants were approached on campus and asked to complete a short self-administered questionnaire, which included the two target questions in counterbalanced order. These questions read, “How satisfied are you with your studies?” and “How satisfied are you with your life as a whole?” They answered both questions on rating scales ranging from not at all satisfied (1) to very satisfied (7). These questions were translated into Chinese and back-translated to ensure comparability.

Results and Discussion

Table 2 shows the results. When the academic satisfaction question preceded the general life satisfaction question, the answers provided by German participants were more highly correlated than the answers provided by Chinese participants, \( z = 2.67, p < .008 \), for the difference in correlations. Confirming a conversational interpretation of this finding, no difference in correlation was observed when the question order was reversed, thus eliminating the conversational redundancy problem. In fact, when the general life satisfaction preceded the academic satisfaction question, the answers of German and Chinese participants showed nearly identical correlations, \( z = .17, \text{ ns} \).

As may be expected on the basis of these cell comparisons, the observed differences in correlation between countries are significantly larger in the academic–life than in the life–academic order, \( z = 1.93, p = .053 \), for the interaction pattern.

On the methodological side, these results highlight the potential pitfalls introduced by culture-sensitive context effects. When the two questions are presented in the life–academic order, we would conclude that satisfaction with one’s studies is a similarly important contributor to general life satisfaction for students in both countries. Yet when the question order is reversed, we would conclude that academic life looms larger in the life satisfaction of German students than of Chinese students. This substantive interpretation would be misleading, however, as the overall pattern indicates. Instead, the pronounced difference in correlations reflects that Chinese participants were more attentive to the common ground, much as independence-primed participants were in Experiment 1 and the pilot study of Experiment 2.

On the theoretical side, the consistency of the pilot study and the cross-cultural results suggests that experimentally induced temporary differences in independent and interdependent self-construals do indeed mirror the effects of chronic differences in self-construal. Under redundancy conditions (i.e., academic–life order), the answers provided by presumably chronically interdependent Chinese respondents correlated \( r(55) = .36 \), whereas the answers provided by interdependence-primed German respondents in the pilot study correlated \( r(21) = .34 \). To our knowledge, this is the first observation bearing on the equivalence of temporary and chronic differences in self-construal using the same experimental task with a priming manipulation and a cross-cultural comparison.

<table>
<thead>
<tr>
<th>Question order</th>
<th>Germany</th>
<th>China</th>
</tr>
</thead>
<tbody>
<tr>
<td>Academic–life</td>
<td>.78 (30)</td>
<td>.36 (55)</td>
</tr>
<tr>
<td>Life–academic</td>
<td>.53 (28)</td>
<td>.50 (54)</td>
</tr>
</tbody>
</table>

Note. Shown are Pearson correlations. \( N \)'s are in parentheses. \( p < .01 \) for all correlations.
GENERAL DISCUSSION

Successful communication requires extensive inferences about the intended meaning of a speaker’s utterances and close attention to the common ground established in the conversation (Clark, 1985). One of the core principles of cooperative conversational conduct asks speakers to provide information that is new to the recipient rather than to reiterate information that the recipient already has. Previous studies have demonstrated that observance of this conversational norm underlies context effects that are difficult to conceptualize in purely cognitive terms, such as the disuse of highly accessible information in forming a judgment (for a more detailed discussion, see Schwarz, 1996, chap. 6). In the current research, we used this aspect of cooperative conversational conduct to explore the role of independent versus interdependent self-construals in conversational sensitivity. Cross-cultural research highlights systematic differences in the extent that sensitivity to the other’s perspective is valued, and interdependent individuals are assumed to be more attentive to the social context than are independent individuals (Fiske et al., 1998; Markus & Kitayama, 1991; Oyserman et al., in press). As expected, we observed that participants with (temporary or chronic) independent self-construals paid closer attention to the common ground than did participants with (temporary or chronic) independent self-construals.

In Experiment 1, interdependence-primed participants were more likely than independence-primed participants to distinguish between two closely related concepts, thus avoiding redundancy, when their answers were directed to the same recipient. Yet the priming procedures did not affect participants’ responses when their answers were directed to different recipients, thus posing no redundancy problem. In Experiment 2, participants from an interdependent culture (China) were more likely to disregard information they had already provided when the question order posed a redundancy problem than were participants from an independent culture (Germany). Yet participants’ cultural background did not result in differential responses when the question order posed no redundancy problem. Moreover, pilot data from interdependence and independence-primed German participants paralleled the effects of chronic self-construals.

In combination, these findings suggest that an interdependent orientation facilitates cooperative conversational conduct, whereas an independent orientation impairs it. Obviously, additional research bearing on other aspects of conversational conduct, and employing natural conversations, will be needed to substantiate this general conclusion.

Methodological Implications

Although researchers rarely think of a self-administered questionnaire as a form of conversation, a large body of research indicates that questionnaire respondents draw on the tacit assumptions underlying the conduct of conversation to make sense of the questions asked (for reviews, see Clark & Schober, 1992; Schwarz, 1994, 1996, 1999; Strack & Schwarz, 1992). The current studies demonstrate that interdependent and independent individuals are differentially likely to do so, presenting a previously unnoticed methodological challenge.

When respondents were asked to report their general life satisfaction after they had already reported their academic satisfaction, the answers to both questions were more highly correlated for German respondents than for Chinese respondents (Experiment 2). Considered in isolation, this finding would suggest that academic satisfaction looms larger in the life satisfaction of German students than of Chinese students, inviting a substantive interpretation, for example, in terms of the differential relevance of individual achievement in both cultures. Reversing the question order, however, eliminated the difference in correlation, consistent with our theoretical analysis of the underlying conversational processes.

Similar considerations apply to Experiment 1, where interdependence-primed participants showed greater differentiation between the concepts of “happiness” and “satisfaction” than did independence-primed participants, provided that the answers were directed to the same recipient. Had we conducted this study with American and Chinese participants, we may have concluded that Chinese respondents have a more complex sense of well-being, characterized by a differentiation between happiness and satisfaction, than do American respondents. With some creativity, we would probably have come up with a substantive explanation for this finding as well.

In both cases, however, the observed differences in correlation are solely due to differences in question interpretation that reflect differential sensitivity to conversational norms. We conjecture that the contradictory findings of cross-cultural research on well-being (for a review, see Oyserman et al., in press) may in part be due to such confounds given the survey-based nature of most of this research. Unless we want to run the risk of misinterpreting cultural differences in the question-answering process as substantive differences in the phenomenon under study, we need to gain a better understanding of how cultural differences influence the cognitive and communicative processes underlying self-reports.

REFERENCES


