

The Role of Construal Processes in Overconfident Predictions About the Self and Others

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Overconfident behavioral predictions and trait inferences may occur because people make inadequate allowance for the uncertainties of situational construal. In Studies 1–3, Ss estimated how much time or money they would spend in various hypothetical, incompletely specified situations. Ss then offered associated “confidence limits” under different “construal conditions”. In Study 4, Ss made trait inferences about someone they believed had responded “deviantly”—again with situational details unspecified and construal conditions manipulated. In all 4 studies, Ss who made predictions or trait inferences without being able to assume the accuracy of their situational construals offered confidence limits no broader than those of Ss who made their responses contingent on such accuracy. Only in conditions where Ss were obliged to offer alternative construals did they appropriately broaden their confidence limits or weaken their trait inferences.

To understand, predict, and control the events in their social experience, people are often obliged, as Bruner (1957) noted three decades ago, to go “beyond the information given.” One important way in which people go beyond immediately available data in the social realm is to make inferences about situational content and context, that is, to infer the nature of various indiscernible or unspecified *details* about the situation and to anticipate its subjective meaning to the actor.

Consider the information that Mrs. Vandergelt, a well-known socialite, has recently donated \$100,000 to the Hunger Project. How likely is she to allow her own home to be used for the project’s next large fund raiser? And what does her donation indicate about her underlying attitudes and personal dispositions? Thoughtful answers to such questions require one to “fill in” some important details: Did she come forward to make the contribution on her own, or did she respond to a specific request from a respected peer? What were the tax consequences of her generosity, and was she thinking about them at the time she decided to make her gift? What experiences, good or bad, has she had on any past occasions when she allowed her home

to be used for various “causes”? More generally, does she have the type of house, furnishings, household staff, and neighbors, or the type of past experiences, expectations, and associations, that would make it relatively easy and pleasant or relatively difficult and unpleasant for her (or anyone else) to lend her residence for the fund raiser. To the extent that we make the wrong guesses and inferences in answering such questions, that is, to the extent that we misconstrue the relevant situational context or fail to appreciate Mrs. Vandergelt’s subjective representation of it, erroneous predictions and attributions become highly likely. And to the extent that we fail to make allowance for the possibility that our guesses may be far off the mark, we are apt to be insufficiently cautious and conservative in the judgments and predictions we make about Mrs. Vandergelt.

The insight that social perceivers must construe or even construct the data on which they rely, and that psychologists therefore must seek to understand the nature not only of the actors’ objective situation but also of their subjective interpretation of that situation, is hardly a new one (see Ross, 1987, 1989; Ross & Nisbett, 1991). Asch’s (1954) textbook left little doubt that this insight is a cornerstone of social psychology. Indeed, the relevance of subjective construal has been acknowledged by researchers within virtually every subdiscipline in psychology. Lewin (1935, 1936) recognized it in emphasizing that the individual’s life space must be characterized in a way that captures its subjective reality and personal significance, and the gestalt psychologists (e.g., Koffka, 1935), as well as many early “cognitivists” (e.g., Brunswik, 1956), consistently gave heavy emphasis to the same objective–subjective distinction. The need to focus on subjective representation in understanding the behavior of the individual has also been echoed by successive generations of personality theorists, from Murray’s (1938) discussion of “beta press,” through Kelly’s (1955) account of personal constructs and Merleau-Ponty’s (1962) reference to personal situations, to more recent discussions by theorists pursuing ques-

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tions of cross-situational "consistency" and person-situation interaction (e.g., Bem & Funder, 1978; Endler, 1983; Magnusson & Endler, 1977; Mischel, 1973; Pervin, 1978).

The research to be reported in this article proceeds from the simple assumption that in making social predictions and attributions, people not only venture beyond the information given to construe details of the situation, they do so without recognizing, or making adequate inferential allowance for, the uncertainty, variability, and likelihood of error in such a venture. We seek to demonstrate that behavioral predictions and trait attributions are accompanied by expressions of confidence that make little if any allowance for the inherent uncertainty of situational construal. More specifically, we attempt to show that expressions of confidence offered by individuals who have no reason to believe that their situational construals are accurate (or that such construals are shared by actors whom they are assessing) will prove to be no more conservative than those offered by the same individuals under circumstances in which they can assume their construals to be precisely correct.

Speculations by investigators in many fields of psychology seem consistent with our general contention. Several recent investigations of human judgment and decision making have concluded that people tend to consider only one possible representation of a problem before making predictions and inferences (e.g., Arkes, Faust, Guilmette, & Hart, 1988; Fischhoff, Slovic, & Lichtenstein, 1978; Hoch, 1985; Shaklee & Fischhoff, 1982), thereby neglecting to make allowance for the possible incompleteness or inaccuracy of their mental representation (Trope, 1978). Thus, even expert mechanics are overly disposed to consider only a subset of possible ways that "things can go wrong" with a car and, as a result, underestimate the likelihood of a breakdown (Fischhoff et al., 1978). Similarly, the failure to consider all sides of an issue seems linked to unwarranted belief perseverance (Anderson, 1982) and to assimilation and confirmation biases that may underlie such perseverance (Lord, Lepper, & Preston, 1984).

Our main argument, we should note, is not that people are unable to appreciate the logical implications of misrepresenting or misconstruing a pertinent stimulus situation. On the contrary, we believe (and think it important to demonstrate) that people can, with explicit enough prompting, be induced to do what they generally do not do on their own, that is, to recognize (a) that ambiguous, incompletely specified, or as yet unexperienced stimulus situations can differ in vitally important respects and (b) that these differences may matter a great deal in determining how a given actor will behave and hence how one should interpret such behavior. We should note in this context that "debiasing" procedures can be used to reduce or eliminate judgmental biases related to those under discussion in this article. In particular, several investigators have shown that when people are explicitly asked to think of evidence supporting a nonfavored hypothesis, their inappropriate confidence in the favored hypothesis is reduced (e.g., Arkes et al., 1988; Hoch, 1985; Koriat, Lichtenstein, & Fischhoff, 1980). In the present research we hope to show that when (but only when) subjects are forced to explicitly consider alternative, contrasting construals they do begin to make allowance for the inherent uncertainty and possibility of error in the process of situational construal.

Although consideration of construal problems and inadequate allowance for misconstrual have a rather long history in psychology, two previous lines of research provide the immediate stimulus for the demonstrations we shall report. The first is our own recent research on overconfident prediction. The second line of relevant research concerns lay dispositionism and the misattribution of social actions and outcomes.

The Overconfidence Effect in Personal and Social Prediction

Research reported in two earlier articles (Dunning, Griffin, Milojkovic, & Ross, 1990; Vallone, Griffin, Lin, & Ross, 1990) explored the pervasive tendency for subjects to express unwarranted subjective certainty in their personal and social predictions. In an initial set of studies, Dunning et al. (1990) demonstrated that subjects' confidence greatly exceeded their objective accuracy regardless of the targets of their predictions (i.e., roommates or strangers interviewed in anticipation of the prediction test) and regardless of the types of prediction items used (i.e., responses to hypothetical dilemmas, inventories of personal habits and past behaviors, or specific responses exhibited in the laboratory). In a second set of studies, Vallone et al. (1990) documented similar overconfidence effects for subjects' predictions about academic, social, and recreational choices for the year to come—their own choices as well as their roommates. Both sets of studies, furthermore, demonstrated the overconfidence effect to be most pronounced for cases in which subjects knowingly or unknowingly made predictions that went against the relevant response base rates, that is, when they predicted that given actors (themselves included) would respond in a manner that deviated from the consensus response of their peers, and thus deviated from the dictates of whatever situational pressures and constraints governed that consensus.

Although overconfidence effects of the sort demonstrated in these studies can reflect the whole range of inferential shortcomings and biases investigated so actively over the past decade (see Kahneman, Slovic, & Tversky, 1982; Nisbett & Ross, 1980), our present contention is simply that problems of situational construal may have played a particularly significant role. We suggest that no matter how well one knows the particular individual—even if the individual to be predicted is the self—one will often be guilty of erroneous predictions if one fails to anticipate correctly what the details of the "situation" in question will actually be like and how the situation will be subjectively experienced. One will be guilty of overconfidence, furthermore, if one fails to recognize that such objective details and subjective representations matter a great deal (enough, frequently, to overcome whatever traits or dispositions the actor might possess) or fails to lower the subjective confidence of one's predictions in light of one's uncertainty about such details.

Lay Dispositionism and the Fundamental Attribution Error

The second line of research relevant to our present concerns deals with inappropriate trait inferences. We contend that a failure to recognize or make allowance for the uncertainties of

situational construal can be a key ingredient in lay dispositionism or the so-called "fundamental attribution error" (Nisbett & Ross, 1980; Ross, 1977, 1978). When an actor's responses seem extreme or surprising, that is, when they seem unwarranted by and inexplicable in terms of the situation as we perceive it, we essentially have two attribution alternatives: We can infer that the actor has thereby manifested his or her own distinctive dispositions, or we can assume that we have erred in our assessment of the relevant situation (or, at least, in our assumptions about the way the situation was perceived or experienced by the actor).¹ Insensitivity to the uncertainty and variability of situational construal promotes dispositional inferences and attributions; conversely, sensitivity to and recognition of the need to make allowance for that uncertainty and variability discourages such inferences and attributions. Our present contention is that social perceivers characteristically leap to unwarranted dispositional inferences, that they fail to use the seeming extremity, inappropriateness, perversity, or even the simple distinctiveness of the actor's behavior as a cue that they (the observers) have somehow misconstrued the situation (i.e., that they either have erred in their assumptions about objective contextual details or have failed to appreciate how such details might be construed or experienced by the actor).

The two main studies to be reported here seek to demonstrate that in predicting their own future behavior (Study 1) and in making attributions about other people on the basis of their past behavior (Study 4), people characteristically are guilty of failing to make the necessary allowance for the uncertainties of situational construal. Both studies attempt to show that subjects remain equally confident in their assessments (i.e., that they bracket their predictions and trait inferences with equally narrow confidence limits) under the following three, very different "construal" conditions: (a) *control* conditions in which no explicit mention is made of the uncertainty of the construal process or the problem it presents for the subjects' assessments, (b) *uncertain construal* conditions in which this uncertainty is made explicit and subjects are required to specify their guesses or working assumptions about relevant situational details before offering any assessments, and (c) *certain construal* conditions in which subjects are first told to specify their guesses about the relevant situational details and then told to make their subsequent assessments assuming their construals to be completely accurate—in other words, to offer their predictions or attributions (and associated confidence intervals) contingent on the complete accuracy of their situational construals. Again, this null hypothesis prediction is based on our assumption that subjects generally will proceed as if their situational construals are precisely correct, even in the two conditions where, logically, they have no license to do so.

In both of these studies a fourth construal condition is introduced, one that we anticipate will force subjects to recognize, and at last make allowance for, the uncertainty and variability of situational construal. In this *multiple construal* condition, subjects will be invited to stipulate alternative construals and will be reminded, before undertaking the relevant prediction or attribution task, that they have no way of knowing how accurate either of their alternative construals (or any others) might prove to be. If, as we hypothesize, subjects do broaden their confidence intervals and make more conservative trait infer-

ences in this multiple construal condition, it will serve to demonstrate that subjects are not completely oblivious to the inferential implications of misconstrual and that they *can* make appropriate inferential allowance for the uncertainties of construal—a result that would make their failure to do so in the control and uncertain construal conditions all the more informative.

Study 1

Study 1 examined the role of situational construal in predictions about the self. All subjects made a series of such predictions on two occasions, the first of which served as a "baseline" for assessing the impact of subsequent construal manipulations. Control condition subjects were simply given the relevant prediction task a second time, with no attempt to influence construal processes or to heighten their salience to the subjects. Uncertain construal condition subjects were asked, before offering their second set of predictions and associated confidence intervals, to describe their own construal of unspecified or ambiguous features of each situational context specified. Certain construal condition subjects were similarly asked to describe their assumptions about the situation before offering the second set of predictions; however, in contrast to the uncertain construal subjects, they were asked to make their second predictions and confidence limits assuming that their situational construals were precisely correct (i.e., to make their predictions contingent, or conditional, on the absolute accuracy of their construals). In the final, multiple construal condition, subjects were similarly asked to stipulate their situational construals after making their first set of predictions. Before proceeding to their second set of predictions, however, they were obliged to offer alternative, contrasting situational construals. Our primary hypothesis was that subjects in the certain construal condition would be no more confident in their predictions than those in the uncertain or control conditions. Only subjects induced to recognize the possibility of alternate construals and misconstruals (i.e., those in the multiple construal condition), we hypothesized, would express less confidence in their judgments than subjects in the other three conditions.

Method

Subjects. A total of 64 undergraduate students furnished data in Study 1. They participated in small groups of 2 to 5 individuals and received course credit for their efforts. One subject's data were subsequently eliminated because he failed to complete several response measures.

Procedure. Upon their arrival, subjects were seated in a small laboratory room and given a brief introduction to the prediction task they would be undertaking. They were told that they would be presented

¹ There are actually two *other* alternatives that become relevant in at least some inference contexts. We can refuse to believe that the response in question actually occurred or, in exceptional cases, we can reassess whatever theories or beliefs about human nature and human behavior gave rise to the expectations that were seemingly disconfirmed. However, our procedure and choices of stimulus materials in the present studies essentially made these alternatives both unlikely and irrelevant.

with a series of hypothetical situations and asked to estimate how much time or money they would spend in each. They were also told that they would provide a range or "confidence interval" around each estimate. Included in the introduction was a chalkboard lesson on the meaning and use of confidence intervals around a numerical prediction, with special emphasis on the 50% confidence intervals to be used in the task at hand. Subjects were told that they would be required to give their "best-guess" estimate for each prediction, and then to bracket that prediction with a range of lower and higher values that they believed had precisely a 50% chance of including the "correct answer." They were told specifically that the range of values stipulated in their 50% confidence interval should be as wide (and as narrow) as necessary for them to feel that the correct answer was just as likely to fall inside the interval as outside it. These introductory instructions were read aloud by the experimenter, who also answered any questions raised by subjects about the prediction task or measures.

To help prepare subjects for their subsequent task, a practice item was presented that invited subjects to imagine themselves waiting to meet a professor who failed to arrive at the appointed time. The subjects were asked to estimate how long they would wait before leaving. They were asked to give their best guess (in minutes) for the length of time they would wait before leaving, and to give the upper and lower bounds (in minutes) for their 50% confidence interval for the length of time they would wait. The order of best-guess and confidence-interval judgments for this practice item was counterbalanced, so that half of the subjects gave their best guess first and half gave their confidence interval first.

When the practice item had been completed, and all questions or difficulties experienced by the subjects had been addressed, the subjects were then asked to make judgments about their own behavior in four new situations using the same rating scales that they had explored in the practice task. The scenarios, described verbatim below, were all quite brief, deliberately leaving many contextual details unspecified and thereby giving subjects ample opportunity to fill in those details for themselves:

1. *The Group Discussion:* You have agreed to participate in a discussion on the topic of abortion with four other people you have not yet met. The discussion is scheduled to last one hour.
Problem: Out of that hour, how many minutes will *you* be the one talking?
2. *Dinner in San Francisco:* You drive up to San Francisco with friends in order to celebrate the end of the quarter. The plans include dinner and then some entertainment afterward.
Problem: How much money will you personally spend on the dinner?
3. *A Birthday Gift:* You are invited to a friend's birthday party at his or her family home near Stanford.
Problem: How much money would you spend on a gift for your friend?
4. *The Telephone Survey:* You receive a telephone call from a telephone survey firm. You initially agree to answer some questions. There is a long series of questions.
Problem: How many minutes will you spend answering questions before ending the call?

After reading each story, subjects gave their best-guess estimates and offered whatever confidence intervals they deemed an appropriate reflection of their uncertainty. (As in the case of the practice item, the order of prediction versus confidence interval was counterbalanced).² When these estimates had been completed, subjects were invited to reread the four scenarios and make a second set of estimates. The written instructions they received regarding this second set of estimates constituted the primary experimental manipulation in our study.

Control condition subjects simply were told that they would be given another chance to make their estimates. They were told that they could

give the same or different estimates and confidence intervals, as they saw fit, but that they were not to look back at their original estimates. Uncertain construal condition subjects were told that we were interested in their view of each situation about which they had made predictions. They were presented again with the description of the first scenario (the group discussion) and asked to use a blank page on which to write "the way you imagined the situation would look, that is, the people involved, the setting, the events, the background details, etc." They were then asked to give a new set of estimates and confidence intervals for the amount of time they would talk in the group discussion, changing or not changing their earlier estimates as they saw fit. The procedure was repeated, in turn, for the other three scenarios.

Certain construal condition subjects, like subjects in the uncertain construal condition, were asked to give their construals for each scenario before completing a second set of estimates. In this condition, however, they were instructed to make their estimates and confidence intervals as if their construals were exactly correct (i.e., to make their judgments contingent or conditional on the accuracy of their construals). They were asked explicitly to give their judgments "assuming now that the situation did, in fact, possess the *exact* characteristics you have just described." Multiple construal subjects received the same initial construal instructions as did those in the uncertain and certain construal conditions. After writing their descriptions of each situation, however, the subjects in this condition were asked to describe *alternative*, very different ways that the situation may have occurred. Then they were asked to offer their second set of estimates and confidence intervals "bearing in mind now that the exact details of the *actual situation* are unknown, that is, it could happen the first way you described it, or any one of the additional ways you just wrote about, or even somehow different from that."

Results

Subjects' initial predictions. Subjects in Study 1 showed considerable within-group variability in their initial estimates of their hypothetical expenditures of time and money in the various situations. Item 1 (minutes the subject would talk in a 1-hr discussion session), for example, yielded a range from 5 min to 25 min, with a mean of roughly 12 min and a standard deviation of more than 4 min. The other items showed even greater variability. Item 2 (money spent on dinner) yielded a range from \$5 to \$50, with a mean of \$14 and a standard deviation of \$8. Item 3 (money spent on a birthday gift) produced a range from \$5 to \$25, with a mean of roughly \$12 and a standard deviation of almost \$6. Item 4 (minutes the subject would continue to participate in a telephone survey) produced a range from 30 s to 25 min, with a mean of 8 min and a standard deviation of about 5 min. This variability in initial estimates is consistent with our assumption that the true nature of the situations in question was necessarily somewhat uncertain and that different subjects would resolve that uncertainty in different ways. But it obviously cannot speak to our primary hypothesis about the subjects' failure to make adequate allowance for the uncertainty of such construals. To address this question, we must examine the changes in confidence intervals that occurred as a function of the construal instructions the subjects received prior to making their second set of estimates.

² Because this order manipulation did not affect any of the dependent variable measures of primary interest in the present study, it will not be discussed further in this article.

Table 1
Mean Change in Confidence Intervals as a Function of Construal Manipulation: Study 1

Individual scenario	Control	Uncertain	Certain	Multiple	<i>F</i> (contrast 1)	<i>F</i> (contrast 2)
Discussion	-7%	-1%	-18%	+29%	1.68	6.33*
Dinner	-2%	+25%	+2%	+17%	0.24	0.09
Party	-1%	-3%	+9%	+52%	0.51	12.74***
Survey	-9%	-10%	-5%	+54%	0.05	10.29***
Overall	-5%	+3%	-3%	+38%	0.04	9.82***
<i>t</i> (difference)	<1	<1	<1	3.23**		

Note. Contrast 1: certain versus uncertain and control. Contrast 2: multiple versus uncertain and control.

* $p < .05$. ** $p < .01$. *** $p < .005$.

Changes in confidence intervals. In order to determine subjects' sensitivity to differences in the relevant construal conditions, percentage change scores for confidence intervals were computed in a two-step process. First, a simple difference score for each item was calculated for each subject by subtracting the width of the initial confidence interval (i.e., the interval offered under no construal instruction conditions) from the width of the second confidence interval, which was offered under the relevant control, uncertain construal, certain construal, or multiple construal condition instructions. Positive scores thus reflected decreases in certainty or, in other words, increases in the allowance subjects made for their uncertainty. Negative scores, by contrast, reflected increases in certainty and corresponding decreases in allowance for uncertainty. Each positive or negative difference score was then divided by the width of the subjects' initial confidence interval, allowing the item in question to be expressed in percentage terms. This percentage measure facilitated comparisons across different items and, of course, reduced the variability that would otherwise have been introduced because of premanipulation differences in subjects' estimates.

Table 1 presents the percentage change scores for each expenditure item or scenario in Study 1. An examination of overall means offers clear support for our primary hypothesis. First, subjects in the certain and uncertain construal conditions were similarly uninfluenced by the very different construal manipulations that intervened between their two sets of estimates. Like subjects in the control condition (who showed a 5% decrease in their confidence intervals when they were simply asked to furnish a second set of assessments), subjects in both of these conditions offered confidence intervals after receiving their specific construal instructions that were, on average, virtually identical to the ones they had offered before receiving the relevant construal instructions. In other words, an explicit invitation to specify construals did not lead to any significant widening of confidence intervals among subjects who knew that their predictions were predicated on construals of uncertain accuracy (M increase = 3%). Nor, remarkably, did the invitation to specify construals and then make subsequent estimates contingent on the certainty and accuracy of these construals lead to any significant narrowing of confidence intervals (M decrease = 3%). Indeed, this negligible decrease in the certain construal condition did not differ significantly from the negligible changes found in the control and uncertain construal conditions, $F(1, 44) < 1$. In a sense, the subjects in all three condi-

tions had responded as if they had all been in the certain construal condition from the outset, and as if no narrowing of confidence intervals were called for when the otherwise highly dubious assumption of perfect correspondence between construal and reality suddenly became justified (in fact, demanded) by the instructions provided.

The results for multiple construal subjects, summarized in Table 1, add weight to this interpretation and demonstrate that our secondary hypothesis was also supported. Subjects invited to offer multiple construals, in contrast to their peers in other experimental conditions, did subsequently increase the width of their confidence intervals (by a mean of 38.0%), $t(15) = 3.23$, $p < .01$. The planned comparison pitting the mean change score for the multiple construal group against the mean change scores for the uncertain construal group and the control group was similarly significant, $F(1, 45) = 9.82$, $p < .01$. Finally, an overall contrast pitting the multiple construal group against the other three groups (a contrast that essentially combines our two hypotheses) accounted for almost 94% of the between-group variance, indicating that it was a very good summary of the group differences.³

Nonparametric analyses of data from the four conditions of the study offered additional evidence supporting the two experimental hypotheses. Certain construal subjects were no more likely to narrow their confidence intervals than were subjects in the control or uncertain construal condition. Nine of the 15 subjects (60%) in the certain construal condition showed a narrowing of their mean confidence intervals, a proportion indistinguishable from the 19 of the 32 subjects (59%) in the control and uncertain construal conditions who showed a similar narrowing. By contrast, 11 of the 16 subjects (69%) in the multiple construal condition showed the predicted widening of mean confidence intervals, whereas only 17 of the 47 subjects (36% overall, ranging from 31% of the subjects in the uncertain construal condition to 44% of the subjects in the control condition) showed such increases in the other three conditions. This difference in the proportion of widened confidence intervals

³ The increase in uncertainty shown by subjects in the multiple construal condition also serves to cast doubt on an alternative possibility—that subjects in the other three conditions had, from the outset, already chosen confidence intervals that made allowance for construal errors (and that certain construal condition subjects had simply disregarded their instructions).

for multiple construal subjects versus the other three conditions proved to be statistically significant, $z = 2.27$, $p < .03$.

Examination of the four individual scenarios used in Study 1 shows that the basic result described so far (i.e., relatively large widening of confidence intervals for the multiple construal condition and small increases or decreases for the other three conditions) proved to be quite consistent across the four different types of predictions. For three of the four items, the overall planned contrasts (multiple construal versus the other three conditions) yielded highly significant F ratios ($p < .005$ in each instance). The only exception was provided by the second item (dinner in San Francisco), in which one single subject responded to the uncertain construal condition instructions with a whopping increase in his best guess (from \$20 to \$75) and, perhaps partly as a consequence, a parallel increase in his associated 50% confidence intervals (from \$10 to \$50). This single observation was sufficiently extreme in its impact on both the relevant cell mean and standard deviation to reduce the F ratio for the planned comparison to a trivial level ($F < 1$).

Taken as a whole, the data from Study 1 suggest that in predicting their own future responses, subjects made little allowance for the uncertainty of their construals unless they were specifically required to offer multiple construals of pertinent situational details. Before extending these findings to the problem of dispositional inference, we will examine evidence from two follow-up studies designed to strengthen the interpretations we have offered and to rule out, as best we can, possible procedural objections and alternative interpretations. The first of these follow-up studies focuses more directly on the contrast between certain and uncertain construal conditions. The second focuses on the impact of multiple construal instructions and attempts to link the relevant widening of confidence intervals more directly to subjects' generation of divergent situational construals.

Study 2

In Study 2, subjects made self-predictions under differing construal conditions in a within-subjects design intended to heighten the salience of the certain versus uncertain status of the relevant situational construals. Thus, in one condition, the *increased certainty of construal* condition, subjects initially made predictions (accompanied by the same 50% confidence intervals used as the dependent measure in Study 1) under instructions that explicitly emphasized the uncertain nature of their construals, and then were asked to make the same predictions a second time, this time *conditional* upon the accuracy of those initial construals. In a second condition, the *decreased certainty of construal* condition, subjects made initial predictions that were conditional upon the accuracy of their construals, and then were asked to offer a second set of predictions that explicitly were not made conditional upon such accuracy. In a control condition, subjects' initial predictions were made in the absence of any mention of construals, and subsequent predictions were made after subjects had received an explicit reminder of the uncertain status of their construals.

Method

Subjects. A total of 60 undergraduate students furnished data in Study 2. They participated in small groups of 2 to 4 subjects and were paid for their participation.

Procedure. Subjects made their first set of predictions under either control, certain construal, or uncertain construal instructions. The control instructions simply asked subjects to make their predictions and give associated confidence intervals without any mention of construals. The certain construal instructions asked subjects to furnish their construals of each situation and then to make predictions "assuming that the situation is, in fact, *exactly* the way that you imagined it to be." The uncertain construal instructions asked subjects to furnish construals for each situation and then to make predictions "bearing in mind that the situation may or may not be exactly the way that you imagined it to be."⁴ After giving these initial predictions and associated confidence intervals, all subjects were asked to reread the scenarios and give a second set of predictions and confidence intervals under new and different construal instructions. Control condition subjects followed up their initial predictions, made in the absence of any particular construal instructions, with predictions made under uncertain construal instructions. Decreased certainty of construal subjects followed up initial predictions made under certain construal instructions with predictions made under uncertain construal instructions. Increased certainty of construal subjects followed up initial predictions made under uncertain construal instructions with new predictions made under certain construal instructions.

Results

As in Study 1, percentage change scores for confidence intervals were computed for each item, and composite means were tested to determine whether subjects in any of the construal conditions showed any statistically significant change in the certainty they associated with their self-predictions. Again, positive scores indicate a widened confidence interval (or decreased certainty of prediction) and negative scores indicate a narrowed confidence interval (or increased certainty of prediction). Essentially, this study sought to determine whether the null hypothesis outcome, that is, unchanging confidence intervals in the face of changed construal instructions, would be supported when a within-subjects design was used that seemingly heightened the salience of the relevant change in construal status.

The results of Study 2 were clear-cut. Overall, the change from certain to uncertain construal conditions (i.e., decreased certainty of construal) led subjects to widen their confidence intervals by 7%—a change associated with a t value of less than 1.0. The change from uncertain to certain construal conditions (i.e., increased certainty of construal) led to a change that was roughly equal in absolute magnitude (11%) and statistical significance, $t(19) = 1.30$, $p > .20$, and, in fact, in the direction opposite to the one normatively demanded. (That is, subjects, on average, widened their confidence intervals in the face of instructions to make their second set of predictions, unlike the first, contingent on the accuracy of their prior construal.) These two changes in mean confidence intervals, of course, did not differ from each other or from the 4% increase in confidence intervals obtained in the control condition (all t s < 1).

Nonparametric analyses, and examination of the two individ-

⁴ Note that this explicit reminder of the inherent uncertainty of construal has been added to the uncertain construal instructions of Study 1 and serves to control for the possibility that the significant changes found in the multiple construal condition of Study 1 resulted merely from such reminders.

ual scenarios, provided further evidence of this failure on the part of subjects to make consistent, normative adjustments in the confidence intervals associated with their predictions under the various construal conditions. Under conditions of both increased and decreased certainty of construal, slightly (but only slightly) more subjects narrowed their confidence intervals than widened them. And in neither scenario did any of the between-condition or within-condition differences approach significance.

Study 3

Our next follow-up study attempted to clarify the role that multiple construal instructions play in inducing subjects to widen their confidence limits. We have assumed that in formulating divergent construals of the same scenarios, subjects are prompted to recognize (a) that differences in the unspecified or unanticipatable details of situational content and context would play a determining role in their responses and (b) that their confidence limits ought to make allowance for this source of uncertainty. If this interpretation is correct, then it should follow that the degree to which subjects are prompted to widen their confidence intervals ought to be a function of the degree to which their multiple construals (or at least their predictions for their responses to the various, differently construed situations) are, in fact, divergent.

Method

Subjects. A total of 32 undergraduate students participated in Study 3. They participated in small groups of 2 to 5 subjects and received course credit for their participation.

Procedure. The scenario used to examine predictions and confidence intervals in Study 3 was the telephone survey scenario used in Studies 1 and 2. All subjects offered their first set of predictions and confidence limits under "control" instructions (i.e., with no mention of situational ambiguity or construal). Subjects were next asked first to describe the way they imagined the situation would look and then to write a second, different description of the imagined situation. At this point, subjects were asked to reconsider their judgments in light of their multiple construals. As in Study 1, they were told to furnish new best-guess estimates and confidence intervals without looking back at their original answers and bearing in mind that "the exact details of the actual situation are unknown." Following these judgments, each subject was asked to furnish two separate sets of best guesses and confidence intervals—one set contingent on the accuracy of the subject's first construal and one set contingent on the accuracy of the subject's second construal.

Results

The first result to be noted is the replication of the basic finding from Study 1, that is, the widening of subjects' confidence intervals following the multiple construal condition instructions. The mean change in Study 3 was 54%, $t(30) = 2.96$, $p < .01$, roughly the same change found for the relevant (telephone survey) scenario in Study 1.⁵ Further examination of these data revealed that 17 subjects increased their confidence intervals after the multiple construal instructions, whereas 7 decreased them and 7 showed no change. Thus, it is clear that

most, but by no means all, of the subjects in Study 3 showed the anticipated impact of the relevant construal manipulation.

The main question of interest in Study 3, however, was not the magnitude or frequency of these increases in confidence intervals. Rather, it was the degree to which such differences were associated with the divergence of the subjects' two separate situational construals. Two types of analyses were undertaken, both examining the divergence between the construals offered by our subjects. To index this divergence, we calculated the absolute difference between a subject's best guess contingent on the accuracy of his or her first situational construal and the best guess contingent on the accuracy of his or her second situational construal. We then divided this difference score by the width of the subject's first best guess to yield a percentage difference score (this corrected for the fact that subjects who gave larger best-guess estimates also tended to vary more in their estimates).⁶ Our first analysis simply examined the correlation between the change in the relevant confidence intervals and the (subsequently measured) discrepancy between the subjects' best-guess estimates for the two separate construals. As predicted, subjects' changes in confidence intervals were directly related to the divergence of their best-guess estimates, $r(29) = .54$, $p < .01$. Our second analysis compared the 17 subjects who increased their confidence intervals with the 14 who decreased or showed no change. Those subjects who increased their confidence intervals reported much more divergent construals and associated best-guess estimates (on average, the differences were more than twice as large for the "increasers" than for the "nonincreasers"), $t(29) = 2.26$, $p < .05$.

Both sets of analyses thus supported the interpretation placed on our earlier findings. Multiple construal conditions led subjects to broaden their confidence intervals, at least in part, because of, and only to the extent that, these conditions forced subjects to generate construals of the relevant situation to which different responses would be likely to occur. The effect was not the result of some kind of very general experimental demand that obliged subjects to merely increase their confidence interval because it would be deemed wiser (or more appropriate or more welcome) by the experimenter.

The results of Study 3 provide additional evidence that is consistent with our more general hypothesis, that is, that people characteristically fail to make adequate allowance for the inherent uncertainty of their situational construals. If our subjects made their initial judgments after considering one and

⁵ One extreme outlier was dropped from this analysis. Even though this subject's 18-fold increase in the width of his confidence interval would have contributed mightily to the mean change score, his extreme standing made subsequent correlational analyses difficult to perform and interpret. However, all relevant tests remain significant even when this subject is included.

⁶ We used this measure, rather than a subjective rating of the "divergence" of the content of the construals, because two construals very different in content might still give rise to the same best guess. In such a circumstance, the multiple construals would not serve to prompt the subject to consider the relevance of situational uncertainty to his or her confidence interval. In fact, a subject might well become more certain if different construals led to the same best guess.

only one construal of the situation, then judgments subsequently made contingent on the accuracy of these initial construals should deviate little, if at all, from the subjects' original, spontaneous judgments. This proved to be the case. The mean absolute difference between subjects' initial best-guess estimates of the number of minutes they would stay on the phone and their best-guess estimates conditional on the accuracy of their initial construal was relatively small ($M = 2.65$). By contrast, if subjects made their initial estimates without considering more than one construal, judgments made contingent on an alternative, second construal should be distinctly different from their initial estimates. Again, this prediction was supported by the data. The mean absolute difference between subjects' initial best-guess estimates and their best-guess estimates conditional on the accuracy of their second construal was relatively large ($M = 7.98$). The difference between these two mean discrepancy scores was statistically significant, $t(30) = 3.03$, $p < .01$.

The same logic can also be applied to a final set of correlational analyses. If, contrary to our assumptions, subjects' confidence intervals took into account at least two different construals of the specified situation, then the width of their initial confidence intervals should have been a function of the discrepancy between the best guesses they subsequently made contingent on those two differing construals. But if subjects' original confidence intervals were the product of single construals, then the width of these confidence intervals should not have been a function of the discrepancy between such contingent best guesses. Consistent with the single construal hypothesis, the relevant correlation⁷ proved to be quite low, Spearman $r(29) = .174$, *ns*. Similarly, if the discrepancies between subjects' initial noncontingent best-guess estimates and the first of their two contingent best-guess estimates were essentially the product of random error, then such discrepancies should not have predicted the degree to which subjects widened their confidence intervals after the multiple construal manipulation. Once again, the relevant correlation proved to be very modest, Spearman $r(29) = .179$, *ns*. By contrast, the deviations between the subjects' initial (noncontingent) best guesses and their best guesses contingent on their second construals (presumably a reflection, at least in part, of the degree of difference between the subjects' two construals) should have predicted the widening of the subjects' confidence intervals. This correlation, in contrast to the two previously described, did reach conventional significance levels, Spearman $r(29) = .386$, $p < .05$, although the relevance differences in magnitudes of those correlations would not reach conventional significance limits.

The results of Study 3 thus did more than merely provide support for our contention that multiple construal instructions were effective because they caused subjects to become aware of the uncertain nature of their construals. They also added weight to our more basic argument that people make spontaneous judgments as if their initial construals of the situation are precisely correct.

Study 4

In Study 4, we turned our attention from predictions to trait inferences. Otherwise, its design and rationale were closely re-

lated to those of Study 1.⁸ Thus, instead of predicting their own behavior in some unspecified situation, subjects were asked to make trait assessments about another person who had behaved in a seemingly extreme and distinctive fashion in such a situation. Confidence intervals associated with the relevant trait assessments, as well as the simple extremity of such assessments, provided the dependent variable measures of interest. As in Study 1, judgments were made on two consecutive occasions, with the first occasion serving to provide a basis for assessing the effect of subsequent construal manipulations. Subjects in the control condition were simply given the judgment tasks on two successive occasions with no intervening construal task or additional instructions. Subjects in the uncertain construal condition again were asked to describe their guesses or assumptions about the unspecified details of the situation before they gave their second set of judgments. Subjects in the certain construal condition again were asked to offer their construals and then to make their second set of judgments conditional upon the total accuracy of these construals. Finally, subjects in the multiple construal condition were asked to construct alternative construals of the relevant situation, a task designed to drive home the uncertainty inherent in their situational construals. We expected, as in the first study, that certain construal subjects would be no more confident or extreme in their trait inferences than those subjects in the uncertain or control conditions, but that multiple construal subjects would express less confidence and offer less extreme trait attributions than subjects in the other two conditions.

Method

Subjects. Subjects were 48 undergraduate students; 34 received course credit and 14 were paid for their participation. Subjects received instructions and completed their questionnaires in small groups.

Procedure. Subjects again were seated in a small laboratory room and given a brief introduction to the inference task they would be facing, that is, making trait judgments about an actor on the basis of his behavior in a particular situation. The introduction began with a discussion of the use of percentile scores to represent the relative extremity of a person on some personality dimension. Also included in the discussion was a chalkboard lesson on the meaning and use of confidence intervals around a numerical prediction. In particular, the discussion illustrated the use of the 50% confidence interval. Subjects were told to give their percentile best-guess estimate for each prediction, and then to bracket that prediction with a range of lower and higher values that they believed had precisely a 50% chance of including the correct answer. As in our earlier studies, they were told specifically that the range of values stipulated in their 50% confidence inter-

⁷ The difference scores could no longer be "normalized" relative to subjects' initial best-guess estimates (because, unlike the prior set of correlations, the current analyses use the initial estimates to create the difference scores). As a consequence, the distributions were skewed, which obliged us to rely on rank-order correlation in our analyses.

⁸ Study 4 was run *before* Study 2 and Study 3 (which were undertaken to address methodological and interpretative issues about Study 1 raised by our reviewers). Study 4 thus used construal manipulations very similar to those of Study 1, without benefit of any refinements added in Studies 2 and 3.

val should be as wide (and as narrow) as necessary for them to feel that the correct answer was just as likely to fall inside the interval as outside it. These instructions were read aloud by the experimenter, who also answered any questions raised by subjects until it was clear that all subjects knew how to use the relevant confidence measures.

The general structure of the questionnaire was similar to that used in the three previous studies. The questionnaire began with a discussion of the use of percentile scores to describe a person's status with respect to a given personality dimension. The instructions indicated that "In this study, we will describe a person's action in a particular situation and ask you for your best guess about what that person is like." Subjects then read a modified version of Scenario 1 (the group discussion) from Study 1, and were asked to make a series of trait assessments about an individual who purportedly behaved in an extreme and seemingly distinctive manner in the relevant situation. The specific description of the actor's behavior was as follows:

Peter is a sophomore at Stanford. He is 19 years old and is thinking of majoring in international relations. When asked if he was willing to participate in a discussion on the topic of abortion with four other people, Peter agreed to do so. The discussion was scheduled to last one hour. It ended up lasting one hour and fifteen minutes. Out of that time Peter talked for 45 minutes (the next most talkative person talked 18 minutes).

Subjects were first asked to estimate what percentage of Stanford students would talk longer than Peter in this situation. They were asked to give a best-guess estimate and a 50% confidence interval around this estimate. They then gave similar responses to questions about Peter's percentile rank in terms of how opinionated, outgoing, and domineering they thought him to be.⁹

When these initial trait ratings were completed, each subject received instructions consistent with one of the four relevant construal conditions, just as in Study 1. Subjects in the control condition simply read a repetition of the discussion scenario and were asked to give their estimates and confidence intervals once again, changing them or not as they saw fit. Subjects in the uncertain construal condition were given a blank page on which they were asked to "describe the way you imagined the situation would look, that is, the people involved, the setting, the events, the background details, etc.," and when they had done so they were simply asked to give a new set of trait estimates and confidence intervals, again changing them from their initial ratings in whatever manner and to whatever extent they saw fit. The certain construal questionnaires began by requesting similar construal information, then (as in Studies 1 and 2) the subjects were asked to give a second set of estimates and confidence intervals assuming (i.e., conditional upon) the complete accuracy of such construals.

Subjects in the multiple construal group were given space to describe their original construal, and then, as in Study 1, they were asked to list other, different ways the situation could have looked. They were then asked to give their second set of estimates and confidence intervals, bearing in mind that the situation could have turned out in any of the ways they had described, or even in another way altogether.

Results

Subjects' initial estimates. Subjects in Study 4 showed considerable within-group variability in their initial estimates of Peter's personal qualities relative to other Stanford students. The first question (how many students would talk longer than Peter in this situation) yielded a mean of 18.5%, with a standard deviation of 13.1%; however, judgments ranged all the way from 1% to 62%. Similar results were obtained for the questions that dealt with Peter's traits, that is, how opinionated Peter was ($M =$

71.9%, $SD = 13.0%$, range = 50% to 95%), how outgoing Peter was ($M = 66.5%$, $SD = 12.8%$, range = 30% to 85%), and how dominant Peter was ($M = 69.3%$, $SD = 15.8%$, range = 25% to 95%).

Changes in confidence intervals. The observed variability in assessments is consistent with our assumption that the construal process is inherently subject to uncertainty and that different subjects would construe situational details in different ways. Our primary hypothesis in Study 4, however, again dealt with the confidence intervals that subjects associated with their assessments. Specifically, it was hypothesized that subjects in the control and uncertain construal conditions (who logically were obliged to make allowance for the uncertainty of their construals) would offer confidence intervals no broader than those offered by subjects in the certain construal condition (who had no need to make allowance for such uncertainty). We further hypothesized that only in the multiple construal condition, where subjects were obliged to explicitly formulate alternative construals and were reminded that the accuracy of all such situational construals was indeterminate, would subjects broaden their confidence intervals beyond those offered in the control and uncertain construal conditions.

To test these hypotheses, percentage change scores were determined for the confidence intervals associated with each trait, and composite means were once again calculated and subjected to statistical analysis. The results of these calculations are presented in Table 2. An examination of the overall mean changes in confidence intervals presented in Table 2 makes it clear that our major experimental prediction was supported. Subjects in the certain construal condition, like subjects in the control and uncertain construal conditions, offered essentially the same size confidence intervals before and after receiving the relevant construal instructions. The mean change score for the certain construal condition was indistinguishable from the combined mean for the control and uncertain construal conditions, $F(1, 33) < 1$. As in Study 1, our secondary hypothesis was also supported. Only subjects obliged to formulate alternative construals, and reminded of their indeterminate nature, showed substantial widening in the range of their confidence intervals, $t(11) = 2.80$, $p < .02$. A second planned contrast, pitting the change scores for the multiple construal group against the uncertain construal and control groups combined, was significant, $F(1, 33) = 6.05$, $p < .02$. It is worth noting, furthermore, that an overall contrast pitting the multiple construal group against the three other conditions accounted for essentially all (96%) of the between-groups variance, indicating that this contrast (which combined our two hypotheses) offered a complete summary of the group differences.

Nonparametric analyses of data from the four conditions give further support to our two experimental hypotheses. Eight of the 12 subjects (67%) in the certain construal condition

⁹ Our questionnaires also included two "reversed" trait ratings: shyness and politeness. These measures were not included in the present analysis because the subjects did not consistently view Peter as shy and polite, in part because several subjects seemed confused by the scale reversal and offered anomalous ratings. Nevertheless, when the data from these two ratings are included, the pattern of results remains essentially the same as those reported for the "nonreversed" traits.

Table 2
Change in Trait Inferences as a Function of Construal Condition: Study 2

Measure	Control (<i>n</i> = 12)	Uncertain (<i>n</i> = 12)	Certain (<i>n</i> = 12)	Multiple (<i>n</i> = 12)	<i>F</i> (contrast 1)	<i>F</i> (contrast 2)
Confidence intervals (% change)						
<i>M</i>	+5%	-4%	-3%	+36%	0.07	6.05*
<i>t</i> (difference)	<1	<1	<1	2.80*		
Extremity of inference (rating 2 - rating 1)						
<i>M</i>	+0.9	-2.0	+0.3	-7.2	0.03	2.99†
<i>t</i> (difference)	<1	<1	<1	2.89*		

Note. *n* = 12 for each condition. Contrast 1: certain versus uncertain and control. Contrast 2: multiple versus uncertain and control.
 † *p* < .10. * *p* < .05.

showed some narrowing of their mean confidence intervals, a proportion identical to the 16 of the 24 subjects in the control and uncertain construal conditions who showed a similar narrowing. By contrast, 10 of the 12 subjects (83%) in the multiple construal condition showed the predicted widening of mean confidence intervals, whereas only 12 of the 36 subjects (ranging from 25% of subjects in the control condition to 42% of subjects in the uncertain construal condition) showed such widening in the other three conditions. This difference in the proportion of widened confidence intervals for multiple construal subjects versus the other three conditions proved to be statistically significant, $z = 3.01$, $p < .01$.

Extremity of trait assessment. The logic of our present conceptual analysis suggests that not only the confidence intervals associated with a given trait assessment, but the extremity of the assessment, should be responsive to the status of one's situational construals. That is, uncertainty about the nature of the situation that prompted or provided the context for a given actor's response, especially when the response seemed extreme and potentially "diagnostic," should compel a rather high degree of conservatism in making trait inferences about such an actor. Our hypothesis, of course, was that subjects would make little if any allowance for such uncertainty. Specifically, we predicted that subjects in the certain construal condition (in which no such allowance was logically demanded) would yield trait inferences no more extreme than subjects in the control or uncertain construal conditions (in which such allowance clearly was demanded).¹⁰ Only in the multiple construal condition, where subjects were obliged to explicitly formulate alternative construals (and reminded that the accuracy of all such situational construals was indeterminate), it was hypothesized, would subjects become more conservative in their trait assessments.

To test these hypotheses, a composite measure was created that reflected the degree to which Peter's monopolization of the discussion session led subjects to simple correspondent inferences, that is, that he was extremely opinionated, outgoing, or domineering and that few other students would monopolize the discussion to the same degree in the same circumstances. Simple change scores for this composite were calculated to reflect differences between initial premanipulation assessments and subsequent assessments after the subjects had received control, uncertain, certain, or multiple construal instructions.

Table 2 presents the relevant mean change scores, which offer some modest support for our hypotheses. As predicted, the certain construal condition subjects showed virtually no increase in the extremity of their trait inferences about Peter ($t < 1$) and produced change scores that did not differ significantly from the slight increases and decreases recorded, respectively, in the control and uncertain construal conditions, $F(1, 33) < 1$. Furthermore, again as predicted, the multiple construal condition did yield a statistically significant decrease (albeit one that was small in absolute terms) in the extremity of trait ratings, $t(11) = 2.89$, $p < .02$. This modest mean decrease for the multiple construal condition, however, differed only marginally from the mean change scores for the control and uncertain construal conditions, $F(1, 33) = 2.99$, $p < .10$. More detailed analysis, in turn, revealed that the between-condition differences were entirely the product of changes in the three trait ratings (how opinionated, outgoing, and domineering Peter was), and not in judgments of how many people would talk more than Peter in this situation. Indeed, when the data for the three trait ratings were analyzed separately from the "talkativeness" measure, the planned comparison reached conventional significance levels, $F(1, 33) = 4.45$, $p < .05$.

Discussion

The presently reported studies were designed to examine the link between the uncertainty of situational construal and the phenomena of overly confident behavioral predictions and overly confident and extreme trait inferences. The results of these studies suggest that both in predicting their own future behavior and in making inferences about others, people are disinclined to make adequate inferential allowance for their

¹⁰ The derivation of this prediction is not quite so straightforward as that underlying our predictions about the breadth of confidence intervals. In principle, subjects could have treated the extremity of Peter's response as a cue that the situation was extraordinary in some as yet unspecified way, or even postulated some particular situational feature that compelled Peter to act as he did. If subjects did so, and thereby showed themselves to be free of the very dispositionist bias our studies were designed in part to explore, then one would not expect them to further reduce the extremity of their trait inferences upon being told that their guesses about the situation had been correct.

uncertainty about relevant situational details. Particularly notable was the fact that subjects' confidence intervals, for both the personal and social assessments, were no different when they had been instructed to make such assessments conditional on the complete accuracy of their construals than when they made their judgments without being able to assume such accuracy. These results support the more general contention that people typically generate a single construal of an ambiguous or incompletely specified situation and then, unless powerfully prompted to do otherwise, make relevant assessments and predictions as if their situational construals corresponded to perfect knowledge.

We should emphasize here that our subjects' apparent reluctance to acknowledge or make allowance for the uncertainty inherent in their construals does not constitute direct evidence that their resulting predictions and inferences were insufficiently conservative. Nor can we prove that the conservatism encouraged by our multiple construal manipulation led to more accurate and appropriate assessments. To do so, of course, would require that we undertake subsequent objective measures of predicted behavior and, even more difficult, that we somehow make accurate percentile assessments of the target individual's "real" dispositions. We can, however, reiterate our contention that to the extent that people naturally and habitually treat their situational construals as if they are error-free representations of reality, their predictions and assessments are bound to be overconfident. We can also point to our earlier demonstrations (Dunning et al., 1990; Vallone et al., 1990) that overconfidence in both personal and social prediction is a robust phenomenon. And we can remind our readers of the longstanding contention of attribution theorists (Heider, 1958; Jones, 1979; Ross, 1977) that people characteristically overuse dispositional explanations without resorting to situational explanations for extreme or surprising behavior.

Our present research, in a sense, suggests that people do not ever fully overcome the egocentrism that Piaget and others (see Inhelder & Piaget, 1958; Piaget, 1954; also see Flavell, 1963; Flavell, Botkin, Fry, Wright, & Jarvis, 1968) claim to be characteristic of the immature social perceiver (see Ross, 1981). At least within the domains of interest in our present study, even adults seem unable to recognize the need for, or are unwilling to make, adequate inferential allowance for the fact that their construals of relevant social situations (i.e., inferences about, constructions of, or images of these situations) are neither isomorphic with reality nor universally shared by other actors.

How heavy a price do we pay for failing to make allowance for the uncertainties of the construal process, and, as a consequence, for making overly confident predictions and social assessments? The question is an empirical one, and needs to be answered in real-world contexts where expressions of confidence or probability estimates are not only solicited but given weight in the decision-making process (see Lichtenstein, Fischhoff, & Phillips, 1982). Nevertheless, it is easy to imagine that the price will often be substantial. As we have noted in previous work (see Dunning et al., 1990; Vallone et al., 1990), overly confident predictions would seem to discourage attempts to gather more or better information, to consider alternative courses of action, or to seek some type of "insurance" to reduce the consequences of error.

In the domain of personal attribution, the consequences of treating unreliable situational construals as reliable situational knowledge seem even more obvious. Perhaps the single most important attributional task we face involves the interpretation of observed or reported behavior that, taken at face value, would suggest negative attributes and motives on the part of the actor. When people behave in ways that surprise or offend us (that is, in ways that are "unlike us" and, we presume, unlike other normal, decent, reasonable actors), we are likely to make strong dispositional inferences (Ross, 1977; Ross, Greene, & House, 1977). The problem, we should reiterate, is that by neglecting the uncertainty involved in our situational construal, we may be erroneously attributing the behavior to the disposition of the actor involved. Further, to the extent that we conclude that such actions reflect corresponding motives and attributes, we may even contrive interaction contexts and interact with those actors in a manner that serves to confirm our beliefs about them (cf. Snyder & Swann, 1978), thereby becoming more estranged from those whose "deviant" behavior we have attributed to differences in basic traits, values, or beliefs.

The success of the multiple construal instructions in encouraging more conservative judgments illustrates that people can be made not only to recognize the possibility that situations may be misconstrued, but also the fact that predictions and trait assessments must be adjusted to reflect that possibility. Such insights, however, may require a prompt or cue that is more explicit and powerful than any normally available in everyday inference situations. In particular, the incompleteness or ambiguity of a description alone is rarely enough to alert us to the unreliability of our construals. Nor is the surprise associated with behavioral extremity or seeming deviance a potent enough cue to make us reconsider our preliminary situational construals, that is, to search for alternative construals (versions of the situation that could lead many reasonable people, even people like us, to behave in a rather similar fashion) and, more important, to withhold dispositional judgments in anticipation of the possibility that such alternatives exist and apply, even if we cannot yet specify their details.

Our multiple construal results also tempt us to speculate about sources of, and remedies for, human disagreement and conflict. If we were to be more conservative in the inferences we draw about our adversaries, and looked longer and harder to discover situational construals that made their actions reasonable and even unavoidable—in short, if we acted more like the subjects in our multiple construal condition—we might find it easier to resolve conflict and communicate with our opponents. This is not simply a restatement of homilies that exhort us to refrain from judging others harshly until we "walk a mile in their moccasins," it is a directive to withhold judgment until one knows both the actor's situation and his or her construal of that situation. Indeed, one area of application that merits investigation in light of these findings involves the role of construal differences, and the power of multiple construal manipulations, in conflict and negotiation situations (Ross & Stillinger, *in press*). Are conflict and ill will heightened because antagonists fail to recognize or make adequate inferential allowance for uncertainties and divergences in the construal of past events, present proposals, and existing social and political contexts? Can multiple construal (or related) manipulations induce

the kind of attributional and intellectual charity required for antagonists to develop mutual respect and trust? Such questions suggest that our current line of inquiry offers potentially important practical implications as well as theoretical ones.

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