Creeping Dispositionism: The Temporal Dynamics of Behavior Prediction

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Four studies tested the hypothesis that temporal distance increases the weight of global dispositions in predicting and explaining future behavior. Study 1 found that the correspondence bias was manifested more strongly in predictions of distant future behavior than of near future behavior. Study 2 found that participants predicted higher cross-situational consistency in distant future behavior than in near future behavior. Study 3 found that participants sought information about others' more global dispositions for predicting distant future than near future behavior. Finally, Study 4 found that participants made more global causal attributions for distant future outcomes than for near future outcomes. The results were interpreted as supporting the assumption of construal level theory that perceivers use more abstract representations (higher level construals) to predict and explain more distant future behaviors.

The ability to control one's outcomes in social situations often depends on one's ability to predict others' behavior. The quality of everyday life decisions, such as the decision to approach or avoid others, to compete or cooperate, or to seek or avoid help, depends on one's ability to predict how others will respond. Indeed, much of the motivation for social information processing has been assumed to derive from the need to reduce uncertainty in predicting others' behavior (see, e.g., Fiske, 1993; Higgins & Bargh, 1987; Trope & Liberman, 1996). Sometimes these predictions concern others' near future behavior (e.g., "Will Leslie come to my birthday party this weekend?"). In other cases, the predictions concern more distant future behavior (e.g., "Will Leslie come to my birthday party next month?"). The question we address in this article is what kind of knowledge perceivers use for predicting behavior in near future versus distant future situations. If we suppose that perceivers have the same information about the two situations, the question is whether perceivers would use this information differently depending on whether they are trying to predict others' behavior in near future or in distant future situations.

Temporal Construal

Our approach to this question is grounded in the social–cognitive view that perceivers' predictions of future events depend on how the perceivers mentally construe those events (see, e.g., Griffin & Ross, 1991; Sherman, 1980; Wilson, Wheatley, Meyers, Gilbert & Axsom, 2000). In this view, perceivers' predictions about their own and others' behavior are based on an abstract, schematic representation of the behavior and fail to incorporate contextual factors. Overreliance on schematic models of future behavior has been assumed to underlie individuals' overconfident behavior predictions (Dunning, Griffin, Milojkovic, & Ross, 1990; Griffin, Dunning, & Ross, 1990; Vallone, Griffin, Lin, & Ross, 1990). Several researchers have suggested that the planning fallacy—namely, the tendency to underestimate task completion times—can be traced to individuals' reliance on oversimplified representations of future tasks—representations that do not capture the full complexity of these tasks (Buehler, Griffin, & Ross, 1994; Kahneman & Lovallo, 1991; Kahneman & Tversky, 1979). Recently, Gilbert, Wilson, and their colleagues (Gilbert & Wilson, 2000; Wilson et al., 2000) proposed that, when asked to predict the intensity and duration of their reactions to future events, individuals focus on salient consequences of the events and underestimate the diluting effect of contextual factors.

These lines of research suggest, then, that perceivers construct abstract mental representations of future situations as a basis for making predictions for those situations. Building on this research, construal level theory (CLT) proposes that perceivers construct more abstract representations, or higher level construals, of distant future events than of near future events (Liberman, Sagristano, & Trope, in press; Liberman & Trope, 1998; Trope & Liberman, 2000; Trope & Liberman, in press). High-level construals are schematic, decontextualized representations that extract the gist from the available information. These construals consist of general, superordinate, and core features of events. Low-level construals tend to be more concrete and include subordinate, contextual, and incidental features of events. Low-level construals are thus richer but less structured and parsimonious than high-level construals.

Initial evidence for the effect of temporal distance on construal was obtained by Liberman and Trope (1998, Study 1). Participants were asked to describe either near ("tomorrow") or distant ("a year from now") future activities. The results showed that abstract, superordinate descriptions were more common in the distant future condition than in the near future condition. For example, participants described moving into a new apartment as starting a new life when referring to the distant future but as packing and carrying boxes when referring to the near future. A series of studies by Liberman, Sagristano, and Trope (in press) provided further evidence for time-dependent construals. For example, one of the studies (Study 1) found that individuals tended to use broader and more inclusive (i.e., more abstract) categories to classify objects that pertained to distant future situations than to classify objects that pertained to near future situations. Participants in this study imagined themselves taking part in different situations (e.g., going on a camping trip) and classified objects related to each situation (e.g., potato chips, boots, hot dogs, blanket, rope) into as many categories as they thought appropriate. Results indicated that participants used fewer (namely, broader, more abstract) categories to classify the objects they imagined in a distant future situation than to classify objects in a near future situation.

Predicting Near Future Versus Distant Future Behavior

Our past research has tested the implications of temporal construal for evaluation and choice of future options. The present research examines the implications of temporal construal for social prediction. The implications are straightforward: Perceivers may use more abstract, higher level construals for predicting behavior in distant future than in near future situations. The distinction between concrete and more abstract construals of behavior has been of central importance to person perception and attribution theories (Gilbert & Malone, 1995; Heider, 1958; Jones, 1979; Jones & Davis, 1965; Trope, 1986). These theories posit that concrete identifications of behavior and the surrounding circumstances sometimes serve as a basis for inferences of more abstract dispositional qualities. The inference may terminate at the relatively concrete level of mental states—namely, the target's contextualized expectations, feelings, and intentions—or proceed to increasingly more abstract dispositions (Jones & Davis, 1965; Trope, 1989; Trope & Liberman, 1993). Mental states correspond to *cognitive–affective mediating units in* Mischel and Shoda's (1995) theory of personality (see Idson & Mischel, 2001). They act as context-dependent antecedents of behavior. For example, people typically conceive of an intention to help another person as depending on various contextual factors, such as the identity of the recipient, his or her relationship to the helper, and social norms. At a higher level of abstraction, personality trait inferences (e.g., extraversion, agreeableness) refer to global, decontextualized dispositions that are invariant across different situations.

In Semin and Fiedler's (1988) linguistic categorization model, trait adjectives constitute the highest level of abstractness in describing behavior. At lower levels of abstraction are state verbs ("A is angry with B"), interpretive action verbs ("A hurt B"), and descriptive action verbs ("A pushed B"). Level of abstraction is also central to Dweck's (see, e.g., Chiu, Hong, & Dweck, 1997; Dweck & Leggett, 1988; Levy, Plaks, & Dweck, 1999) distinction between implicit theories of personality and intelligence as fixed (entity theory) or malleable (incremental theory). Perceivers with incremental theories tend to explain behavior in terms of contextualized mental states (e.g., goals, problem solving strategies), whereas perceivers with entity theories tend to explain behavior in terms of decontextualized global traits (e.g., morality) and abilities (e.g., intelligence).

In terms of CLT, global traits constitute high-level construals of behavior, whereas mental states constitute low-level construals of behavior. Therefore, traits should receive more weight and mental states should receive less weight in predicting others' behavior in the distant future than in the near future. Moreover, because traits are less contextualized than mental states, information about concrete aspects of the situational context should receive less weight in predicting distant future behavior than in predicting near future behavior. In a distant future situation, people are expected to express their character, whereas in a near future situation, they are expected to respond more flexibly to the specific contingencies of the situational context. Therefore, perceivers would expect others' behavior to show greater cross-situational consistency in the distant future than in the near future. For example, an individual who is believed to be a cooperative person would be expected to always behave cooperatively in distant future situations but would be expected to sometimes behave competitively in near future situations.

CLT also proposes that a target person's present behavior is more likely to be construed in terms of the target's underlying traits when it is used to predict the target's more temporally distant behavior. This proposal has interesting implications with regard to the correspondence bias, the tendency to attribute situationally constrained behavior to the corresponding personal disposition. In CLT, dispositional attributions constitute high-level construals of behavior. Therefore, they are more likely to be made when the situationally constrained behavior is used to predict the target's behavior in the more distant future. For example, a situationally constrained proabortion statement is more likely to be attributed to the speaker's corresponding attitude when the statement is used for predicting the speaker's distant future behavior than when it is used for predicting his or her near future behavior regarding the abortion issue. This, in turn, may lead perceivers to predict more confidently the target's behavior regarding the abortion issue in the more distant situation. Ironically, then, perceivers may treat a target's present situationally constrained behavior as more predictive of what the target will do in a distant future situation than of what he or she will do in a near future situation.

The Present Research

The present studies were designed to test several implications of the CLT proposal that perceivers use higher level construals for predicting distant future behaviors than for predicting near future behaviors. Study 1 investigates the correspondence bias in predicting near future versus distant future behavior. We expected that perceivers would show the correspondence bias in making distant future predictions more than in making near future predictions. Study 2 investigates predictions of others' behaviors across different situations. We expected that perceivers would predict greater cross-situational consistency in others' distant future behavior than in their near future behavior. Study 3 examines the kind of information perceivers seek about others when predicting their near

future versus distant future behavior. We expected that perceivers would seek information about more global characteristics when attempting to predict others' distant future behavior than when attempting to predict their near future behavior. Finally, Study 4 investigates the globality of the explanations perceivers offer for temporally proximal and distal outcomes. We expected that perceivers would generate more global explanations for distant future outcomes than for near future outcomes.

Study 1: Time Perspective and the Correspondence Bias

The present study used a variation of the Jones and Harris (1967) attitude attribution paradigm. Tel Aviv University students read an essay arguing in favor of Israel's withdrawal from Lebanon. They were told that the writer was instructed either to write a prowithdrawal essay (constrained condition) or to express his or her own opinion (unconstrained condition). Participants then predicted the writer's attitude-related behavior in either near future or distant future situations and indicated what they thought was the writer's attitude regarding Israel's withdrawal from Lebanon.

Method

Participants. Participants were 110 Tel Aviv University students (84 women) who participated in the study to fulfill an introductory psychology course requirement. Participants were randomly assigned to the four conditions of the Time (near vs. distant) × Situational Constraints (constrained vs. unconstrained) design. They participated in the experiment in individual sessions.

Procedure. Participants signed up for an experiment entitled "Judging Attitudes." The study was described as part of a series of studies on attitudes toward controversial issues. The experimenter informed the participants that a pretest sample of students had been asked to write short essays expressing attitudes toward Israel's withdrawal from Lebanon. (The study was conducted a few months before Israel's withdrawal from Lebanon in May 2000.) Participants were asked to read a one-page essay allegedly written by one of the students. The essay provided political, moral, and military arguments for a unilateral, unconditional withdrawal from Lebanon.

Half of the participants were told that the writer had been instructed to express an opinion favoring Israel's withdrawal from Lebanon (constrained condition), whereas the other half were told that the writer had been instructed to express her opinion on the issue (unconstrained condition).

Participants then predicted the writer's attitude-related behaviors in either the near future (the following day) or the distant future (a year later). The four behavior prediction questions were as follows: "During a conversation with her friends, how likely is the writer to express prowithdrawal attitudes?" "How likely is the writer to participate in a prowithdrawal rally?" "How likely is the writer to join a pro-withdrawal activist organization?" and "How likely is the writer to agree to express pro-withdrawal opinions on a radio interview?" Participants indicated the likelihood of each behavior on a scale ranging from 0 (*There is absolutely no chance the writer will do this*) to 100 (*The writer will definitely do this*).

After making the behavior predictions, participants were asked to assess the writer's true attitude ("In your opinion, what is the writer's true attitude regarding Israel's withdrawal from Lebanon?") on a scale ranging from 0 (*The writer is clearly anti-withdrawal*) to 100 (*The writer is clearly pro-withdrawal*). As a check on the manipulation of situational constraints, participants judged the extent to which the instructions given to the writer were forcing him or her to state the expressed attitude. In addition, participants judged the extent to which the essay was prowithdrawal ("How much do you think the essay was in favor of Israel's withdrawal from Lebanon?"). Both judgments were made on scales ranging from 0 (*not at*

all) to 100 (*very much*). After making these judgments, participants were debriefed and thanked for their participation in the experiment.

Results and Discussion

Manipulation checks. Participants' perceptions of the situational constraints were subjected to a Time × Situational Constraint between-subjects analysis of variance (ANOVA; see Table 1). As expected, the analysis yielded a significant main effect of situational constraints, $F(1, 106) = 15.25, p < .001$, indicating that participants identified the instructions given to the writer as more forceful in the constrained situation condition than in the unconstrained condition ($Ms = 46.9$ vs. 26.3, respectively). Neither time as a main effect nor time in interaction with situational constraints affected these identifications ($Fs < 1.00$).

The same analysis was conducted on participants' identification of the essay as pro- or antiwithdrawal (see Table 1). None of the effects in this analysis was significant. As intended, participants in all four conditions identified the essay as highly prowithdrawal (means ranging from 89.0 to 93.9).

Behavior predictions. Participants' judgments of the likelihood of the essay-consistent behaviors (expressing prowithdrawal attitudes in a conversation with friends or in a radio program, participating in a prowithdrawal rally, and joining a prowithdrawal activist organization) were positively correlated (Cronbach's $\alpha = .82$). Therefore, the average of the four judgments was used as a prediction measure (see Table 1). A Time × Situational Constraint ANOVA was performed on this measure. The analysis yielded a main effect of situational constraint, $F(1, 106) = 10.17, p < .01$, indicating situational discounting—namely, essay-consistent behaviors were judged as less likely in the constrained condition than in the unconstrained condition ($Ms = 65.9$ vs. 75.5, respectively).

Table 1

Essay-Related Judgments as a Function of Temporal Distance and Situational Constraints (Study 1)

Situational constraint	Temporal distance			
	Near (n = 53)		Distant (n = 57)	
	Absent	Present	Absent	Present
Perception of situational constraints				
M	24.3$_a$	48.5$_b$	28.4$_a$	45.3$_b$
SD	21.6	31.4	24.0	31.9
Perception of essay (pro- vs. antiwithdrawal)				
M	93.9$_a$	89.0$_a$	90.2$_a$	89.3$_a$
SD	8.0	10.4	10.6	11.9
Predicted essay-consistent behavior				
M	76.7$_a$	60.0$_b$	74.4$_a$	71.8$_a$
SD	11.5	16.0	19.1	15.7
Attitude inference (pro- vs. antiwithdrawal)				
M	94.2$_a$	72.5$_b$	87.7$_a$	80.0$_b$
SD	6.4	13.8	16.9	16.4

Note. The ratings were made on a 0–100 scale. Numbers in the same row that do not share a subscript differ at $p < .05$.

More important, the analysis showed that this situational discounting effect depended on temporal distance, $F(1, 106) = 5.41$, $p < .05$, for the Time $\times$ Situational Constraint interaction effect. As can be seen in Table 1, when participants were predicting for the near future, they saw essay-consistent behaviors as less likely given the constrained essay than given the unconstrained essay (Ms = 60.0 vs. 76.7, respectively), $F(1, 106) = 14.67$, $p < .001$. However, when predicting for the distant future, participants judged essay-consistent behaviors as likely, regardless of situational constraints (Ms = 71.8 and 74.4, respectively; $F < 1.00$). Thus, consistent with our hypothesis, the results indicate a more pronounced correspondence bias in distant future predictions than in near future predictions.

CLT also predicts that temporal distance should have a stronger effect on predictions based on constrained behavior than on predictions based on unconstrained behavior. This is because, in the absence of any situational constraints, there is relatively little information to support low-level, contextualized construal of behavior, and perceivers are likely to construe the behavior in high-level, dispositional terms in both the near future and the distant future perspectives. As a result, equally extreme behavior predictions would be made both for the near future and for the distant future. Indeed, as can be seen in Table 1, both distant future and near future essay-consistent behaviors were seen as equally likely (Ms = 74.4 and 76.7, respectively). In contrast, in the presence of situational constraints, behavior lends itself to low-level, contextualized construals as well as high-level, decontextualized construals, allowing the distant future perspective to shift the construal of the constrained behavior toward higher level dispositional inferences. This temporal shift in construal, in turn, should produce an ironic result, whereby predictions for the more distant future are in fact more extreme, despite the relative uncertainty inherent in the more distant future. Consistent with this prediction, our findings show that, on the basis of the same situationally constrained essay, our participants made significantly more extreme predictions of what the writer would do a year later than on the next day (Ms = 71.8 vs. 60.0, respectively; $p < .05$).

Attitude inference. We hypothesized that when participants used the essay to predict the writer's more distant future behavior, they would be more likely to see not only the unconstrained essay but also the constrained essay as reflecting the writer's true attitude. ANOVA of the attitude inference data yielded a main effect of situational constraints, $F(1, 106) = 29.86$, $p < .001$, indicating that, overall, attitude inferences from the constrained essay were more moderate than were attitude inferences from the unconstrained essay (Ms = 76.2 vs. 90.9, respectively). More relevant to our hypothesis, this situational discounting effect depended on temporal distance, $F(1, 106) = 6.81$, $p < .01$, for the Time $\times$ Situational Constraints interaction effect. As can be seen in Table 1, when predicting the writer's near future behavior, participants drew much more moderate attitude inferences from the constrained essay than from the unconstrained essay (Ms = 72.5 vs. 94.2, respectively), $F(1, 106) = 31.45$, $p < .001$. This situational discounting effect on attitude inferences was much weaker when perceivers used the essay to predict the writer's distant future behavior (Ms = 80.0 vs. 87.7, respectively), $F(1, 106) = 4.23$, $p < .05$. Moreover, consistent with the behavior prediction data, temporal distance produced stronger attitude inferences from the constrained essay (Ms = 80.0 vs. 72.5, for the near and distant future

conditions, respectively; $p < .06$) but not from the unconstrained essay (Ms = 94.2 vs. 87.7, respectively).

These findings demonstrate that the tendency to underweight situational constraints on observed behavior is more pronounced when this behavior is used for predicting distant future behavior than when it is used for predicting near future behavior. When making distant future predictions, our participants treated the situationally constrained essay as diagnostic of the correspondent attitude and predictive of a variety of attitude-related behaviors. In contrast, when making near future predictions, our participants treated the situationally constrained essay as less diagnostic of the correspondent attitude and much less predictive of other behaviors. The correspondence bias thus seemed to better characterize our participants' distant future than their near future behavior predictions. In terms of CLT, the writer's general attitude constitutes a high-level construal of the information about the essay writing and is, therefore, more likely to guide perceivers' prediction of the writer's distant future than near future actions.

Study 2: Time Perspective and Expected Cross-Situational Consistency

How consistently are people expected to act across different future situations? Thinking of future behavior in terms of global personality traits should lead perceivers to expect others to behave consistently across different situations. According to CLT, global personality traits are more likely to constitute high-level construals than low-level construals of behavior. CLT therefore predicts that perceivers should expect others to behave more consistently across different situations in the distant future than in the near future.

To test this prediction, we asked participants to imagine a target person in different situations (e.g., a birthday party, waiting in line) in either the near future or the distant future and to predict his or her behavior in each situation in domains related to several personality dimensions (e.g., extraversion, agreeableness). This allowed us to examine the expected cross-situational consistency in others' near future and distant future behavior with respect to each of these personality trait dimensions.

Method

Participants. Participants were 52 Tel Aviv University students (47 women) who participated in the experiment to fulfill an introductory psychology course requirement. Participants were randomly assigned to either near or distant future conditions. The experiment was conducted in individual sessions.

Procedure. As a behavior prediction task, we used an adapted version of Van-Heck, Perugini, Caprara, and Froeger's (1994) Tendencies-in-a-Situation Scale originally designed to assess the cross-situational consistency of traits related to the five-factor personality model (Big Five). Participants were asked to think of a target person they knew quite well and imagine that person in four different situations either in the next couple of days (near future condition) or a few months later (distant future condition). Instructions were as follows:

> Please think of a person you know quite well. This may be any person you choose, a boyfriend or a girlfriend, a close acquaintance, a brother or a sister, a parent, and so on. You will soon be asked to imagine this person in a variety of situations she or he may encounter in the next couple of days [a few months from today], and predict how she or he will respond.

The situations were having an argument with someone, meeting with people the target does not know, attending a birthday party, and waiting in a long line. The order of presentation of the four situations was counterbalanced across participants.

Each situation was followed by 15 bipolar traits, with 3 traits representing each of the Big Five trait dimensions (McCrae & Costa, 1996, 1997): Extraversion (quiet–talkative, passive–active, inhibited–impulsive), Agreeableness (selfish–unselfish, unfriendly–friendly, boastful–modest), Conscientiousness (irresponsible–responsible, frivolous–serious, disorganized–organized), Emotional Stability (agitated–calm, emotional–reserved, insecure–secure) and Intellect (uncreative–creative, uninquisitive–curious, blunt–sharp). Participants were asked to predict how the target person would behave in each situation in terms of these 15 traits. For example,

> Suppose that in the next couple of days [a few months from today] this person will be having an argument with someone. How do you think she or he will respond? How passive–active will she or he be? How unfriendly–friendly will she or he be?

Participants indicated their predictions on scales ranging from 1 to 9 and anchored with the opposite trait terms. After making these judgments, participants were debriefed and thanked for their participation in the experiment.

Results and Discussion

For each of the 15 traits, we computed the variance of the predicted behavior across the four situations. We averaged these cross-situational variance scores across the three traits representing each of the Big Five trait dimensions and used these average scores as a measure of cross-situational consistency in predicted behavior. The lower the cross-situational variance is, the higher is the predicted cross-situational consistency in behavior related to a given trait dimension. For example, the amount of cross-situational variance in Extraversion indicated the extent to which the target was predicted to show different degrees of extraverted behavior while attending a party, meeting unfamiliar people, having an argument, and waiting in line (see Table 2 for means of cross-situational variance scores).

Near future and distant future cross-situational variance scores were subjected to a Time × Trait Dimension ANOVA, with time as a between-subjects factor and the five trait dimensions as within-subject factors. Consistent with our hypothesis, the analysis yielded a significant effect of temporal distance, $F(1, 50) = 8.28$, $p < .01$, indicating that cross-situational variance was lower in the distant future condition than in the near future condition ($Ms = 2.7$ vs. 3.8, respectively). Thus, participants' close acquaintances were expected to behave more consistently across different situations in the distant future than in the near future. This held true for all five trait dimensions, as indicated by the nonsignificant Time × Trait Dimension interaction, $F(4, 50) = 1.81$, $p = .13$. Of secondary interest here, a main effect of traits, $F(4, 50) = 20.3$, $p < .001$, indicated that participants' acquaintances were expected to show greater cross-situational consistency in behavior related to some traits (e.g., Conscientiousness) than in behavior related to other traits (e.g., Extraversion).

It might be argued that the higher cross-situational consistency scores (i.e., lower cross-situational variance in behavior predictions) for distant future than for near future behavior were due to a general tendency to make more regressive (moderate) predictions about the more distant future situations. This regressiveness inter-

Table 2

Cross-Situational Variance Scores as a Function of Temporal Distance (Study 2)

Trait dimension	Time	
	Near (n = 25)	Distant (n = 27)
Extraversion		
M	5.40	3.89
SD	2.84	2.26
Agreeableness		
M	3.50	2.89
SD	2.70	1.89
Emotional Stability		
M	4.84	2.89
SD	2.42	1.71
Intellect		
M	2.91	2.15
SD	1.91	1.34
Conscientiousness		
M	2.33	1.76
SD	1.33	0.83
Total		
M	3.79	2.72
SD	1.62	1.04

Note. Higher variances represent less consistency.

pretation would predict that behavior predictions should be less extreme for the distant future than for the near future. To test this possibility, we computed each participant's mean behavior prediction scores across the four situations for each of the five trait dimensions. As can be seen in Table 3, these behavior prediction scores were significantly above the scale's midpoint (all $ps < .05$), indicating some positivity bias in participants' behavior predictions. More important, it can also be seen that distant future prediction scores were not less extreme than near future prediction scores. Indeed, a Time × Trait Dimension ANOVA on the behavior prediction scores yielded a nonsignificant effect of time ($F < 1.00$). If anything, near future predictions were more moderate than were distant future predictions, which argues against the interpretation of the present cross-situational consistency findings in terms of greater regressiveness of distant future predictions.

The cross-situational variance scores reflect the effect of situational variation on predicted behavior. Independent of this effect, the extent to which these predictions are correlated across the situations may vary. To examine this possibility, we computed for each trait the cross-situational intercorrelations in predicted behavior as another measure of cross-situational consistency. With four situations, there are six such cross-situational intercorrelations for each of the 15 traits. We computed the resulting 90 cross-situational correlations for each time condition, z transformed the correlations, and subjected the z scores to a Trait Dimension × Time ANOVA (see Table 4 for means of the cross-situational back-transformed correlations).

As expected, the ANOVA yielded a main effect of time, $F(1, 170) = 13.11$, $p < .001$, indicating that the cross-situational correlations were significantly higher in the distant future than in the near future ($Ms = 0.4$ and 0.3, respectively). Less important, a main effect of trait dimension, $F(4, 170) = 3.55$, $p < .01$, indicated that the cross-situational correlations of behaviors pertaining to

Table 3
Behavior Prediction Scores Across Four Situations as a Function of Temporal Distance (Study 2)

Trait dimension	Time	
	Near (n = 25)	Distant (n = 27)
Extraversion		
M	5.63	5.12
SD	1.05	1.38
Agreeableness		
M	6.26	6.36
SD	1.27	1.13
Emotional Stability		
M	5.47	6.11
SD	0.81	0.92
Intellect		
M	6.00	6.22
SD	0.79	1.16
Conscientiousness		
M	6.49	6.72
SD	1.11	0.84
Total		
M	5.97	6.10
SD	0.46	0.64

Note. Ratings were made on a 1–9 scale.

certain trait dimensions (e.g., Agreeableness) were higher than those of other dimensions (e.g., Emotional Stability). In addition, a significant Time × Trait Dimension interaction, $F(4, 170) = 3.45$, $p < .05$, indicated that the effect of temporal distance on the cross-situational correlations varied across trait dimensions. Thus, the temporal pattern of cross-situational correlations provides further support for our hypothesis that perceivers expect greater cross-situational consistency in behavior in the distant future than in the near future.

In the preceding analysis, correlations were the unit of analysis. To assess cross-situational consistency while maintaining participants as the unit of analysis, we computed cross-situational covariation scores for each participant, as suggested by Hayes and Dunning (1997, Study 2). We first standardized the behavior predictions and then computed the six cross-products (across the four situations) of the standardized scores for each of the 15 traits.

Table 4
Cross-Situational Correlations as a Function of Temporal Distance (Study 2)

Trait dimension	Time	
	Near (n = 90)	Distant (n = 90)
Extraversion	.15	.41
Agreeableness	.45	.41
Emotional Stability	.16	.39
Intellect	.24	.45
Conscientiousness	.44	.41
Total	.29	.41

Note. The numbers in the table are correlations, back transformed from z scores.

For each participant, we computed the mean cross-products for each of the five trait dimensions and subjected these means to a Time × Trait Dimension ANOVA (see Table 5). As expected, the cross-situational covariation scores were higher in the distant future than in the near future ($Ms = 0.4$ and 0.2, respectively), $F(1, 50) = 3.85$, $p = .055$. No other effect was significant in this analysis.

Together, these results support our hypothesis that perceivers expect others to act more consistently across different situations in the distant future than in the near future. Like the results of Study 1, the results of the present study suggest that global dispositions are more prominent in predictions about others' behavior in the distant future than in the near future. Consistent with CLT, then, temporal distance seems to increase the tendency to think about others in terms of global factors rather than in terms of more concrete, context-specific factors.

Study 3: Time Perspective and Information Search

The preceding studies asked participants to base their predictions on experimentally provided information (Study 1) or preexisting information about a target person (Study 2). In many real life situations, however, perceivers are free to seek new information before making a prediction. If predictions for the more distant future are based on more global dispositional qualities, as CLT assumes, then perceivers should seek more information about such dispositions when attempting to predict the target's behavior in a distant future than in a near future situation. Trait concepts may differ in their level of abstraction (Hampson, John, & Goldberg, 1986). Some traits are highly general (e.g., "talented"), whereas others are more concrete (e.g., "musical"). Temporal distance should therefore increase the use of the more general traits in behavior prediction. The present study tests this hypothesis by examining the kind of questions perceivers ask when trying to predict a target's future behavior. In this study, participants interviewed each other to predict either near or distant future behaviors.

Table 5
Cross-Situational Covariation Scores as a Function of Temporal Distance and Trait Dimension (Study 2)

Trait dimension	Time	
	Near (n = 25)	Distant (n = 27)
Extraversion	.13	.38
	(.27)	(.37)
Agreeableness	.35	.38
	(.50)	(.40)
Emotional Stability	.14	.36
	(.23)	(.33)
Intellect	.20	.39
	(.29)	(.67)
Conscientiousness	.40	.36
	(.61)	(.41)
Total	.24	.37
	(.21)	(.26)

Note. The numbers in the table are cross-products of z transformed prediction scores. The numbers in parentheses are standard deviations of the cross-products.

Content analysis of the interview questions examined the questions pertaining to the target's dispositions. We expected perceivers to ask more about decontextualized, global traits when the goal was to predict the target person's behavior in distant future rather than in near future situations. According to Mischel and his colleagues (see Idson & Mischel, 2001; Mischel & Shoda, 1995), some dispositional constructs entail conditional, if–then expectancies (e.g., "talkative in class" or "talkative with friends"). We expected that temporal distance would lead perceivers to ask fewer questions about these specific traits.

Method

Participants. Participants were 74 Tel Aviv University students (64 women) who participated in the study to fulfill an introductory psychology course requirement. Participants were randomly assigned to either near or distant future conditions. They participated in the experiment in pairs.

Procedure. Participants signed up for an experiment entitled "Getting Acquainted." They arrived at the laboratory in pairs and were asked to interview each other to predict their partner's activities during the following weekend (near future condition) or a weekend 3 months later (distant future condition). Participants were encouraged to ask any questions they felt would help them in the prediction task. The interviews were conducted face to face, in the form of a dialogue, with each question followed by an answer. Participants were not given time to prepare for the interview but rather generated the questions during the course of the interview. The interview time was limited to 5 min, and the participants were informed of this time limit in advance. The interviews were recorded, and the written transcripts were content analyzed.

It is not surprising that the unstructured dialogue format of the interviews yielded a large amount of rich material. To simplify the coding of this material, we focused our content analysis on a relatively simple and theoretically relevant distinction between contextualized and decontextualized dispositions. First, we identified individual interview questions by following the structure of the dialogue—a question ended when an answer was given. Two judges then classified the questions as pertaining to one of three categories: (a) questions about decontextualized dispositions of the target person, (b) questions about contextualized dispositions of the target person, and (c) other questions. Both contextualized and decontextualized questions referred to the interviewee's dispositions, such as preferences, habits, attitudes, values, or traits. However, the contextualized questions explicitly referred to conditions under which the dispositions are manifested (e.g., "*When you are alone,* what are your favorite activities?" "Are you hard working *when it comes to studying*?" "*As a commander in the army,* do you think of yourself a megalomanic?"). This category is related to Mischel and Shoda's (1995) if–then behavioral signatures. In contrast, decontextualized questions did not refer to any such condition (e.g., "Are you an optimist or a pessimist?" "Do you usually prefer to hang out with friends rather than stay home alone?" "What are your sexual preferences?"). The two judges agreed on categorizing 98% of questions. All cases of disagreement were resolved by discussion.

Results and Discussion

On average, each participant asked a total of 16.7 questions (*SD* = 4.1), of which 10.5% (*SD* = 11.4%) referred to decontextualized dispositions and 3.4% (*SD* = 5.0%) referred to contextualized dispositions. The two time conditions did not differ in the total number of questions asked during the interview (*M*s = 16.8 and 16.7, for near and distant future predictions, respectively, *t* < 1.00). Although the interview consisted of a relatively small percentage of dispositional questions, most of the participants (84%) asked at least one dispositional question. It seems that the

direct, face-to-face nature of the interview discouraged participants from asking many personal questions. Nevertheless, the number of dispositional questions they asked was sufficient to allow us to test the present temporal perspective hypothesis.

For each participant, we computed the proportion of contextualized questions and decontextualized questions. These proportions were subjected to a Time (near future vs. distant future) × Type of Question (contextualized vs. decontextualized) ANOVA, with time as a between-subjects factor and type of question as a within-subject factor (see Table 6). A significant main effect of type of question, $F(1, 72) = 27.80$, $p < .001$, indicated that participants asked more decontextualized questions than contextualized questions (*M*s = 10.5% vs. 3.4%, respectively). More relevant to our hypothesis, this effect depended on temporal distance, $F(1, 72) = 8.79$, $p < .01$, for the Time × Type of Question interaction effect. As can be seen in Table 6, when participants' task was to predict their interviewee's near future behavior, they addressed a similar number of contextualized and decontextualized questions to the interviewees (*M*s = 7.9% vs. 4.9%, respectively), $F(1, 72) = 2.59$, *ns*. In contrast, when participants' task was to predict their interviewees' distant future behavior, they asked many more decontextualized questions than contextualized questions (*M*s = 13.0% vs. 2.1%, respectively), $F(1, 72) = 34.86$, $p < .001$. The main effect of temporal distance was insignificant ($F < 1.00$).

As expected, these findings show that perceivers asked more questions about decontextualized dispositions and fewer questions about contextualized dispositions when making predictions about a target person's distant future behavior than when making predictions about the target's near future behavior. Our participants apparently felt that global characteristics were more predictive of what the target person would do in the distant future, whereas more specific characteristics were more predictive of what the target person would do in the near future. It should be noted, however, that the distinction between contextualized and decontextualized dispositions is only one aspect of level of construal of future behavior. We focused on this distinction because it provided us with a relatively unambiguous basis for coding our participants' interview questions. The majority of the questions concerned a

Table 6

Proportion of Contextualized and Decontextualized Dispositional Questions as a Function of Temporal Distance (Study 3)

Type of question	Time		Overall
	Near (*n* = 36)	Distant (*n* = 38)	
Decontextualized			
M	7.9	13.0	10.5
SD	7.5	13.8	11.4
Contextualized			
M	4.9	2.1	3.4
SD	6.2	3.0	5.0
Overall			
M	6.4	7.5	
SD	5.8	7.1	

Note. Values are percentages out of the total number of questions.

variety of autobiographical data that were hard to classify as concrete or abstract. Despite this limitation, the present study successfully applies CLT to information search and provides initial support for the hypothesis that perceivers seek more abstract information when making predictions about distant future than when making predictions about near future behavior.

It is also important to point out that the present distinction between global and specific dispositions is not the same as the distinction between internal (person) and external (situation) causes, as both global and specific dispositions are person characteristics. The present study therefore demonstrates temporal shifts in globality that are independent of locus of causality. In the earlier two studies, the situational information pertained to relatively specific circumstances that may be seen as only qualifying the expression of more personal dispositions (i.e., attitudes and personality traits). However, situational concepts may also differ in their level of abstractness. For example, *informal situations* is a more general situational concept than is *John's birthday party,* and *being under academic pressure* is more general than is *having a large reading assignment for a recitation.* CLT therefore predicts that temporal distance would increase the use of more general situational causes in much the same way that it would increase the use of more general person causes. The next study addresses this issue empirically.

Study 4: Temporal Changes in the Globality of Causal Attribution

Studies 1–3 demonstrate that perceivers think of distant future behavior in terms of general causes—causes that affect a broad class of behaviors—rather than in terms of more specific causes—those that affect a relatively narrow set of behaviors. The present study was designed to extend these findings to perceivers' internal and external attributions of their own near future outcomes and distant future outcomes. Participants were presented with a set of positive and negative outcomes (e.g., "You will get a raise," "You will go out for a date, and it will go badly") that were described as occurring either in the near future or in the distant future. For each outcome, participants generated one major cause and indicated how global it was. We expected that participants would generate more global causes in explaining distant future outcomes than in explaining near future outcomes. We expected this effect of time for both internal and external causes and for positive and negative outcomes.

Method

Participants. Participants were 29 Tel Aviv University students (23 women) who took part in the study to fulfill an introductory psychology course requirement. Participants were randomly assigned to either the near future or the distant future condition. The experiment was conducted in individual sessions.

Procedure. The outcomes and causal judgment task were adapted from Peterson et al.'s (1982) Attributional Style Questionnaire. Participants were presented with four positive outcomes ("You will meet a friend who will compliment you on your appearance," "You will get a raise," "Your boyfriend/girlfriend will be treating you more lovingly," "You will apply for a job that you want very badly and you will get it") and four negative outcomes ("You will give an important talk in front of a group and the audience will react negatively," "You will meet a friend who will act in a

hostile manner toward you," "You will not be able to complete all of the work you will be expected to do," "You will go out on a date and it will go badly").

Participants were asked to vividly imagine each outcome happening to them either in the course of the next couple of days (near future condition) or a year later (distant future condition) and indicate one major cause for that outcome. The specific question was

> What do you think will be the main cause of this outcome? While outcomes may have many causes, we want you to pick only one—the main cause of this outcome happening to you. Please write this cause in the blank provided after each outcome.

Participants were then asked to indicate how global they considered that cause: "Is the cause something that influences only the described outcome, or does it also influence other areas of your life?" Ratings were made on a scale ranging from 1 (*will influence just the described outcome*) to 7 (*will influence every area in my life*). In addition, two independent judges classified each cause as internal or external, with 92.6% agreement (e.g., for the event "You will meet a friend who will compliment you on your appearance," the answer "I will look good that day" was judged as an internal cause, whereas the answer "My friend will be in a good mood" was judged as an external cause) and rated its globality on a 1–5 scale, with an interjudge correlation of .85 (e.g., for the same event, the answer "I usually wear nice clothes" was rated as most global, whereas the answer "I may pay special attention to my clothes that day" was rated as least global).[1]

Results and Discussion

For each participant, we computed the mean self-globality ratings of the causes of the four positive outcomes and the causes of the four negative outcomes. These mean globality scores were subjected to a Time (near future vs. distant future) × Valence (positive vs. negative) ANOVA, with time as a between-subjects factor and valence as a within-subject factor (see Table 7). As expected, a significant main effect of temporal distance, $F(1, 27) = 5.60$, $p < .05$, indicated that distant future outcomes were attributed to more global causes than were near future outcomes ($Ms = 4.1$ vs. 3.5, respectively). The ANOVA also yielded a significant main effect of valence, $F(1, 27) = 13.20$, $p < .001$. In line with previous findings of self-serving biases (e.g., Dunning, 1999; Kunda, 1990; Miller & Ross, 1975), positive outcomes were attributed to more global causes than were negative outcomes ($Ms = 4.3$ and 3.4, respectively). The Time × Valence interaction effect was not significant, $F(1, 27) < 1.00$. As can be seen in Table 7, this indicated that temporal distance increased the globality of the causes of positive outcomes as well as negative outcomes. The same ANOVA on judges' globality ratings yielded similar results—namely, a main effect of time, $F(1, 26) = 8.07$, $p < .01$, a marginally significant main effect of valence, $F(1, 26) = 3.83$, $p = .061$, and a nonsignificant Time × Valence interaction effect, $F(1, 26) = 2.91$, $p = .10$.

A Time × Valence ANOVA on the number of internal causes revealed a marginal effect of valence, $F(1, 27) = 3.41$, $p < .08$, indicating that participants predicted more internal causes for

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[1] Judges were asked to make globality judgments in addition to participants' own ratings because it may be argued that, with increased temporal distance, participants simply rated their attributions as more global rather than actually providing more global attributions. To simplify the coding, judgments were made on a 1–5 scale instead of the original 1–7 scale.

Table 7

Globality Ratings as a Function of Temporal Distance and Events' Valence (Study 4)

	Time		
Valence	Near (*n* = 13)	Distant (*n* = 16)	Overall
Positive			
M	3.87	4.72	4.34
SD	1.00	0.98	1.07
Negative			
M	3.17	3.54	3.37
SD	1.15	0.77	0.77
Overall			
M	3.52	4.13	
SD	0.83	0.55	

Note. Globality ratings were made on a 1–7 scale. Higher ratings represent more global attributions.

positive outcomes than for negative outcomes (Ms = 2.3 and 1.8, respectively). However, both the main effect of time and the Time × Valence interaction effect on the number of internal versus external causes were insignificant (Fs < 1.00). Finally, we computed for each participant the mean self-globality ratings of the internal and external causes. A Time × Locus of Causality (internal vs. external) ANOVA on these globality ratings yielded, as before, a main effect of time, $F(1, 26) = 4.41$, $p < .05$. A main effect of locus of causality, $F(1, 26) = 26.68$, $p < .01$, indicated that internal causes were more global than were external causes (Ms = 4.4 and 3.3). More important, the Time × Locus of Causality interaction was insignificant ($F < 1.00$). As expected, temporal distance (distant vs. near) enhanced the globality of both internal causes (Ms = 4.6 and 4.0, respectively) and external causes (Ms = 3.5 and 2.9, respectively). Similar findings were obtained in the analysis of judges' globality ratings: a main effect of time, $F(1, 26) = 9.24$, $p < .01$; a marginal effect of locus of causality, $F(1, 26) = 4.17$, $p = .051$, and an insignificant Time × Locus of Causality interaction, $F(1, 26) = 2.02$, $p = .17$. Thus, the effects of temporal distance and locus of control on globality were independent. Internal causes tend to be more global than external causes; however, both internal and external causes were more global when the outcomes were expected in the distant future than when they were expected in the near future.

The results of this study are consistent with CLT's prediction that people attribute future outcomes to more general causes when the outcomes are expected in the distant future than when they are expected in the near future. A near future outcome was expected to result from an idiosyncratic cause, a cause that is specific to that outcome, whereas a distant future outcome was expected to result from a more general cause, a cause that can produce a relatively broad range of outcomes. This effect of temporal distance was independent of the valence of the outcomes and their locus of causality. Specific causes were expected to underlie near future outcomes, and more general causes were expected to underlie distant future outcomes, whether the outcomes were positive or negative and whether the causes were internal or external.

General Discussion

The aim of the present studies was to investigate how temporal distance affects predictions and explanations of future behavior. According to CLT, perceivers use more abstract, decontextualized representations (higher level construals) to predict and explain behavior in the more distant future. Traits are more abstract and decontextualized constructs than are mental states (e.g., expectancies, feelings, and intentions). Therefore, perceivers are more likely to rely on traits and less likely to rely on the concrete situational context in predicting distant future behavior than in predicting near future behavior.

Temporal Shifts in Prediction and Attribution

Using different prediction and explanation tasks, the present studies provide convergent evidence for this hypothesis. Study 1 used the Jones and Harris (1967) attitude attribution paradigm to examine behavior predictions and attitude inferences from situationally constrained or unconstrained essays. The results show that participants disregarded the influence of situational constraints when predicting the writer's distant future behavior but not when predicting the writer's near future behavior. The situationally constrained essay was thus seen as more predictive of the writer's distant future behavior than of his or her near future behavior. Moreover, this essay was seen as more diagnostic of the corresponding attitude when it was used to predict the writer's more distant future behavior. In other words, the correspondence bias—the tendency to attribute situationally constrained behavior to the corresponding disposition—was stronger when participants were making distant future predictions than when they were making near future predictions.

A central property of abstract trait concepts is that they refer to invariant properties of people, properties that should be manifested across different situations. Study 2 examined the implications of the assumed invariance of abstract traits for behavior predictions. Specifically, if personality traits are used to predict behavior in the more distant future, as CLT proposes, then perceivers should expect others' behavior to show greater cross-situational consistency in the distant future than in the near future. Our participants predicted how their acquaintances would behave in different near future and distant future situations. The predictions spanned a wide range of behaviors representative of the Big Five personality trait dimensions. As predicted, the results showed that participants expected others to behave more consistently across distant future situations than across near future situations. This was manifested in both lower cross-situational variance and higher cross-situational correlations for distant future behavior predictions than for near future behavior predictions. Participants thus appeared to expect their acquaintances to more clearly express their personality in the distant future than in the near future.

Study 3 examined the kind of questions perceivers ask a target person when attempting to predict that person's distant future versus near future behavior. As expected, temporal distance increased interest in more global information about the target person. Specifically, participants asked more questions about the target's decontextualized dispositions and fewer questions about the target's contextualized dispositions when trying to predict what the target would do in a distant future situation than when trying to

predict for a near future situation. These findings are important because they demonstrate that temporal distance not only diminishes sensitivity to externally provided contextualized information but also diminishes spontaneous search for such information.

Finally, Study 4 applied CLT to people's self-predictions. In this study, participants offered causal explanations for their own near future and distant future outcomes and rated the globality of the offered causes. As predicted, we found that participants explained more distant future outcomes in more global terms. This held true for both positive and negative outcomes and for internal and external causes.

In all of the studies, participants were provided with the same information about the distant future and near future situations. Nevertheless, it might be argued that our participants were more uncertain about the more distant future. Such uncertainty might produce more regressive (moderate) predictions that are insensitive to situational information. Several aspects of the present findings argue against this interpretation. It is notable that in Study 1, predictions of essay-consistent behavior were made with no less and even greater confidence for the distant future than for the near future. Thus, contrary to what would be expected from the regressive judgment interpretation, the situationally constrained essay led participants to predict with greater confidence how the writer would behave in a distant future situation than how he or she would behave in a near future situation. In Study 2, the behavior predictions were no less and even more extreme for the distant future than for the near future. These results suggest that the weaker impact of situational circumstances on distant future predictions is not attributable to a general tendency to make more regressive predictions for the distant future than the near future. Instead, as suggested by CLT, temporal distance seems to shift perceivers toward construal of future behavior in terms of global causes. This temporal change in level of construal may both decrease the impact of concrete situational circumstances and increase the perceived predictability of distant future behaviors.

Relationship to Past Research

The present findings that perceivers base their distant future predictions on more global information builds on our earlier research, which directly examined how people represent future events (Liberman et al., in press). This research found that participants used fewer and broader categories in classifying objects (e.g., camping items, yard sale items) for a distant future situation than for a near future situation (Study 1). In another study (Study 3), multidimensional scaling of preferences regarding future daily activities and events revealed that fewer dimensions underlie distant future preferences than near future preferences. Still another study (Study 2) found that daily experiences on a distant future day, compared with daily experiences on a near future day, were expected to be more prototypical—less variable and more extreme.

There are also interesting parallels between the present findings and our research on intertemporal preference and choice (Liberman & Trope, 1998; Trope & Liberman, 2000). According to CLT, the value associated with superordinate, general aspects of future options should be more influential in determining preferences for the distant future than the near future. As a test of this hypothesis, a series of studies investigated temporal changes in the influence of information about superordinate goals ("why" aspects of action)

and information about subordinate means for reaching those goals ("how" aspects of action) on evaluation and choice (Liberman & Trope, 1998). These studies found that information about "why" aspects of actions was more influential in decisions for the distant future, whereas information about "how" aspects of actions was more influential in decisions for the near future. For example, one study (Study 2) described a guest lecture and asked participants to indicate their interest in attending it either in the near future or in the distant future. The lecture was described as either interesting or uninteresting and as being given at a convenient or inconvenient time. As predicted, the effect of interest level (desirability) on preference increased with temporal distance, whereas the effect of convenience of the timing (feasibility) decreased with temporal distance.

This and related studies on preference (see Trope & Liberman, 2000) suggest that the perceived value of an event derives from its construal and that if the value of a high-level aspect of an event is different from the value of its low-level aspects, then changing the level of the construal of the event (e.g., by changing temporal distance) would result in a corresponding change in its perceived value. For example, the schematic representation of a vacation (e.g., dining in a scenic restaurant) may be more positive than its contextual, nonschematic representation (e.g., waiting in line to get on the plane), and, therefore, a vacation in the distant future may seem more positive than a vacation in the near future. The present research extends these earlier studies on intertemporal preferences by demonstrating that people use higher level construals not only for making choices but also for making behavior predictions and attributional inferences regarding the more distant future.

The Origins of Temporal Construal

Why do perceivers base their behavior predictions for the more distant future on global dispositions? We believe that this reflects the kind of information that is usually available and needed about near versus distant future situations (see Trope & Liberman, in press). Ordinarily, information about concrete contextualized factors becomes available only as one gets closer in time to the actual situation, whereas information regarding others' global traits may be available long in advance. Even when information about concrete factors is available, these factors may be seen as malleable and variable, whereas global traits may be seen as fixed and stable and, therefore, as transcending the here and now (Dweck & Leggett, 1988). In addition, perceivers are often free to revise their predictions in light of information they acquire over time. This, in turn, may allow perceivers to postpone the processing of low-level contextual information until they get close in time to the actual situation. Perceivers may therefore start thinking about a future behavior in high-level terms—in terms of others' global traits— and only later think about the behavior in low-level terms—in terms of others' situation-specific goals and intentions.

This strategy may be generalized to cases in which it is inappropriate—namely, cases in which the prediction is final and the same global and specific information is available for both the near and the distant future. This was indeed the case in the present research. The same information was available about the near and distant future behavior, and the prediction was final. Yet our participants continued to rely on global traits for distant future predictions and on situation-specific factors for near future predic-

tions. Perceivers may thus associate temporal distance with level of construal. This association may influence not only how perceivers think about the future but also how they communicate with each other about the future—namely, the rules of conversation about the future (Grice, 1975; Sperber & Wilson, 1987). People may be expected to answer questions about the distant future in terms of global considerations and questions about the near future in terms of more specific considerations, even when information about the two types of considerations is available for both the near and the distant future.

Implications for Psychological Distance

The implications of CLT for behavior prediction and attribution extend beyond the effect of future temporal distance. Although our research has focused on temporal distance from future events, we believe that any factor that increases the psychological distance from an object will also increase the level of construal of the event. These factors include temporal distance from past or future events, spatial distance, and social distance (e.g., self vs. other, in-group vs. out-group, and familiar vs. unfamiliar others). Indeed, research on attribution of past behavior has found stronger dispositional attribution of behavior in the distant past than in the recent past (Frank & Gilovich, 1989; Funder & Van Ness, 1983; Moore, Sherrod, Liu, & Underwood, 1979; Peterson, 1980; but see Burger, 1991). Similarly, Semin and his colleagues (Semin & Fiedler, 1988; Semin & Greenslade, 1985; Semin & Smith, 1999) found that perceivers use more abstract linguistic terms to describe events that occurred in the distant past than to describe events that occurred in the near past. According to Semin and Smith, events from the distant past are likely to be stored in a relatively schematic and generalized form, detached from contextual details, whereas events from the recent past are more likely to be stored with rich contextual details, referring to concrete features of the here and now.

Of special interest to attribution researchers are social distance factors. A considerable amount of research has shown that perceivers make more global, dispositional attributions of others' behavior than of their own behavior (Fiedler, Semin, Finkenauer, & Berkel, 1995; Jones, 1976; Jones & Nisbett, 1972; Robins, Spranca, & Mendelsohn, 1996). This is particularly true for unfamiliar rather than familiar others (see Idson & Mischel, 2001). Similarly, research on group perception suggests that, compared with in-groups, out-groups are described in terms of abstract qualities (Fiedler, Semin, & Finkenauer, 1993; Werkman, Wigboldus, & Semin, 1999) and are perceived as being more homogeneous (Jones, Wood, & Quattrone, 1981; Park & Judd, 1990; Park & Rothbart, 1982), as being less differentiated into subgroups (Brewer & Lui, 1984; Linville, 1982; Park, Ryan, & Judd, 1992), and as possessing more structured, predictable properties (Linville, Fischer, & Yoon, 1996). Together, these lines of research suggest that the various dimensions of psychological distance have a similar effect on level of construal. In all of the cases, perceivers tend to think of individuals in terms of abstract and global traits rather than in terms of more concrete and contextualized states when the individuals are psychologically remote rather than when they are psychologically close to the perceiver.

Finally, CLT may help shed light on cultural differences in social cognition. Recent research suggests that members of inde-

pendent cultures (Westerners) are more likely than members of interdependent cultures (East Asians) to overattribute others' behavior to their global dispositions (e.g., Choi, Nisbett, & Norenzayan, 1999; Lee, Hallahan, & Herzog, 1996; Morris & Peng, 1994; Van Boven, Kamada, & Gilovich, 1999). From the present perspective, this difference might be traced to psychological distance. Perhaps the psychological distance among members of an interdependent culture is smaller than the psychological distance among members of an independent culture. If this is true, then East Asians, compared with Westerners, should tend to form less abstract, lower level construals of others and should therefore tend to attribute others' behavior to concrete, contextualized mental states rather than to global personality traits. Exploring this source of cultural differences in social cognition seems a promising direction for future research.

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