

CHAPTER 15

Psychological Distance

NIRA LIBERMAN
YAACOV TROPE
ELENA STEPHAN

WHAT IS PSYCHOLOGICAL DISTANCE?

Psychologically distant things (objects, events) are those that are not present in the direct experience of reality. We would like to set aside the philosophical questions regarding the objective existence of reality and focus, instead, on people's subjective experiences of reality, divergence from such experiences, and the consequences of those. People believe that they directly experience themselves and their immediate surroundings at the present moment. Anything that is not present is distal. It may be thought of, constructed, or reconstructed, but it cannot be experienced directly. There are different reasons for things not to be present in the immediate reality experienced by me. Things may belong to the past or to the future (e.g., my first year of marriage, my first year of school), to spatially remote locations (e.g., my parents' house, the North Pole), to other people (the way my best friend or a person from another culture perceives the present situation), and to hypothetical alternatives to reality, what could or might have been but never materialized (e.g., had I married another person or had I had wings). These alternatives to the directly experienced reality define, respectively, four dimensions of psychological distances—temporal distance, spatial distance, social distance, and hypotheticality. In each pair of examples of distal things, the first example is more proximal than the second. We would like to propose that in relation to psychological distance, these various distance dimensions are anchored on a single starting point (zero distance

point), which is my direct experience of the here and now. Anything else—other times, other places, experiences of other people, and hypothetical alternatives to reality—is a mental construct.

This analysis suggests a basic relationship between psychological distance and construal; that is, any distancing (i.e., moving beyond direct experience) involves construal. Based on construal-level theory (CLT; Liberman & Trope, 1998; Trope & Liberman, 2003), we distinguish between extents (levels) of construal and propose that more distal entities, which are more remote from direct experience, are construed on a higher level (i.e., involve more construal). The reason for this change in construal could be that as we move away from direct experience of things, we have less information about those things. Thus, we know less about the more distant future and the more distant past, we know less about more remote places, we know less about acquaintances than about close friends, and, finally, we know less how the world would have been with more remote (i.e., less probable and more difficult to imagine) alternatives to reality. In all those cases, lack of knowledge about the more remote entities—people, events, places, alternatives—requires representing them more abstractly than proximal entities.

Sometimes, in the absence of knowledge about distal entities, one may extrapolate from proximal ones. For example, if I do not know how my friend felt about a movie, I may reason that she is similar to me and assume that her feelings were similar to mine. Ordinarily, simi-

larity decreases with distance (e.g., the distant future becomes increasingly less similar to the present and more distal people are increasingly less similar to ourselves) and with it the ability to project (i.e., extrapolate) direct experience. Schematic construals are employed instead. For example, if I assume that the experiences of a person from another culture are dissimilar to mine, then I need to resort to general schemas in order to construe those experiences. More generally, in the absence of any specific knowledge about either a distal or a proximal entity, the former would be less likely construed in concrete terms than the latter.

We thus propose that because there is less information about distal entities than proximal entities, people typically construe the former more abstractly than the latter. As a result, an association is formed between psychological distance and level of construal, and the use of more abstract construals for more distal entities may be generalized beyond the conditions that initially gave rise to the association. That is, people may construe distal entities at a high level and proximal entities at a low level even when information on these entities is equally available or obtainable. Differential knowledge explains how the association between distance and level of construal was formed, but it does not necessarily explain every specific case of construing distal entities at a high level.

It is important to note that estimations of distance are subjective. What determines level of construal is not the physical distance as measured in meters or temporal distance as measured in seconds but, rather, the subjective experience of distances as large or small. The same objective distance may look differently due to psychological factors, some of which are "cognitive" (e.g., division into more stages may enhance perceived distance), and some are "motivational" (e.g., in the service of self-enhancement, one's negative behaviors may seem more distant than one's positive behaviors). This chapter does not address the question of how objective units of distance translate into subjective experiences. Rather, we address the effects of perceived distance on other outcomes, such as level of construal, prediction, affect, and choice.

PLAN OF THE CHAPTER

The next section discusses in more detail the concept of level of construal and the association between level of construal and psychological distance. That section addresses two implications of this association, namely, that psychological distance would produce higher levels of construal and that, conversely, high levels of construal would enhance perceived distance. The third section examines the effects of psychological distance on confidence in prediction, intensity of affective reactions, and evaluation and choice. We present evidence suggesting that the effects of various distance dimensions are similar to each other and are mediated by level of construal. The fourth section further proposes that the different psychological distances are interrelated and to some extent

interchangeable. That is, distancing an object on one dimension may be exchanged for distancing the object on another dimension.

PSYCHOLOGICAL DISTANCE AND LEVEL OF CONSTRUAL

What Is Level of Construal?

Before examining how psychological distance and level of construal affect each other, we discuss in more detail the concept of level of construal. Our basic premise is that high-level construals change the meaning of events by forming more abstract representations of the events. A defining property of concrete representations is that they lend themselves to multiple abstract representations. For example, the concrete action "waving a hand" could be identified more abstractly as threatening or, alternatively, as being friendly (Vallacher & Wegner, 1987), and "a poodle" could be classified as a pet or, alternatively, as a mammal (Rosch & Lloyd, 1978). An abstract representation is selected among different possible abstractions according to context-defined relevance, which, in turn, may be affected by one's goals. Thus, if one's goal is to buy a poodle for a child, then "a pet" is a relevant category and friendliness is relevant, but if one's goal is scientific zoological classification, then "a mammal" is a relevant category and friendliness is of less relevance.

Usually, some aspects of the focal stimulus are more closely related to one interpretation or categorization (the hand movement was relatively fast; poodles are friendly), while other aspects are more closely related to other interpretations or categorizations (the person who waved her hand seemed to smile; poodles are warm blooded). Moving from a concrete representation to an abstract representation involves deciding on one of the alternative abstract representations. This, in turn, means omitting the features that are perceived to be less important while retaining those considered more central or important to the abstract construct in question. For example, in replacing "waving a hand" with the more abstract construal "showing friendliness," the fact that one used one's hand is omitted (Semin & Fiedler, 1988). Similarly, in representing a poodle as a pet, warm-bloodedness is omitted (Rosch & Lloyd, 1978). Like irrelevant details, details that are inconsistent with the chosen abstract representation are omitted from the representation or assimilated into it. For example, the detail that the hand waving was slightly faster than usual would be omitted or modified once the "being friendly" interpretation is chosen.

Because abstract representations necessarily impose one of possibly many alternative interpretations, and because irrelevant or inconsistent details are omitted from the abstract representation or assimilated to it, abstract representations may be expected to be simpler, less ambiguous, and more prototypical than concrete representations (Fiske & Taylor, 1991; Smith, 1998). Abstraction thus involves moving to a more schematic, simple, and coherent representation.

There are multiple levels of abstractness, as one could construct less inclusive or more inclusive categories of objects (e.g., poodle, dog, or mammal). In feature-based theories of categorization, more inclusive categories have fewer features and therefore are simpler than concrete categories (Rosch & Lloyd, 1978). Actions also form hierarchies of abstractness (e.g., giving money, helping, and being a good person) with each level of abstractness containing less concrete details about the specific type of action performed and the objects it involved (Semin & Fiedler, 1988; Trope, 1989). In the same way, traits form hierarchies (e.g., an excellent guitarist, musical, and talented) such that more abstract traits are less detailed about the behaviors, objects, circumstances, and people they involve (Hampson, John, & Goldberg, 1986). Goal-directed actions form hierarchies too, as goals could be translated into more abstract, superordinate goals (Carver & Scheier, 2000; Miller, Galanter, & Pribram, 1960; Vallacher & Wegner, 1987). In such hierarchies, each action (e.g., study for an exam) has a superordinate, abstract level, which answers the question of why the action is performed (e.g., do well) and a subordinate, concrete level, which supplies the details of how the action is to be performed (e.g., read a textbook).

It is important to note that abstract representations are not simply more impoverished than concrete representations. Rather, many times, they contain additional information (i.e., high-level meaning) about the value of the stimulus and its relations to other stimuli. For example, the construal "a mammal" entails many characteristics not directly observed in the original "poodle" stimulus (e.g., ways of reproduction), and it places it within a larger context of living things, thus specifying its relations to other animal species (e.g., it informs us that a poodle is closer to mice than to fish). Thus, the process of abstraction involves not only a loss of specific, idiosyncratic, and incidental information but also ascription of new meaning via the top-down process of induction from stored knowledge. Abstract representations contain less information about the unique instance but might, nevertheless, contain more general information.

In sum, we suggest, in line with other theories of mental construal, that abstract mental models represent the detailed and possibly ambiguous information contained in a real event in a relatively simple and coherent mental model that connects it to stored knowledge. Moreover, it is possible to think about levels of abstractness as a gradual reduction in incidental details and in complexity of representations. We further suggest that higher-level, more abstract and coherent representations are formed of more distal entities.

The rest of this section presents evidence in support of the construal-level hypothesis, which is that distancing produces more abstract, higher-level construals. We also examine the reverse direction of influence, namely, higher-level construals leading to perception of increased psychological distance. To that end, we examine new and existing social psychological literature on future and past temporal distance, physical distance, social distance, and hypotheticality.

The Effect of Psychological Distance on Level of Construal

The Effect of Temporal Distance on Level of Construal

CONSTRUAL OF ACTIONS

Research conducted in the framework of temporal construal theory has examined the effects of future temporal distance on level of construal of actions, objects, other people, and oneself. For example, in one study participants imagined themselves engaging in various activities (e.g., reading a science fiction book) either tomorrow or next year and described these activities (Liberman & Trope, 1998, study 1, part 1). The study found that people used more superordinate, high-level descriptions of distant activities (e.g., "getting entertained") and low-level descriptions for near future activities (e.g., "flipping pages"). A related, forced-choice study used an adapted version of Vallacher and Wegner's (1989) Level of Personal Agency questionnaire that was originally designed to assess stable individual differences in action identification (Liberman & Trope, 1998, study 1, part 2). The questionnaire presents 19 activities (e.g., "locking a door"), each followed by two restatements, one corresponding to the how (low-level) aspects of the activity (e.g., "putting a key in the lock") and the other corresponding to the why (high-level) aspects of the activity (e.g., "securing the house"). As predicted, participants chose significantly more high level, why restatements when the activities were described as occurring in the distant future than when the same activities were described as occurring in the near future.

CATEGORY BREADTH

If the distant future is represented more abstractly, then individuals should use broader categories to classify objects for distant-future situations than for near-future situations. To test this prediction, Liberman, Sagristano, and Trope (2002, study 1) asked participants to imagine an event (e.g., camping trip) in either the upcoming weekend or a weekend a few months later and to classify a given set of 38 objects related to the event (e.g., tent and toothbrush) into as many mutually exclusive and exhaustive groups as they deemed appropriate. Participants were instructed to assume that their classification was final and could not be altered later. The authors simply counted the number of groups into which participants classified the objects from each scenario. The results showed that participants used fewer categories when they imagined the objects in a distant-future scenario than a near-future scenario. This finding is consistent with the CLT assumption that distant-future events are represented in terms of relatively high-level, abstract categories, whereas near-future events are represented in terms of relatively low-level, concrete categories.

PRINCIPLES AND VALUES

Eyal, Liberman, Sagristano, and Trope (2006) found that the distant future is construed in terms of abstract

principles more than the near future. For example, in one study, participants read about distant-future and near-future situations that involved an abstract principle or a dilemma (e.g., "In a few days/in a few years, the university will set to increase the number of minority students") and asked them to choose a description of this situation either in terms of a global principle or in terms of a lower-level action, devoid of moral implications (e.g., "endorsing affirmative action" vs. "making changes to admission lists"). It was found that distant-future situations were perceived in terms of high-level principles more than near-future situations. Presumably, principles more easily apply to the distant future, but as the situation gets closer in time, morals and ideologies seem to lose their relevance.

CAUSAL ATTRIBUTION

A series of studies by Nussbaum, Trope, and Liberman (2003) examined level of construal of social targets as a function of future temporal distance. A considerable amount of person perception research has demonstrated the correspondence bias, namely, the tendency to attribute situationally constrained behavior to the corresponding personal disposition (see Gilbert & Mallone, 1995; Jones, 1979). In terms of CLT, this bias reflects a high-level construal of behavior in terms of abstract, decontextualized dispositions (see Fiedler, Semin, Finkenauer, & Berkel, 1995; Semin & Fiedler, 1988; Semin & Smith, 1999). According to CLT, the correspondence bias would be more likely with more distal social targets.

Nussbaum and colleagues (2003, study 1) used the Jones and Harris (1967) attitude attribution paradigm to test this hypothesis with respect to temporal distance. Student participants from Tel-Aviv University read an essay arguing in favor of Israel's withdrawal from Lebanon. (The study was conducted a few months before Israel's withdrawal from Lebanon in June 2000.) They were told that the essay was written by a student who had been instructed either to express her own opinion (unconstrained condition) or to argue in favor of withdrawal (situationally constrained condition). Participants were asked to estimate the likelihood that the writer would express pro-withdrawal attitudes in a variety of near-future (next day) or distant-future (a year later) situations (e.g., express pro-withdrawal attitudes in a conversation with friends and attend a pro-withdrawal rally). The results showed that the judged likelihoods of essay-consistent (pro-withdrawal) behavior in the near future were moderated in view of the situational constraints, whereas the judged likelihoods for the more distant future were high regardless of situational constraints. Thus, whereas near-future predictions showed substantial situational discounting, distant-future predictions showed little or no situational discounting. These findings demonstrate that the correspondence bias, the tendency to underweight low-level situational constraints on observed behavior, is more pronounced when this behavior is used for predicting the distant future than the near future.

BEHAVIOR CONSISTENCY

CLT predicts that people would expect others to behave more consistently across different situations in the distant future than in the near future. Nussbaum and colleagues (2003, study 2) tested this hypothesis by asking participants to predict an acquaintance's behavior in four different situations (e.g., a birthday party and waiting in line in the supermarket) in either the near future or the distant future. Participants predicted the extent to which their acquaintances would display 15 traits (e.g., behave in a friendly vs. unfriendly manner) representative of the Big Five personality dimensions (extraversion, agreeableness, conscientiousness, emotional stability, intellect). Cross-situational consistency was assessed by computing, for each of the 15 traits, the variance in predicted behavior across the four situations and the correlations among the predicted behaviors in the four situations. As hypothesized, 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.

CONSTRUAL OF THE SELF

The latter study was replicated with the self as the target. Nussbaum, Liberman, and Trope (2004) made people imagine themselves in different situations, either in the near future or in the distant future, and indicate the extent to which their behavior in those situations would reflect each of the Big Five traits. As with describing other people, it was found that in the distant future people expected themselves to exhibit traits more consistently across situations. This study suggests, in line with CLT, that people are more likely to use abstract, decontextualized trait concepts in predicting distant-future than near-future behaviors of both other people and themselves.

Nussbaum and colleagues (2004) also examined the effect of future temporal distance on the level of construal of self using Linville's (1985) self-complexity paradigm. Participants described themselves to another person, who was expected to read the description in either the near future or the distant future. For that end, they chose cards with self-descriptive adjectives and grouped them into categories. The results indicated that participants used fewer categories and that the categories were more distinct from each other in the distant-future condition than in the near-future condition. It seems, then, that a temporally distal perspective on the self fosters a less complex representation thereof than a proximal temporal perspective.

In sum, extensive research conducted within the framework of temporal construal theory demonstrates that future temporal distance enhances level of construal of actions, situations, objects, and people. Are there similar effects for other dimensions of psycho-

logical distance? We turn now to examine this question.

The Effect of Past Temporal Distance on Level of Construal

Closely related to CLT is the idea that past temporal distance is associated with higher construal levels. Semin and Smith (1999) asked participants to recall significant events from either the distant past (at least a year ago) or the recent past (the last 2 weeks) and analyzed the abstractness level of the responses. They found more abstract language in descriptions of more distant events. The authors suggested that past events are gradually moved into a long-term storage system, which uses an abstract, schematic form of information representation. Consistent with this view is also the research on temporal effects on attribution, which has shown that over time, observers' attributions about an actor's behaviors become more dispositional and less situational, presumably because the specific details of the situations fade away more rapidly than the more general inferences about the actor's personality (Frank & Gilovich, 1989; see also Funder & Van Ness, 1983; Moore, Sherrod, Liu, & Underwood, 1979; Nigro & Neisser, 1983; Peterson, 1980; but see Burger, 1986).

These findings are consistent with memory consolidation, namely, the tendency for concrete details to fade away from memory more rapidly than general abstractions, which makes memories of the distant past more abstract than memories of the recent past (Bartlett, 1932; Wyer & Srull, 1986). However, assuming that memory is an active, reconstructive process, CLT proposes that increasing past temporal distance is associated not only with a loss of specific details but also with an increased use of high-level, schematic construals (Ross, 1989). For example, Ross (1989) found that young adults tend to think that their personal adjustment (i.e., their sense of personal worth and self-reliance) and social skills improve with age. In an actual assessment, however, these scores appeared relatively stable, with the same average self-ratings between the ages of 25 and 45 (Woodruff & Birren, 1972). Interestingly, at age 45 people tended to rate their adjustment at the age of 25 as much lower than it actually was, presumably because they subscribed to a general theory that adjustment and social skills increase over the years (Ross, 1989). Thus, it is not only the case that information about their actual standing at 25 was lost, but it was also replaced with schema-derived inferences. Consistent with this idea, McDonald and Hirt (1997) showed that over time, student participants not only forgot a fellow student's grades but also were more likely to infer those from overall expectancies and general attitudes toward that person, thus producing a more coherent picture of the target person over time. Similarly, Mitchell, Thompson, Peterson, and Cronk (1997) found that people's recollections of a bicycle trip or a trip to Europe became more positive over time, presumably as the details of these events faded from memory and were replaced with a more general, schematic (and, in

this case, positive) representation. It seems, then, that the passage of time produces not only a passive loss of detail but also an active reconstruction characteristic of higher-level construals.

The Effect of Spatial Distance on Level of Construal

Spatial distance from an object ordinarily determines the amount and kind of information that is available about the object. As one gets closer to an object, the information becomes more accurate and detailed. From the distance we see a forest; as we get closer we begin seeing the trees. A more pertinent question, however, is whether, as would be predicted by CLT, the same information about an object would be represented differently depending on whether the object is thought to be in a close or a distant location. A study by Fujita, Henderson, Eng, Trope, and Liberman (2006) examined how perceivers construe a social interaction believed to take place in either a spatially close or a distant location. New York University student participants watched and then described a video of two other NYU students casually conversing about their schooling, hobbies, and families. They were told that the video was filmed either at NYU Study Abroad in Florence, Italy (distant location), or at NYU in New York City (proximal location). Content analysis based on Semin and Fiedler's (1988) linguistic categorization model (LCM) served as to assess the level of abstractness of the descriptions. As expected, the descriptions of the taped interaction were more abstract when the interaction was said to take place in Florence than in New York City. Participants thus formed more abstract representations of the same observed social interaction when its location was said to be distant rather than near. It should be pointed out that the effect of the location was unrelated to participants' sense of familiarity with or similarity to the interactants, which was also measured in this study. These findings demonstrate the idea that spatial distance, like temporal distance, leads to higher-level construal of the information at hand.

The Effect of Social Distance on Level of Construal

The distinctions between self and other, similar and dissimilar others, familiar and unfamiliar others, ingroup members and outgroup members, and status differences, all may be considered as instances of social distance. We now review social psychological research documenting higher-level construals of more distant social targets. We then discuss the case of politeness as an indicator of social distance and examine its effects on level of construal. Finally, we examine the possibility of relating cultural differences in construal to CLT.

SELF VERSUS OTHER

Perhaps the best documented difference in construal between self and other is the actor-observer effect in attribution (Jones & Nisbett, 1972; for a review, see Gilbert, 1998). This research shows that a person's view of his or

her behavior emphasizes the role of concrete situational factors that operate at the moment of action, whereas his or her view of other people emphasizes the causal role of stable, general dispositional properties of the actor. For example, Robins, Spranca, and Mendelson (1996) found that participants in a "getting acquainted" conversation task tended to see their own behavior as caused by their partner but their partner's behavior as caused by his or her personality (see also Nisbett, Caputo, Legant, & Marecek, 1973; Saulnier & Perlman, 1981; for a review, see Watson, 1982).

Similar to what CLT suggests, Semin and Fiedler (1989) argued that the actor-observer effect reflects different levels of abstraction of action representation. In support of this proposal, Semin and Fiedler (1989; see also Fiedler et al., 1995) made participants describe either their own or another person's behaviors in a number of situations (e.g., a successful party or a failure at school) and coded their responses for abstractness. The analysis employed the LCM (Semin & Fiedler, 1988) described earlier. The results showed that observers' descriptions of behaviors had a higher proportion of abstract verbs than actors' descriptions. The reverse pattern was found for the rate of specific context supplements (e.g., space and time). From the perspective of CLT, these findings demonstrate a higher construal level of distal social targets (another person) than a proximal social target (the self).

Self-other differences might be explained as being due to differences in knowledge (people know more about themselves and the variability of their behavior over situations than about others) and differences in the salience of behaviors versus situations (the latter is more salient from one's own perspective, the former from the observer's perspective). The differential knowledge explanation is consistent with the CLT notion of how high level of construal came to be associated with distant entities, but it does not necessarily exemplify the notion of construal level. Would differences in construal emerge when knowledge is identical for near and distal social targets? Research relating abstractness of memories to the perspective in which they are recalled seems to offer a positive answer. It has been shown, for example, that personal memories of behaviors that were recalled from a third-person perspective (e.g., "try to remember your first day at school, as if you are now watching the kid you were") rather than from a first-person perspective ("try to remember your first day at school, as if you are a kid again") tended to employ dispositional (as opposed to situational) terms (Frank & Gilovich, 1989; Nigro & Neisser, 1983). In a similar vein, Libby and Eibach (2002, study 4) found that imagining performing an activity (e.g., rock climbing and playing drums) from a third-person perspective produced less vivid and rich reports of the activity than imagining the same activity in a first-person perspective. In terms of CLT, this means that a third-person perspective, which imposes more distance than a first-person perspective, induced a higher level of construal.

A third-person perspective on oneself may be induced by a situational manipulation of self-awareness, such as

the presence of a mirror or a camera (Duval & Wicklund, 1972; Wicklund, 1975) but may also express a dispositional tendency for public self-consciousness (Fenigstein, Scheir, & Buss, 1975). Both sources of self-awareness seem to increase people's tendency to behave in a way that corresponds to their own personal values and socially accepted ideals (e.g., Macrae, Bodenhausen, & Milne, 1998; for a review, see Gibbons, 1990). From our perspective, values and ideals are high-level constructs (Eyal, 2005). The finding that self-awareness increases behavior-value correspondence is therefore consistent with the idea that increased distance from oneself increases the impact of high-level constructs on one's behavior. Self-awareness also decreases the effect of situational factors on behavior. For example, self-aware individuals are better able to resist situational inducements to commit moral transgressions under the cover of anonymity (Beaman, Klentz, Diener, & Svanum, 1979). Moreover, both situationally manipulated self-awareness and dispositional self-consciousness seem to enhance dispositional attributions and diminish situational attributions for one's own actions, presumably because these variables engender a view on oneself that is akin to that of an external observer (Gibbons, 1990). As noted before, general dispositions are typically more abstract than situational attributions and, therefore, constitute a higher level of construal.

In sum, people tend to construe others in higher-level terms than themselves and, in addition, to construe themselves in higher-level terms when taking the perspective of another person. Both of these effects are consistent with CLT. The latter effect is particularly informative because it is hard to interpret in terms of differential knowledge about the target.

INGROUPS VERSUS OUTGROUPS

A considerable amount of research on group perception suggests that people form higher-level construals of outgroups than their ingroups. Compared with ingroups, outgroups are described in more abstract terms (Fiedler et al., 1995; Werkman, Wigboldus, & Semin, 1999) and are perceived as more homogenous (Jones, Wood, & Quattrone, 1981; Park & Judd, 1990; Park & Rothbart, 1982), less differentiated into subgroups (Brewer & Lui, 1984; Linville, 1982; Park, Ryan, & Judd, 1992), and as possessing more structured, predictable sets of properties (Linville, Fischer, & Yoon, 1996). From the perspective of CLT, we construe outgroups more abstractly than ingroups because we typically have less direct experience with outgroups and thus perceive them as more distant. We might also have less information about the outgroup. We propose, however, that a generalized sense of greater psychological distance from the outgroup than the ingroup may independently affect construal. Support for this proposal comes from the Jones and colleagues (1981) study on ingroup heterogeneity/outgroup homogeneity. These researchers asked students, who were members of four selective clubs, to characterize members of different clubs (their own club and each of the three other groups) on a number of per-

sonal characteristics, such as introverted–extraverted, refined–crude, and athletic–nonathletic. On each trait scale, participants marked the position of the average member of each group, two values between which they believed 50% of the group members would fall, and two scale values between which they believed all group members would fall. As predicted, participants indicated wider ranges for their own club than the three other clubs, indicating more perceived variability within the ingroup as opposed to the outgroup. Importantly, this tendency was unrelated to the number of ingroup or outgroup members known, suggesting that the more abstract construals of the outgroup than the ingroup may be independent of amount of knowledge about those groups.

SOCIAL POWER

Almost any relationship can be characterized in terms of the amount of control an individual has over others' outcomes relative to the amount of control others' have over the individual's outcomes (Thibaut & Kelley, 1959). A considerable amount of social psychological research has shown that social power affects a broad range of social cognitive and self-regulatory phenomena (Fiske, 1993; Keltner, Gruenfeld, & Anderson, 2003). Does social power also affect social distance among individuals? Based on the definition of power in terms of outcome dependence, Smith and Trope (2006) recently proposed that the more powerful individuals feel more independent of others and, therefore, more distinct and separate from them. Indeed, there is evidence that individuals with more power see themselves as more different from, and thus distant from, other people than people with less power (e.g., Lee & Tiedens, 2001; Snyder & Fromkin, 1980). For example, group leaders tend to be distinctive relative to their fellow group members, and over time they become even more psychologically separate from the rest of the group (see Hogg, 2001; Hogg & Reid, 2001).

If power entails more social distance, then CLT would predict that it would predispose the more powerful individuals to form high-level construals of relevant situations. Powerful individuals might, as a result, focus on the central, most important aspects of the situation and disregard secondary, more peripheral aspects, thus forming an unequivocal orientation toward the situation. In a study related to this prediction, Overbeck and Park (2001) asked high- and low-power participants to interact via email with targets who held the opposite power role. Some of the information participants received was relevant to the task at hand and some was irrelevant. At the end of these interactions, participants were asked to list as much information from the emails as they could remember. Not only did participants in the high-power role recall overall more information from these interactions, but they were especially superior at recalling information that was relevant. Thus, high-power participants were better at distinguishing between primary and secondary information, a hallmark of abstract processing.

Powerful people also seem to use more abstract language. Guinote (2001) found that Portuguese participants used more abstract language to describe both their ethnic group and an outgroup when they were part of the majority (i.e., they were living in Portugal: higher-power group) than when they were part of a minority (i.e., they were immigrants living in Germany: lower-power group). Similarly, participants who played the role of judges used more abstract, trait-like language in referring to themselves than did participants who were workers (Guinote, Judd, & Brauer, 2002).

Smith and Trope (2006) examined how priming power affects participants' ability to abstract visual stimuli in perceptual tasks. For example, one of the studies examined participants' performance on an embedded-figures task in which a specified pattern has to be found and traced within a complex geometrical figure (Witkin, Oltman, Raskin, & Karp, 1971). As predicted, participants who were primed with high power performed better than participants who were primed with low power. Subsequent studies by Smith and Trope found that power-primed participants were (1) better at detecting patterns and thus more accurately detected the amount of covariation in a series of data; (2) focused more on primary features, making more superordinate categorizations; and (3) more accurate at detecting structure, making responses that better fit the data at hand, in a Gestalt completion task. These effects of power on level of construal were not mediated by participants' reported mood, efficacy, or effort.

It has been argued that powerful individuals are susceptible to heuristic thinking and uninhibited reliance on superficial stereotype-consistent cues (Fiske, 1993; Keltner et al., 2003). The present analysis suggests an interesting alternative to this view. Power does not seem to reduce overall attention to and utilization of the available information. Instead, it seems to focus individuals on its central, high-level aspects. It is possible, then, that the distal perspective activated by the possession of social power promotes going beyond the information given, detecting the underlying structure, and abstracting from it superordinate, central features. This power-driven construal may support the kind of long-term planning and goal pursuit that are often required of individuals in positions of power.

POLITENESS

The way individuals communicate with each other might be indicative of the social distance between them (Argyle, 1970). One general aspect of interpersonal communication is the extent to which the speaker addresses a recipient politely. Research conducted across different cultures has found that politeness is closely related to social distance. That is, speakers tend to address more politely socially distant listeners than socially close listeners (see Brown & Levinson, 1987; Holtgraves, 2002). Politeness may thus serve as an indicator of social distance and, like social distance, act to produce higher construal levels of the situation.

A series of studies by Stephan (2005) tested this hypothesis. For example, one study examined how the intention to be very polite as opposed to less polite affects the abstractness of one's language. Participants were asked to indicate how a student would address a classmate (e.g., ask for his or her notes) in a very polite way, a moderately polite way, or a less polite way. The open-ended responses were analyzed for abstractness according to the Semin and Fiedler's (1988) LCM. As predicted, abstract verbs were used more frequently and concrete verbs were used less frequently with increasing levels of politeness. Another study examined how the intention to be very polite versus less polite affected level of construal of actions. Participants imagined a person performing an action and then described it in either a polite way or a less polite way by choosing between a high-level, "why" description and a low-level, "how" description of the action (Vallacher & Wegner, 1989). For example, participants chose between describing "Shelly is reading a book" as "Shelly is gaining knowledge" or as "Shelly is following lines of print." As predicted, high-level restatements were chosen more frequently for polite descriptions than for less polite descriptions. Both studies demonstrate, then, that an increase in level of politeness resulted in higher-level construals of actions.

CULTURE

Research on cross-cultural psychology distinguishes between independent and interdependent cultures. This research suggests that Asian and South American cultures, compared to West European and North American cultures, emphasize more the interdependence and interconnectedness of the individual with the collective, rather than his or her independence from others (Berry, 1976; Markus & Kitayama, 1994). Thus, participants from China, India, Africa, and Mexico often explicitly acknowledge the importance of other people, of relations, and of the participatory, responsive, interpersonal nature of behavior. In terms of social distance, interdependent cultures may be characterized as maintaining more proximity between a person and his or her social surrounding (Markus & Kitayama, 1994). If others are more proximal in interdependent cultures, then CLT would predict that in these cultures, people would be predisposed to using low-level construals of persons, objects, and events.

Indeed, a large amount of research has documented a reduced tendency in interdependent cultures to construe others in high-level, dispositional terms, and an enhanced tendency to construe them in lower-level, situation-specific and relational terms (Miller, 1984; Morris & Peng, 1994; for a review, see Choi, Nisbett, & Norenzayan, 1999). For example, Morris and Peng (1994) found that Chinese participants explain a murder crime in situational terms (e.g., the murdered was just fired from work) whereas European Americans explain a similar crime in dispositional terms (e.g., the murderer could not control himself). Interestingly, it seems that the differences in construal between independent and interdependent cultures apply not only to people, but also

to a wide range of nonsocial stimuli. Nisbett, Peng, Choi, and Norenzayan (2001) suggest, more broadly, that individuals from interdependent cultures process stimuli in a contextual manner, attend to the relationships between the focal object and the field, explain and predict events on the basis of such relationships, and rely on experience-based knowledge rather than on abstract logic. In contrast, individuals from independent cultures presumably process the same stimuli as isolated from the immediate context, focus on attributes of the object and assign it to categories, use rules about the categories to explain and predict the object's behavior, and use formal logic. For example, these researchers report a study in which Japanese and American participants were shown pictures of fish and other underwater objects and reported what they had seen. This study found that Japanese participants made more statements about background elements than did American participants. Interestingly, Nisbett and colleagues suggested that these differences in perception and cognitive styles may be traced to structural differences in the socioeconomic systems that have evolved in different cultures. Social structure presumably shapes cognition because perception of social objects is generalized to the inanimate world, and because reasoning develops in the service of solving interpersonal conflicts. Based on this assumption, Nisbett and colleagues argue more specifically that social interdependence and close social ties give rise to attention to relations between objects and to experience-based knowledge, whereas social independence gives rise to isolating objects, attending to their attributes, and assigning them to abstract categories. This idea is consistent with the CLT proposal that social distance affects level of construal.

The Effect of Level of Construal on Psychological Distance

As indicated earlier, psychological distance may not only affect construal but may be affected by construal. We argued that the association of distance to high construal levels becomes generalized beyond situations in which distance entails less knowledge. We further suggest that through this association process, the connection also became bidirectional, so that high levels of construal induce perceptions of greater distance from stimuli. We therefore predict that highly construed stimuli would be perceived as more distant in time and space, as more distant socially, and as less real.

The Effects of Level of Construal on Future Temporal Distance

Liberman, Trope, McCrae, and Sherman (in press) examined the effect of construal level on the temporal distance of activity enactment. In one of their studies, participants were first asked to indicate either "why" (i.e., high-level construal) or "how" (i.e., low-level construal) a person would perform an activity (e.g., "Ron is considering opening a bank account. Why (How) would Ron do that?") and were then asked to estimate how much time

from now the person would do the activity. As predicted, participants indicated more distant enactment times after a high-level "why" construal than after a low-level "how" construal. The authors found similar effects with other manipulations of level of construal, and with participants' estimates of the enactment time of their own activities.

The Effects of Level of Construal on Past Temporal Distance

Semin and Smith (1999, studies 2 and 3) studied the effect of linguistic abstractness on event age. They provided participants with retrieval cues of varying abstractness and examined how distant were the events that they recalled. For example, participants recalled either an occasion on which they helped somebody (i.e., concrete retrieval cue) or an occasion on which they displayed a trait of helpfulness (i.e., abstract retrieval cue). As predicted, an abstract retrieval cue prompted memories that were more than 8 months older than memories that were prompted by a concrete retrieval cue. Thus, abstractness of representation affected past temporal distance.

Semin and Smith (1999) suggest that abstract terms mark distant events and concrete terms mark recent events. They relate their findings to the existence of two separate learning and memory systems: a fast learning system and a slow learning system (McClelland, McNaughton, & O'Reilly, 1995). According to this model, the slow learning (schematic) system records repeatedly encountered regularities in the environment and uses them to fill in unobserved details and interpret new information. It uses, therefore, more abstract representations. In contrast, the fast learning (episodic) memory system uses more concrete representations and records specific events together with information about their context. From our perspective these findings demonstrate a more general principle, which is that high-level construals foster a perception of more distant past events.

The Effects of Level of Construal on Social Distance

Stephan (2005) conducted a series of studies to examine the effect of level of construal on politeness and familiarity, which were conceptualized as indicators of social distance. It was predicted that an increase in level of construal would produce a corresponding increase in perceived politeness and a decrease in perceived familiarity of a social target. For example, one study asked participants to provide either dispositional, high-level explanations or situational, low-level explanations for an actor's behavior (e.g., "Danny is explaining the class materials to another student. What aspects of Danny's personality, character, or dispositions [in the situation or the setting] could explain Danny's behavior?"). The researchers then measured the perceived familiarity of the target person. Consistent with the prediction, politeness and familiarity were higher after participants generated low-level, situational attributions than high-level, dispositional attributions. These results suggest that an increase

in level of construal produces an increase in perceived social distance, as indicated by reduction in perceived familiarity as well as in increased politeness.

The Effects of Level of Construal on Hypotheticality and Probability

A low-level construal of hypothetical events, more than a high-level construal, makes them seem more likely to become real, or, in other words, makes them seem more probable (for reviews, see Koehler, 1991; Nisbett, 1993). For example, a study by Sherman, Chialdini, Schwartzman, and Reynolds (1985) presented participants with information about a disease that supposedly was becoming prevalent on campus and asked them to imagine actually contracting the disease. For some subjects, symptoms were concrete (low energy level, muscle aches, severe headaches), whereas for others the symptoms were described more abstractly (disorientation, malfunctioning nervous system). A control group read the descriptions of the disease but did not engage in imagining contracting the disease. The results indicated that subjects who imagined contracting the disease with the concrete symptoms estimated that the likelihood of actually contracting it was greater than the control subjects imagined, who, in turn, gave higher likelihood estimates than the group of subjects who imagined abstract symptoms. Thus, construing something on a lower level makes it seem more likely. Koehler (1991) argued that low-level, detailed construals allow a more confirmatory information search. It is possible, however, that the mere existence of low-level, concrete details creates a feeling of greater reality, veridicality, and likelihood.

The literature on source monitoring in memory (Johnson, Hashtroudi, & Lindsay, 1993) is also closely related to the connection between level of construal and veridicality. One of the questions that this literature has addressed is how people know if a mental representation corresponds to reality rather than to fantasy. In other words, how do people decide that something they remember actually happened as opposed to being imagined, dreamt, or considered (e.g., did I really visit my aunt's house or did I only consider going there?). According to source monitoring theory, certain memory characteristics enhance people's confidence in an event's reality. These include perceptual detail, such as sound, smell, touch, and taste, as well as contextual information, such as the hour, day, year and season the event took place, and the relative spatial arrangement of people and of objects (Johnson, Foley, Suengas, & Raye, 1988). For example, I might think I remember the color of the floor my aunt stood on and the smell of the cooking meal in her kitchen and thus conclude that it must be the case that I really visited her house. In terms of CLT, these details pertain to a low-level construal and the process of inferring the reality of a mental representation involves using the existence of low-level details as an indication of higher likelihood and veridicality.

It is noteworthy that representations of imagined actions do actually appear to have less perceptual and contextual features than observed events (Suengas & John-

son, 1988). Stern and Rotello (2000) made participants perform some actions and imagine others (e.g., eating crackers and tying a ribbon around a pencil) and examined the memory characteristics of these actions both immediately and 1 week later. They found that performed events were clearer and richer in sensory and contextual detail than imagined events. Thus, it appears that the relation between hypotheticality and level of construal is bidirectional: not only that people infer realism (i.e., probability) from level of construal but also that realism affects level of construal. Interestingly, in the study by Stern and Rotello, the level of perceptual and contextual features of both imagined and performed events deteriorated over a period of 1 week (see Johnson et al., 1988, for a comparable effect of time on autobiographical memories), making the level of these features similar between immediate imagined actions and performed actions 1 week later. It seems, therefore, that temporal distance has an effect on level of construal that is similar to the effect of hypotheticality.

Implicit Associations between Psychological Distance and Level of Construal

Recently, Bar-Anan, Liberman, and Trope (in press) examined associations between level of construal and psychological distance using an Implicit Associations Test. Similar to other assessments of implicit associations (e.g., between stereotyped group members and stereotypical attributes; Greenwald, McGhee, & Schwartz, 1998), participants in these studies were presented with stimuli from four categories: stimuli pertaining to high-level construal (e.g., category names such as "drinks"), stimuli pertaining to low-level construal (e.g., exemplar names such as "coke"), stimuli pertaining to low psychological distance (e.g., the word "ours" or the word "friend" for the social distance), stimuli pertaining to high psychological distance (e.g., the word "theirs" or the word "stranger"). In the critical trials participants mapped stimuli from these four categories on two responses, pressing either a left key or a right key on the computer keyboard. On CLT-congruent trials, high-level stimuli were paired with distant stimuli and low-level stimuli were paired with proximal stimuli, whereas on CLT-incongruent trials high-level stimuli were paired with proximal stimuli and low-level stimuli were paired with distant stimuli. Reaction times were compared between congruent and incongruent trials to test the prediction of CLT that reaction would be faster on congruent than on incongruent trials. Each study examined one of four dimensions of psychological distance—temporal distance, spatial distance, social distance, and hypotheticality. With all four dimensions it was found that participants are faster with congruent than with incongruent pairings, suggesting that participants implicitly associate psychological distance with high-level construal and psychological proximity with low-level construal.

This set of studies extends previous lines of research on the association between level of construal and psychological distance in several important respects. First, it shows that this association cannot be explained by differ-

ential knowledge about proximal versus distal targets. Second, the research demonstrates similar effects across the four dimensions of psychological distance (temporal, spatial, social, and hypotheticality), thus suggesting that they all share a common meaning as instances of psychological distance. Third, it suggests that the association between psychological distance and construal level can be activated automatically without conscious deliberation.

COGNITIVE, AFFECTIVE, AND BEHAVIORAL EFFECTS OF PSYCHOLOGICAL DISTANCE

How does psychological distance from an event affect people's affect, cognitions, and behaviors toward those events? Research conducted in the framework of temporal construal theory addressed this question with respect to future time perspective. This section reviews the research, integrates it with literatures suggestive of similar effects of other distance dimensions, and offers new predictions for these dimensions. As in the previous section, we examine the effects of future temporal distance, past temporal distance, hypotheticality, and social distance. We also examine the effects of level of construal. As demonstrated in the previous section, level of construal is closely related to psychological distance, and therefore CLT postulates that its effects on prediction, evaluation, and choice would resemble those of psychological distancing.

Prediction

The French anthropologist Claude Levi Strauss once noted that in the Western sciences, the most distal topics (e.g., astronomy and geography) developed first whereas those that look at more proximal entities (e.g., psychology) were last to develop (Levi Strauss, 1978). We would like to propose, consistent with this observation, that abstract theoretical reasoning is easier to apply to distal targets than to proximal targets. More specifically, CLT proposes that increasing psychological distance from a future situation would make it more likely that predictions about this situation would be based on the implications of high-level rather than low-level construals. In theory-based predictions, the theory constitutes a high-level construct that promotes confident predictions, whereas low-level features, associated with incidental deviations and noise, undermine confidence. In these cases, psychological distancing, because it enhances the effects of high-level constructs and reduces the effects of low-level constructs, would enhance confidence. For example, economic theory posits that increasing interest rates causes the stock market to decline. The theory acknowledges that other factors might also affect the stock market but treats them as noise. According to CLT, psychological distancing would promote confidence in predicting that if interest rates are raised, then the stock market would fall. Thus, economists would be more confident in their prediction when considering the more distant future, when making predictions about more geographically distant markets, when making forecasts

about the investments of other people, and when the predictions concern a hypothetical or unlikely scenario.

Normatively, predictions about more distant entities should be made with less confidence because less is known about them. For example, one knows less about another person than about oneself, and hence one should be less confident when predicting the other's than one's own behavior. However, if high-level construals promote greater confidence, then people may feel no less and even more confident in predicting distal outcomes. For example, because stable personality traits and dispositions are more readily inferred about another person than about oneself (Jones & Nisbett, 1972), one may be more confident in predicting another person's correspondent behaviors than one's own (Pronin, Kruger, Savtisky, & Ross, 2001). This logic of CLT is consistent with the claim that overconfident predictions stem from relying on oversimplified representations of situations.

A great deal of social cognitive research has identified mental construal as underlying a wide range of prediction errors, including overconfidence (Dunning, Griffin, Milojkovic, & Ross, 1990; Griffin, Dunning, & Ross, 1990), the planning fallacy (Buehler, Griffin, & Ross, 1994; Kahneman & Lovallo, 1991; Kahneman & Tversky, 1979), affective forecasting errors (Dunn, Wilson, & Gilbert, 2003; Gilbert, Morewedge, Risen, & Wilson, 2004; Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998; Gilbert & Wilson, 2000; Kahneman & Snell, 1990, 1992; Wilson, Meyers, & Gilbert, 2001). This research has shown that people often have unwarranted confidence in their prediction because their mental models of future situations are schematic and oversimplified. For example, people typically underestimate task completion times because they base their estimates on schemas of how things unfold and fail to take into consideration nonschematic events (Buehler et al., 1994). Thus, the schema of writing a paper includes reading relevant literature, analyzing data, and communicating with colleagues, but it does not include a visit from one's in-laws. Therefore, the latter, even if known in advance, would not be taken into account in predicting how much time it takes to write a paper. As another example, focalism involves overconfident prediction of one's own reactions to emotional events (e.g., how sad I am going to be if my team loses the game) due to an underestimation of the diluting effect of low-level, situational factors (i.e., underestimation of the fact that most of life remains unaffected by the game; Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000).

In all these lines of research, predictions are compared to actual outcomes (i.e., predicted completion times are compared to actual completion times), whereas CLT focuses on comparing predictions for proximal versus distal entities (e.g., estimations of completion times in the distant future vs. the near future). This difference notwithstanding, we would like to note that explaining the discrepancy between prediction and reality as a consequence of construal is in line with our assumption that distances are anchored on one's direct experience and that any distancing entails construal. Let us now turn to

examine the effects of psychological distance on prediction, which, we believe, are mediated by differences in construal in much the same way as differences between predicted and actual outcomes.

Future Temporal Distance and Confidence in Prediction

Direct evidence for these hypotheses comes from research on the effect of temporal distance on predictions of social and nonsocial events (Nussbaum et al., 2004; see also Nussbaum et al., 2003). One study examined the confidence of advanced psychology students in replicating classic findings in psychology in either the near future or the distant future (Nussbaum et al., 2004, study 1). For example, participants imagined entering a class at the university, either the next day or a year later (depending on the experimental condition), handing the students a list of words to memorize and then testing how well they remember it after moving some of the students to a different room. Participants estimated how likely it is that those tested in the same room would outperform, on average, those who were moved to a different room, thus replicating the encoding specificity effect. Participants were more confident in replicating encoding specificity when they imagined conducting the experiment in the distant future than in the near future. The same pattern of results occurred also with other classic findings in social, cognitive, and developmental psychology.

Several other studies assessed confidence in predicting one's own performance on a general knowledge quiz expected to take place either on the same day or 2 months later (Nussbaum et al., 2004, study 3). These studies used the same questions but in either a relatively easy or hard question format, which we assumed is a low-level aspect of performance. Specifically, in one study, the quiz consisted of either multiple-choice questions (relatively easy format) or open-ended questions (relatively hard format). In another study, the quiz consisted of questions with either two response alternatives (relatively easy) or four response alternatives (relatively hard). We also assessed participants' perceived ability in each knowledge domain (how knowledgeable one is in geography, history, etc.). The results showed that the difficult question format appropriately reduced confidence in near-future performance but failed to reduce confidence in distant-future performance. We think that this was the case because question format was a low-level aspect of the situation that, consistent with CLT, affected confidence in near-future outcomes more than in distant-future outcomes. Our results also indicated that participants' beliefs about their general knowledge in different domains predicted their confidence in that domain in the distant future better than in the near future. We think that this was the case because such beliefs constitute a high-level consideration, as they are perceived to be more central to the quiz.

The Nussbaum and colleagues (2003) studies on the effect of future temporal distance on dispositional attribution, discussed in the first section of this chapter as an example of the effect of future temporal distance on level of construal, are also relevant to prediction. They show

that people base their predictions of others' more distant-future behavior more on high-level, dispositional attributions and less on low-level, situational attributions.

In sum, there seems to be considerable empirical support for the idea that temporal distance increases the impact of high-level information (e.g., theories, prototypes, self-beliefs, and personal dispositions) and decreases the impact of low-level information (e.g., irregular outcomes and specific situational and task characteristics) on prediction. Thus, two complementary processes may contribute to the unwarrantedly higher confidence levels associated with distant-future predictions: underweighting of the uncertainty associated with low-level information and overweighting of the certainty associated with high-level information.

Confidence Regarding Past Events

How does confidence about past events change over time? Bearing on this question is research on the hindsight bias, namely, people's tendency to exaggerate their past estimated likelihoods of an event after it had occurred (Fischhoff, 1975; for a review, see Christensen-Szalanski, & Willham, 1991). For example, after January 1, 2000, people reported that before that date they estimated the likelihood of no disaster happening as quite high, higher than the estimates they actually gave before that date (Pease, McCabe, Brannon, & Tagler, 2003). Interestingly, one of the explanations for the hindsight bias is akin to construal. Specifically, it has been proposed that people construct a theory to explain the outcome (e.g., 9/11 events were foreseeable given the frustration of the Muslim world), which makes the outcome seem inevitable.

CLT predicts that the hindsight bias and, more generally, theory-driven confidence in the inevitability of past events would increase over time. The research literature provides some support for this prediction. For example, Bryant and Guilbault (2002) found that hindsight about President Bill Clinton's acquittal in the Monica Lewinsky case increased from 4 days after the verdict to 11 days after the verdict. Obviously, more research is needed to examine in more detail the hypothesis that hindsight would increase over time and to specify the conditions under which this would occur. For example, it would be interesting to examine whether confidence in the inevitability of historical events increases over large time spans (e.g., how inevitable were the events of September 11, 2001, or how inevitable was World War II) and whether an increase in confidence is associated with holding general theories that explain those events. It would also be interesting to manipulate the salience of local, low-level theories (e.g., 9/11 happened because the FBI failed to arrest the suicide pilots) as opposed to global, high-level theories (the Muslim world felt outraged toward the United States), and examine whether the salience of the latter, more than the former, would make the effect of hindsight increase over temporal distance. Such results, if obtained, would suggest that past events that are explained in global and abstract terms seem increasingly inevitable over the course of time, more than past events that are at-

tributed to specific, low-level events. In other words, the more global one's theories, the more the distant past would seem inevitable and the distant future would seem foreseeable.

Summary: Psychological Distance and Confidence

We reviewed research on the effect of future and past temporal distance on confidence in prediction. This research demonstrates that distancing enhances confidence in predictions that are based on high-level features, such as theories and schemas, but not confidence in predictions that are not based on high-level constructs. Would similar effects obtain also for social distance and for hypothetical versus actual scenarios? We could not find any research that directly addresses this question and could only speculate about such effects. A possible prediction would be, for example, that remote hypothetical models (e.g., a model of the effects of a meteorite hitting earth) would make more confident and clear-cut predictions than models of more realistic and likely events (e.g., a model of the effects of global warming). One could also predict that as a precondition of a theoretical prediction becomes more probable (e.g., as the likelihood of a meteorite hitting earth would increase), confidence in one's predictions would decline.

Preferences

How do people evaluate and make choices about distant future outcomes, as opposed to near future outcomes? How is advice given to others different from one's own choice? How does uncertainty about a situation change the way it is evaluated? And does level of construal change decisions? All these are questions we now address. As before, the most direct evidence bearing on these questions comes from research on the effects of future temporal distance, but findings related to other distances are discussed as well.

Future Temporal Perspective and Preferences

How the value of outcomes changes with temporal distancing has been a question of central importance in psychology (e.g., Ainslie, 1975; Ainslie & Haslam, 1992; Baumeister & Heatherton, 1996; Metcalfe & Mischel, 1999; Rachlin, Brown, & Cross, 2000; Read & Loewenstein, 2000), behavioral economics (e.g., O'Donoghue & Rabin, 2000), and political science (e.g., Elster, 1977; Schelling, 1984). All these behavioral sciences have generally assumed that the value of outcomes is discounted or diminished as temporal distance from the outcomes increases. Indeed, a considerable amount of research suggests that individuals often place higher value on a near-future reward than on a distant-future reward, even when the distant-future reward is larger (e.g., Ainslie & Haslam, 1992; Elster & Loewenstein, 1992; Mischel, Grusec, & Masters, 1969; Mischel, Shoda & Rodriguez, 1989; Read & Loewenstein, 2000).

Contrary to the claim of overall time discounting, CLT proposes that the effect of temporal distance would de-

pend on the level of construal with which value is associated. In this view, temporal changes in the attractiveness of an option depend on the value associated with the high-level construal of the option (high-level value) and the value associated with the low-level construal of the option (low-level value). Temporal distance should increase the weight of high-level value and decrease the weight of low-level value. As a result, temporal distance should shift the overall attractiveness of an option closer to its high-level value than to its low-level value. When the low-level value of an option is more positive than its high-level value, the option should be more attractive in the near future (time discounting). However, when the high-level value of an option is more positive, the option should be more attractive in the distant future (time augmentation).

We examined this hypothesis with different manipulations of high versus low levels of construal: primary, goal-related versus secondary, goal-irrelevant sources of value; feasibility versus desirability and expectancy versus value in gambles; arguments in favor versus arguments against an action; and abstract and primary attitudes and values versus concrete and secondary attitudes and values. This literature was reviewed elsewhere (Liberman & Trope, 1998; Sagristano, Trope, & Liberman, 2002; Trope & Liberman, 2000; see Trope & Liberman, 2003), and is only briefly summarized here. We return to the general question of discounting after we review the effects of different psychological distances on evaluation and choice.

PRIMARY VERSUS SECONDARY ASPECTS OF OBJECTS

Consider an activity consisting of two parts: a main task, which is the goal of the activity, and an unrelated filler task to be performed during a break in the main task. Because the main task is the primary goal of the activity, it is part of a high-level construal of the activity, and because the filler task is a secondary aspect of the activity, it is part of a low-level construal of the activity. CLT therefore predicts that temporal distance will increase the weight of the value of the main task relative to the weight of the value of the filler task in determining the overall attractiveness of the activity. When the main task is more attractive than the filler task, the overall activity would become more attractive over temporal distance. In contrast, when the main task is less attractive than the filler, the overall activity would become less attractive over temporal distance.

Trope and Liberman (2000, study 4) presented participants with activities consisting of either an interesting main task and a boring filler or a boring main task and an interesting filler. Each activity was described as consisting of three sessions of performing the main task, with the filler task performed between these sessions to provide rest and distraction from the main task. For example, an activity titled "Judging Humor" was described as follows: "The main task is judging humor, and will ask you to evaluate the funniness of cartoons. The filler task in between the three sessions is checking data, and will ask you to compare two lists of numbers to check for dis-

crepancies." When the chosen activity was said to take place in a few weeks, participants strongly preferred the activity with an interesting main task to the activity with a boring main task. However, when the chosen activity was said to take place in the same experimental session, this preference was significantly weaker. Thus, as predicted by CLT, temporal distance enhanced the tendency to evaluate activities in terms of goal-relevant rather than incidental aspects, so that with time delay the activity with an interesting main task (but boring filler) became more attractive and the activity with a boring main task (but interesting filler) became less attractive. The same temporal changes in preference were found for evaluations of products with primary and secondary features (Trope & Liberman, 2000, study 3).

FEASIBILITY AND DESIRABILITY

An important difference between high-level and low-level construals of goal-directed action is their emphasis on the desirability versus feasibility of outcomes. Desirability refers to the value of an action's end state, whereas feasibility refers to the ease or difficulty of reaching the end state. For example, desirability concerns the value of receiving a job offer, whereas feasibility concerns the amount of time and effort one has to invest to get the job offer. Given this assumption, CLT predicts that desirability considerations are more likely to guide distant-future preferences, whereas feasibility considerations are more likely to guide near-future preferences.

Liberman and Trope (1998) tested these predictions in a number of studies. One of the studies (study 4) used a realistic choice situation. Tel Aviv University students taking an introductory social psychology course were presented with a choice among several course assignments. The assignments were either easy (based on readings in Hebrew, the students' native language) or difficult (based on readings in English, a foreign language for these students) and either on an interesting topic (e.g., romantic love) or on an uninteresting topic (e.g., history of social psychology). In this situation, the difficulty of the assignment represents a feasibility consideration and the interest level of the assignment represents a desirability consideration. Students had to submit both a near-future and a distant-future assignment. They were told that they would have 1 week to work on each assignment but that the near-future assignment (reading materials and essay questions) would be given immediately whereas the distant-future assignment would be given 9 weeks later. Consistent with CLT, students' preferences showed that time delay decreased the effect of the difficulty of the assignments and increased the effect of the interest level of the topic of the assignments. The preference for the easy but uninteresting assignment decreased over time, whereas the preference for the hard but interesting assignment increased over time. Thus, in selecting a near-future assignment, students were willing to sacrifice interest for the sake of ease. In contrast, in selecting a distant-future assignment, students were willing to sacrifice ease for the sake of interest, thus committing themselves to a desirable but less feasible task. A similar tem-

poral pattern was obtained with various other options (Liberman & Trope, 1998, study 2).

Feedback seeking is another important decision that often pits feasibility against desirability concerns. Freitas, Salovey, and Liberman (2001) reasoned that feedback seeking involves a conflict between the goal of gaining information about oneself (a desirability consideration) and the difficulty of being exposed to self-evaluation (a feasibility consideration). They therefore predicted and actually found that distant future feedback preferences depended on the accuracy of the offered feedback, whereas near-future feedback preferences depended on the evaluative implications of the feedback. Informative but unflattering feedback was preferred for the distant future, whereas uninformative but flattering feedback was preferred for the near future.

An interesting implication of CLT's view on feasibility and desirability concerns the effect of temporal distance on planning. Liberman and Trope (1998, study 5) conceptualized time constraints as a feasibility aspect of an activity and investigated the role of time constraints and desirability of activities in near- and distant-future planning. They showed that plans for the distant future tend to reflect desirability of activities and disregard time constraints, thus creating a tendency to overcommit. It appears that in making distant-future plans, individuals consider each activity in isolation and fail to take into account that each activity they plan comes at the expense of some other activities in which they may want to engage at the same time.

PROBABILITY AND VALUE

The distinction between feasibility and desirability may be extended to games of chance—gambles characterized by probability of winning and the monetary payoff associated with winning. According to CLT, payoff is the superordinate consideration because the payoff determines the desirability of the end state of a gamble. The probability of winning is a subordinate consideration having to do with the properties of the random mechanism, device, or procedure that determines the feasibility of winning. In the normative expected utility model, probability and payoffs combine multiplicatively and therefore have symmetric weight in determining the attractiveness of gambles. However, our studies have demonstrated that people view the probability of winning as subordinated to the payoff; that is, they think that probability is important only if the payoff is high, but that payoff is important regardless of whether the probability of winning is high or low (Sagristano et al., 2002, study 1). This establishes payoffs as pertaining to a higher construal level than probabilities, and entails a prediction by CLT that people would assign more weight to payoffs and less weight to probabilities in deciding for the more distant future.

A series of studies on preference for near- and distant-future gambles tested this prediction (Sagristano et al., 2002). For example, one of the studies assessed monetary bids for gambles to be played on the same day or 2

months later. Participants were presented with a set of 20 bets that varied in probability of winning and expected value and were asked to state the amount of money they were willing to bid to play each gamble. As expected, preference among near-future gambles was primarily based on probability of winning, whereas preference among distant-future gambles was primarily based on the payoffs associated with winning. Thus, for near-future gambles, bids were highest for high-probability-low-payoff bets (i.e., relatively safe bets), whereas for distant-future gambles, bids were highest for low-probability-high-payoff bets (i.e., risky bets). These findings extend CLT to uncontrollable, random outcomes.

ARGUMENTS IN FAVOR OF AND AGAINST AN ACTION

In deciding whether to undertake an action, cons are subordinate to pros. This is because the subjective importance of cons depends on whether or not pros are present more than the subjective importance of pros depends on whether or not cons are present. For example, consider a decision to undergo a medical treatment. If we know that the treatment has some health benefit for us, we would inquire about its potential side effects before making a decision. But if the treatment has no benefits for us, we would decide against taking it without further inquiry about its side effects. In contrast, we would inquire whether a medical treatment has health benefits whether or not it has side effects—when the treatment is known to have no side effect, information about its benefits may tell us whether the treatment is worth taking; when the treatment is known to have some side effects, we may still inquire about the benefits of the treatment in order to determine whether they outweigh its side effects. Thus, the importance of side effects depends on whether the treatment is known to have benefits, but the importance of benefits is independent of whether the treatment is known to have side effects.

After establishing these subordination relations in a series of studies (Eyal, Liberman, Trope, & Walther, 2004, studies 1a and 1b), the authors proceeded to examine an obvious implication that follows from CLT: If cons are subordinate to pros, then pros should become more salient as temporal distance from the action increases, whereas cons should become less salient as temporal distance from the action increases. A series of studies tested this prediction by asking participants to generate arguments in favor and against new (i.e., nonroutine) near-future or distant-future actions. As predicted, participants generated relatively more pro arguments and fewer con arguments when the actions were to take place in the more distant future. The proposed action involved new exam procedures (e.g., switching to open-ended questions instead of multiple-choice questions; study 2), social policies (e.g., restricting private cars in the city center; study 3), and a variety of personal and interpersonal behaviors (e.g., approaching a fellow student and offering to write an assignment together; studies 4–6). In all the studies, participants generated more pros and less cons as temporal distance from the actions increased.

PREDICTING BEHAVIORAL INTENTIONS FROM ATTITUDES AND VALUES

Personal attitudes and values are commonly viewed as transsituational guides (Schwartz & Bilsky, 1987), as abstract structures that provide continuity and meaning under changing environmental circumstances (Feather, 1995), and as stable meaning-producing superordinate cognitive structure (Rohan, 2000). Based on CLT, we propose that attitudes and values, because of their relatively abstract and decontextualized nature, will be more readily applied to and guide choice in psychologically distant situations. As one gets closer to a situation, choices are increasingly more likely to be based on secondary, low-level considerations.

Initial evidence for this analysis was recently obtained by Sagristano, Eyal, Trope, and Liberman (2006). The first session of the study assessed participants' general attitudes toward blood donation, volunteering for psychology experiments, and physical fitness advisement. In the second, purportedly unrelated session, participants were offered an opportunity to actually engage in those activities either in the next 2 days or several weeks later, and their behavioral intentions were assessed. As expected, participants' general attitudes better predicted their intention for the distant future than for the near future.

Another set of studies examined temporal changes in forming value-consistent intentions and applied Schwartz's (1992) value questionnaire to assess the importance participants assign to a wide range of values (e.g., power, benevolence, and hedonism). For example, one study asked participants to imagine 30 behaviors (e.g., rest as much as I can) and to indicate the likelihood of performing each behavior either in the near future or in the distant future. The researchers then correlated the rated importance of each value and the mean likelihood for performing the behaviors corresponding to that value. As predicted, these correlations were higher when the behaviors were planned for the distant future than when they were planned for the near future (Sagristano et al., 2006).

It is also possible to distinguish between values that are central to an individual and more peripheral, secondary values. When a situation is related to a number of different values, the individual's central values are more likely to guide choice from a psychologically distant than a proximal perspective, whereas the individual's secondary values are more likely to guide their choice from the psychologically proximal than the distant perspective. To examine this prediction, Eyal, Liberman, Sagristano, and Trope (2006) measured or manipulated the centrality of values and examined how they predict behavioral intentions. For example, one study assessed the relative centrality of achievement versus altruism values and examined near and distant intentions of solving a dilemma between getting ahead by working extra hours or helping a friend. Results indicated that people who were predominantly achievement oriented planned to be achieving in the distant future more than in the near future, whereas people who were predominantly altruistic planned to be

more cooperative in the distant future than in the near future. In other words, participants solved the conflict in favor of the more central value in their own value priorities in the distant future more than in the near future. These results imply that distant-future decisions reflect predominant values whereas in near-future decisions secondary values are also brought into consideration. Interestingly, these results also suggest that individuals with different values are quite similar to each other with respect to their near-future plans but differ considerably in their plans for the distant future. Inasmuch as actual behavior is closer to near-future plans than to distant-future plans, it is also possible to contend that individual differences in values are reflected in distant plans more than in real behavior. This would be reminiscent of the basic notion of social psychology that individual differences often fail to materialize in actual behavior, despite the common intuition that such differences are essential, central, and important. Possibly, people feel that individual differences in values guide behavioral choice because we tend to think of behavioral plans for temporally distant or hypothetical situations.

COMPENSATORY STRATEGIES IN DECISION MAKING

Our choice findings may be interpreted as suggesting that choice for the near future is based on more dimensions and is more compensatory, whereas choice for the distant future gives more weight to a smaller number of dimensions and is, therefore, less compensatory. Decision-making research views looking at attributes within each alternative as the hallmark of compensatory search, because compensation requires summing, within each alternative, the contribution of each attribute to the overall value. Looking at each attribute across alternatives, on the other hand, typically characterizes non-compensatory choice strategies, such as elimination by aspect (Payne, Bettman, & Johnson, 1988). We think that, generally, looking within alternatives across attributes constitutes a lower-level construal than looking at attributes across alternatives, because alternatives are directly experienced entities whereas attributes are abstracted. Moreover, a comparison of alternatives requires construal, or transcending the directly experienced situation (e.g., one cannot experience simultaneously a number of apartments and compare by experience their level of noise), but many attributes of a single alternative may be experienced simultaneously and thus do not require transcendence (see Hsee & Zhang, 2004, for a related distinction between joint and separate evaluation). From this perspective, too, compensatory evaluation of alternatives and within-alternative search would be associated with low-level construal and would characterize processing of proximal decision situations, whereas noncompensatory evaluation and within-attribute search would be associated with high-level construal and therefore would characterize processing of distal decision situations.

This idea was recently tested in an information search study by Borovoy, Liberman, and Trope (2004). Partici-

pants were presented with a matrix of information in which rows represented alternatives (e.g., different apartments), columns represented attributes (e.g., price, location, and noise), and cells represented the standing of each alternative on the corresponding attribute. Participants searched this matrix by exposing the information in each cell, one at the time (see Payne et al., 1988, for a review of this paradigm). We told some participants that they are making a choice for the near future (e.g., that they are choosing an apartment to rent in the next 2 weeks) whereas other participants were told that they are making a decision for the distant future (e.g., that they are choosing an apartment to rent 1 year later). We counted the number of within-alternative steps (i.e., the number of cells that were opened immediately after opening a cell in the same row) and within-attribute steps (i.e., the number of cells that were opened immediately after opening a cell in the same column). As expected, we found more within-alternative steps and less within-attribute steps for more near-future decisions. Moreover, we found that participants opened an equal number of cells and invested a similar amount of time in both temporal distance conditions. Thus, they did not perform a more heuristic search for the distant future sets.

SUMMARY: THE EFFECT OF FUTURE TEMPORAL PERSPECTIVE ON PREFERENCES

Together, the studies reviewed here support the CLT analysis of temporal changes in the effects of high-level and low-level information on preference. A distant-future activity was chosen according to the main task, but a near-future activity was chosen more according to a secondary, filler task. Diagnostic value was the prime determinant of preferences regarding distant-future self-relevant feedback, but pleasantness of the feedback was influential in preferences for the near future. Distant future time planning, but not planning for the near future, was guided by desirability concerns without taking into account time constraints. A future gamble was chosen according to the value of the outcome, whereas a near-future gamble was chosen according to the probability of the outcome. A distant-future action alternative was represented in terms of pro arguments, whereas a near-future action alternative included a representation of more con arguments. Finally, behavioral intentions for the more distant future, more than intentions for the near future, corresponded to abstract and central attitudes and values, whereas more specific and secondary attitudes and values showed the reverse intertemporal pattern.

In many of these cases, an irreversible decision was made at the same point in time regarding near- or distant-future options. Moreover, at the time of the decision, similar low- and high-level information was available for both the near- and distant-future options. Nevertheless, low-level information was more influential in decisions regarding near-future options, whereas high-level information was more influential in decisions regarding distant-future options. Thus, these findings cannot be explained by temporal differences in availability

of high- versus low-level information or by the ability to postpone the use of one of these types of information when it pertains to distant-future options.

Notably, our studies do not show more regressive choices for the more distant future. To the contrary, choices for the distant future tend to discriminate more clearly both between alternatives and between individuals. Thus, our participants were not simply uncertain or indifferent in their choices for the distant future, but, to the contrary, exhibited more differentiation and decisiveness regarding distant-future choices. We think that this was the case because they based distant-future preferences on higher-level construals, which are often more simple and schematic than construals of the near future. Our studies on information search and memory explicitly show that participants did not invest less effort and did not engage in shallower processing when thinking about more distant-future decisions. They did, however, apply a less compensatory, more attribute-based, rather than alternative-based, strategy in making decisions for the more distant future. We believe that this was the case because compensation and within-alternative search are based on a lower-level construal of the decision situation than looking within attributes. It is this noncompensatory strategy, we believe, that in many cases gives rise to more clear-cut preferences for the more distant future.

Past Temporal Distance and Preferences

Gilovich and Medvec (1995) found that people regret action in the recent past but inaction in the distant past. For example, when asked about regrets they have about their college years, students would say that they regret majoring in psychology, but older people would say that they regret not taking art classes. One explanation that Gilovich and Medvec proposed for their finding was that reasons for an action are more schematic and essential for the action (e.g., I like art) than reasons against an action (e.g., I am too busy) and therefore are better retained in memory. As a result, with time, the reasons for not taking an action become unclear, and a failure to act becomes less understandable and more regrettable. This explanation is consistent with our findings that pro arguments become more salient over temporal distance whereas con arguments become less salient over distance. Thus, the tendency to increasingly regret inaction over time distance may be explained within CLT as a result of the pro arguments being superordinate to con arguments (see above), and thus more salient at a larger distance.

Social Distance and Preferences

ADVISING VERSUS MAKING DECISIONS: PRIMARY AND SECONDARY ASPECTS

Kray and Gonzalez (1999) and Kray (2000) compared participants' own choices to the advice they gave to close and remote others. They found that in advising others, especially to more socially remote others, participants tended to give more weight to a single attribute that they

designated as the most important and less weight to other, more peripheral attributes. For example, when advising another person about choosing between two jobs, participants gave more weight to personal satisfaction (the most important dimension) and less weight to salary and location (the less important dimensions) than when choosing for themselves (study 2). In two other studies, conceptually similar results were shown to be stronger with a more distant social target (a student in another department) than with a closer target (a student in one's own class). Moreover, it was found that when rating the importance of attributes, advisories to others tend to give more polarized ratings, favoring central attributes and discounting unimportant ones, whereas decisions for oneself tend to have a more balanced view, in which more similar importance ratings are assigned to both important and less important attributes. Kray also found that participants reported more responsibility and potential regret, a larger number of generated decision-relevant attributes, and less regressive choice when making decisions for others than for oneself, from which she concludes that it is implausible that people simply invested less effort in advising others than in deciding for themselves. In our terms, these findings demonstrate choosing according to more central, high-level aspects for more socially remote targets and applying less compensatory strategies for others than for oneself. Both of these results parallel our findings on future temporal perspective and, we believe, may be similarly explained within the framework of CLT.

THE EFFECT OF POWER ON WEIGHTING PRIMARY AND SECONDARY ASPECTS

As discussed earlier, theory and research suggest that powerful individuals feel more independent of others and, therefore, more distinct and distant from others than people with less power (e.g., Hogg, 2001; Hogg & Reid, 2001; Lee & Tiedens, 2001; Snyder & Fromkin, 1980). We also argued that this predisposes the more powerful individuals to adopt a distal perspective on the immediate situation and to form high-level construals of information about the situation (see Smith & Trope, 2006) and therefore to be more attuned to the primary outcomes the situation affords. In contrast, powerless individuals would divide their attention between central and peripheral aspects of the situation and would, therefore, be less likely to form an unequivocal action orientation in line with what the situation affords.

Initial evidence in support of this idea comes from a series of studies by Guinote and Trope (2004). One of these studies assigned participants to the roles of judges or workers. The judges evaluated the performance of the workers and controlled their payment and thus constituted a higher-power role. Before starting this task, in a purportedly unrelated experiment, participants were asked to imagine themselves in two situations, and to describe 1 day in their lives while in those situations. One situation described a friend visiting, whereas the other situation described doing an internship. Both situations provided opportunities to engage in work and social ac-

tivities, but in the internship situation work activities are more central, whereas in the friend visit situation social activities are more central. The results showed that participants planned more work-related than social-related activities in the internship situation and more social-related than work activities in the friend visit situation. More important here, this difference was stronger for participants in the more powerful role than for participants in the less powerful role. As predicted, then, the more powerful individuals seemed more responsive to primary aspects of the situation and less responsive to secondary aspects of the situation. These findings are consistent with the assumption that greater social power increases the weight of high-level construals in individuals' behavioral choices. Positions of social power often require individuals to take a global orientation, plan ahead, and take decisive action. By promoting high-level construals, social power may naturally support such requirement.

CHOOSING VERSUS PREDICTING OTHERS' CHOICES: PROBABILITY AND VALUE

We argued earlier that in positive bets, payoffs may be conceptualized as being at a higher-level construal than probabilities. If this is true, then the weight of payoffs would increase over distance whereas the weight of probabilities would show the reverse effect. Consequently, people would take more risky (i.e., lower-probability, higher-value) distant bets but more conservative (i.e., high-probability, low-payoff) proximal bets. Self-other differences in choice of positive bets seems to support this prediction. Hsee and Weber (1997) asked participants to make a series of choices between a sure outcome and a risky outcome (e.g., getting \$800 for sure vs. a 50% chance to get \$2,000) and also to predict the choice that other people would make. They found that people thought that others would take more risky bets than themselves. Moreover, the discrepancy between one's own risk preferences and the predicted risk preferences of others was related to the abstraction of the other person: It was stronger for abstract others, of whom participants had no image, than for concrete individuals, whom participants could see but did not know. Hsee and Weber explained their results in terms of the risk-as-feeling hypothesis according to which people's risk preferences are dependent on their feelings toward risk. They contended that people are more likely to empathize with a more concrete individual and perceive his or her feelings as similar to their own. Consistent with this view, CLT suggests that others, and particularly distant others, are construed more abstractly. Therefore, in predicting their preferences, people give more weight to value and less weight to probability.

Probability and Preference

CLT predicts that increasing the likelihood of an event would decrease the weight of desirability-related features relative to the weight of feasibility-related features in decisions, thereby decreasing (or even reversing) the pref-

erence for a more desirable but less feasible outcome over a less desirable but more feasible outcome. A recent series of studies by Todorov, Goren, and Trope (in press) tested this prediction. In one study, participants were told that a number of companies in New York had started promotional campaigns for their products and services, and that some of them had offered a special promotional plan to NYU students. In the high-probability condition, participants were told that if they signed up for the campaign, they were almost certain to receive a voucher for the company's products. In the low-probability condition, participants were told that they would have about a 1 in 100 chance of receiving a voucher. In both probability conditions, the campaign was described as offering either a highly desirable but less feasible outcome or a less desirable but highly feasible outcome. For example, the highly desirable outcome was receiving 10 CDs from a Tower Record store, but to claim the CDs, the voucher had to be presented at a store at an inconvenient location. The less desirable outcome was receiving one CD that could be claimed at a convenient location.

Participants indicated their willingness to sign up for the campaign. The results showed that whereas under low probability, participants preferred the highly desirable but less feasible alternative to the less desirable but highly feasible alternative, under high probability this preference was reversed. Similar results were obtained with a variety of other prospects pitting desirability and feasibility. In all these cases, participants gave more weight to the outcome's desirability than to its feasibility when the outcome was improbable, but not when it was highly probable. It seems then that that probability changes the weights of outcome feasibility and desirability in much the same way as temporal proximity does.

Construal Level and Preference

As mentioned earlier, we believe that psychological distancing affects preference via construal, by enhancing the weight assigned to high-level value relative to low-level value. It is also possible to examine directly the effects of construal level on preference—although level of construal is not conceptualized as a dimension of distance, CLT predicts the effect of higher-level construal to be similar to that of psychological distancing. Evidence in the domains of risk taking and self-control seems to support this claim. We turn now to examine it.

RISK TAKING

Level of construal appears to have a crucial effect on the relative weight of probabilities and expected utility in risky choice, particularly in natural, real-life decisions. For many decision situations, one can choose whether to view them as one in a series of similar events or rather as unique, one-time occurrences. For example, when facing a decision on whether to invest in developing a new herbal treatment based on dried violets for stress-related headaches, an executive of a drug company may view the

decision as one in series of decisions about novel medicines, or, alternatively, as a unique, one-time decision about applying dried violets for treating stress-related headaches. Note that abstraction is needed in order to adopt the former view, as it requires ignoring specific, incidental, and contextual features. From that perspective, viewing the decision as one in a series of similar decisions constitutes a high-level construal of the situation.

Kahneman and Lovallo (1991) proposed that risk avoidance in real life often stems from a narrow categorization of the decision situation as a unique, one-time event. In our example, if the decision is construed with all of its rich specific and contextual details, it will be viewed as unique and would produce risk avoidance. If, on the other hand, the manager would think of the product as one of a series of developments, and one of a series of risks that the company and she personally are to take, then her willingness to take the risk would increase. This is because normatively, the outcome of aggregated gambles is more likely to be close to its expected utility than the outcome of a single gamble. In other words, risk is reduced with repetition (see Lopes, 1996). In our terms, Kahneman and Lovallo's analysis suggests that less risk aversion (in fact, less weight for the dimension of risk and more weight for expected utility) ensues from a higher level of construal, a notion that is compatible with the findings on the enhancing effects of psychological distance on risk taking reviewed earlier. More generally, in series of risky events, a high-level construal may correspond to aggregation, whereas a low-level construal may be related to a viewing each event separately. Because aggregation reduces risk aversion, it follows that high-level construal of risky events would be associated with reduced risk aversion.

SELF-CONTROL

Situations that require self-control involve a conflict between two opposing motivations (e.g., a desire to go out with friends and a need to study for an exam). Recently, Fujita, Trope, Liberman, and Levin-Sagi (2006) proposed an analysis of self-control conflicts as conflicts between behavioral implications of high-level construal (i.e., value that is related to primary, central, goal-relevant, superordinate considerations) and behavioral implications of low-level construal (i.e., value that is related to secondary, incidental, goal-irrelevant, subordinated, features). Failure of self-control, according to this proposal, is succumbing to the motivation implied by the low-level value. For example, if studying for an exam is related to more superordinate goals than going out with friends, then the latter behavior would represent a failure of self-control. Consistent with this analysis, a series of studies by Fujita and colleagues demonstrated that higher-level construals increased self-control. In one study, participants first completed a task in which they indicated either why or how they would maintain good physical health. This task was designed to induce a high- or low-level construal mindset, respectively. Participants were then asked to hold a handgrip while connected to bogus electrodes, os-

tensibly as part of a psychophysiological assessment of personality. Participants were told that the longer they hold the handgrip, the more diagnostic was the information obtained from the apparatus. Thus, the situation presented a conflict between a desire to get diagnostic, self-relevant information (high-level value) and the inconvenience of holding the handgrip (low-level value). The results indicated, as predicted, that participants in the high-level construal condition held the handgrip longer than those in the low-level construal condition.

The finding that high-level construal produces greater self-control than low-level construal is consistent with the conceptualization of self-control as involving a conflict between behavioral implications of low-level versus high-level value. CLT further predicts that temporal, spatial, and social distancing would also enhance self-control. Consistent with this prediction, extant research on temporal distance has shown that people are better able to commit to self-control a long time in advance than a short time in advance (Ainslie & Haslam, 1992; Frederick, Loewenstein, & O'Donoghue, 2003), and when the temptation is physically distance than when it is near (Metcalf & Mischel, 1999; Mischel et al., 1989).

Summary: Psychological Distance and Preference

It seems ironic that when outcomes become psychologically proximal and likely to materialize, people tend to overweight secondary considerations in their choices. Conversely, it is when outcomes seem unlikely or remote or refer to distant times that people's primary concerns are more likely to guide their preferences. In other words, people appear to be better able to act according to their priorities with respect to distal options than proximal options. This counternormative (and perhaps counterintuitive) conclusion raises interesting self-regulatory questions regarding people's ability to express core aspects of their self-identity in remote versus proximal situations.

We demonstrated effects of psychological distance on evaluation and choice, and we believe that these effects are mediated by the effects of psychological distance on construal. It is important to note, however, that psychological distance may affect not only the perceived value of outcomes but also the motivation to pursue the outcomes, by affecting the outcomes' expectancy. The effects of distance on expectancy are outside the scope of CLT but are worth discussion in order to prevent possible confusion. It is to that discussion that we now turn briefly.

Motivation researchers have related expectancy to uncontrollable probability of outcomes (e.g., in bets; Edwards, 1955), task difficulty (Atkinson, 1957), controllability (Locke & Latham, 1990; Rotter, 1966), and self-efficacy (Bandura, 1982). For our purposes, it is instructive to note that psychological distance may often reduce expectancy in these various forms. For example, people typically have less control over more socially distant individuals. People typically control others less than themselves and strangers less than friends and relatives. Control also diminishes with spatial distance, as it is often

more difficult to do something about things that are farther away. Events in the distant future (e.g., a distant-future rebate) typically involve some uncertainty (e.g., would the company still be around to pay the rebate), which increases with time distance, as noted already by Keren and Roelofsma, 1995 (see also Frederick et al., 2003, and Prelec & Loewenstein, 1991, for a proposed similarity between the effects of time and probability). Proximity also increases efficacy by making action more crucial for achieving an outcome. For example, a long time before an exam, failing to study may be compensated by studying more intensely later, but a short time before the exam, when only a few hours remain, such possibility no longer exists. As another example, failing to help a stranger may be compensated by help by another stranger, but failing to help a close friend is less likely to be compensated by someone else, because people typically have fewer close friends than strangers around them.

Psychological distance may thus decrease motivation due to changes in expectancy. For example, students may be more motivated to study for a close exam than for a distant exam because not studying is easier to compensate for at a distance, or people may be more motivated to help a close friend than a stranger, because in the latter case, their lack of help is more likely to be compensated by others. These changes in motivation do not reflect changes in value (i.e., it is not necessary to assume that the value of a success on the exam increases closer to it) although such changes may, of course, exist. Moreover, changes in expectancy over psychological distance are not mediated by construal but, rather, are real, objective changes (e.g., opportunities for compensation really decrease closer to an outcome) that do not require a psychological theory to explain them. For that reason, they fall outside the scope of CLT (see Liberman & Trope, 2003, for a detailed discussion of that point with respect to temporal perspective).

It is possible however, that motivation contaminates measures of value. For example, it is possible that one's motivation to study for an exam and one's arousal or level of energy would affect one's answer to a question about the importance of succeeding in an exam. If contaminated with motivation, measures of value would show discounting over psychological distance. It is possible that this is one of the reasons for the widespread assumption that value is discounted over psychological distance. CLT proposes, however, that if value is measured independently of motivation and thus is not affected by possible changes in expectancy, then both discounting and augmentation over psychological distance become possible, depending on the construal level with which value is associated.

Affect

How does psychological distance influence affective responses? It is commonly assumed that the intensity of affective reactions decreases with psychological distance. People typically react more strongly to events that are

closer to them in time and space, to events that happen to themselves than to others, and to events that are real more than to hypothetical events. It seems that the effect of the various dimensions of psychological distance is similar and involves reduction in the intensity of affective responses. Theoretically, CLT would predict that affective responses are diminished over temporal distance only if they are low level, and, contrary to that, high-level affective responses may be augmented over time. But is there high-level affect?

Indeed, emotion researchers typically identify affective responses with low-level, concrete processing and contrast them with cognitive responses, which are considered to be more abstract and high level (Loewenstein, 1996; Metcalfe & Mischel, 1999). It is possible, however, that there are different types of affect, and that some may be characterized as more abstract and higher level than others. An interesting possibility would be to distinguish between high- and low-level affect by the extent to which they require going beyond one's direct experience here and now (i.e., the extent to which they necessitate distancing and construal). For example, social emotions such as pride and guilt involve considering the perspective of other people and hope involves considering the future; counterfactual emotions, such as disappointment and regret, involve considering alternatives to reality. Interestingly, it has been suggested that anxiety, contrary to fear, is an apprehension of a potential source of danger at a location other than the immediate (Gray & McNaughton, 2000). All these emotions are distinct from hunger, thirst, pain, anger, happiness, sadness, and fear, which do not necessitate transcending one's direct experience (but, of course, allow for such transcendence, as one can, for example, become angry by thinking of a hypothetical event). We refer to this distinction in terms of level: higher-level emotions are those that require more distancing and construal, whereas lower-level emotions are those that do not necessarily require as much distancing and construal. This distinction between levels of emotion partly overlaps with extant distinctions in the literature between basic emotions and other emotions (Ekman, 1992; Izard, 1977, 1992; but see Ortony & Turner, 1990, for questioning the validity of this distinction). Interestingly, in these theories, emotions are called basic because they are assumed to have innate neural substrates, innate and universal expressions, and unique motivational states. These criteria are very different from the construal versus experience criterion that we propose here. Thus, although the distinctions proposed in these theories overlap to some extent, the theoretical basis that underlies the distinction is different.

The classification of emotions according to level is content based, as it distinguishes between qualitatively different emotions. Besides this distinction, according to CLT, the level of the exact same emotion can differ depending on the situation in which it occurs. For example, as noted before, central aspects of situations constitute higher-level construals than do peripheral aspects. Therefore, affective aspects that are made central (e.g., by virtue of being goal relevant) would be of a higher level than similar aspects that are made peripheral (e.g., irrelevant to the main goal). For exam-

ple, in a funeral, sadness about the transience of life and compassion are central and thus constitute high-level emotions, but happiness upon seeing old friends is peripheral and thus constitutes a low-level, peripheral emotion. In a birthday party, however, the centrality of these emotions reverses.

For both content-based and situationally based variations of level of affective responses, CLT proposes that low-level affective responses, more than high-level affective responses, would be diminished over psychological distance. The latter, we think, may be discounted less or even augmented with distance. Let us now review literature on the effect of various distance dimensions on affective responses.

Future Temporal Perspective and Affect

It is commonly assumed that temporal distance diminishes affective reactions. Research on delay of gratification (Mischel et al., 1989; Mischel, Ayduk, & Mendoza-Denton, 2003) and self-control (Baumeister & Heatherton, 1996; Loewenstein, 1996; Metcalfe & Mischel, 1999) has documented that from a distance, people underestimate their affective reaction and overestimate their ability to make "cold," rational, unemotional decisions. For example, the positive value of watching a funny movie is affective or "hot," whereas the positive value of studying for an exam is cognitive. If the value of watching the movie is discounted more steeply than the value of studying, a temporally inconsistent pattern of preferences emerges wherein studying is preferred a long time in advance but watching the film seems more attractive from a closer perspective. According to this approach, then, temporal distance should always increase the relative weight of cognitive (vs. affective) value in preference.

As noted before, an interesting prediction of CLT is that both affective and cognitive types of value could be either high level or low level and, therefore, could be both augmented and discounted over time perspective. This prediction was tested in a study that independently manipulated the affective-cognitive dimension and level of construal (Trope & Liberman, 2000, study 5). In this study, we assessed desirability ratings of four films varying in affective value (funniness) and cognitive value (informativeness). The films were, thus, funny and informative, funny but uninformative, not funny but informative, or neither funny nor informative. Some of our participants expected to watch the films in the same experimental session, whereas other participants expected to watch them in the second session of the study, 2 months later. The goal of watching the films was also manipulated: It was either affective (getting oneself into a good mood) or cognitive (learning about a topic). We assumed that the features of the film that are related to the goal would be more central than the goal-irrelevant features and thus would constitute a high-level construal of the film. Thus, depending on the goal, either affective features or cognitive features of the films were more central (constituted the high-level construal of the films), whereas the other type of features was rendered goal irrelevant and thus part of the low-level construal of the films.

We examined how time perspective, goal, affective value, and cognitive value influenced the desirability ratings of the films. Consistent with the predictions of CLT, we found that temporal distance increased the influence of the informativeness versus the funniness of the films when the goal was cognitive but decreased the influence of informativeness versus the funniness of the films when the goal was affective. Thus, the effect of high-level, goal-relevant value increased over delay relative to the effect of low-level, goal-irrelevant value.

Social Distance and Affect

A large amount of social psychological research suggests that liking, love, hate, and empathy decrease with social distance. For example, reducing similarity reduces liking and empathy toward a social target (Byrne, 1971; Newcomb, 1961). In terms of CLT, liking and empathy are low level, because they do not require construal or transcending one's direct experiences. We would predict that higher-level interpersonal emotions, such as shame and guilt, would be less discounted over social distance. For example, we would predict that reducing similarity would not reduce and may even increase one's feelings of shame regarding another person.

Interestingly, the literature on empathy distinguishes between cognitive empathy, which involves taking a perspective of another person, and emotional empathy, which involves contagion with another person's emotions and does not involve perspective taking (Davis, Hull, Young, & Warren, 1987; Preston & de Waal, 2002). For example, cognitive empathy involves understanding the difficulties faced by another person, whereas affective empathy involves feeling the other person's pain. In our terms, cognitive empathy pertains to a higher level of construal than emotional empathy. CLT therefore predicts that emotional empathy would be discounted over social distance (and, in fact, any psychological distance) more than cognitive empathy.

Physical Distance and Affect

Closely related to empathy is the ability to experience another person's pain and take it into consideration in one's actions. As discussed previously, experiencing another's pain is an emotional contagion and thus would be classified as emotional empathy, or, in our terms, low-level empathy. We would therefore predict that it would decrease over physical distance. Milgram's (1965) studies on obedience are consistent with this prediction, as they show that physical proximity to the victim reduced the willingness to obey an order to inflict pain on him. It is possible that this was the case because physical proximity enhanced participants' emotional empathy toward the victim. In other situations, too, physical proximity plays a major role in empathic concern. For example, it has been suggested that the cruelty of war has intensified with introduction of weapons that are remotely operated (e.g., aerial bombardment). Indeed, Latané's (1981) social impact theory specifies physical distance as one deter-

minant of social impact in general and emotional impact in particular.

The Effect of Level of Construal on Affect

As with the effects of social distance on evaluation and choice, we believe that the effects of distancing on affect are mediated by its effects on construal. Thus, it would be interesting to examine evidence for the effects of construal level on affect. According to Metcalfe and Mischel (1999), stimuli can be mentally represented either in terms of their emotionally arousing "hot" features or their cognitive, informational, "cool" features. These representations are intrinsically connected to two regulatory systems: hot representations elicit emotionally driven, reflexive, "hot" responses that are predominantly under stimulus control and generate automatic approach-avoidance behaviors. Cool representations, on the other hand, elicit cognitively driven, reflective, "cool" system responses whose functioning requires more effortful and conscious control. Effective self-regulation of reflexive responses associated with the hot system is possible to the extent that individuals have and can access cognitive representations (i.e., distraction, reappraisal, and abstraction) that help cool intrinsically hot stimuli. In this view, then, abstract representations are associated with cool, less affective responses. Mischel's (1974) work on delay of gratification provides support for this idea. It demonstrates that an effective way to overcome immediate temptations and successfully delay gratification is to turn attention away from the concrete qualities of the immediate temptation (e.g., a tasty cookie) and focus on its abstract qualities (Mischel et al., 1989; see also Mischel et al., 2003).

A recent study by Kross, Ayduk, and Mischel (2004) examined the joint effects of construal level and social distance on people's ability to reduce experienced negative emotions. In the study, participants recalled a past interpersonal experience in which they felt overwhelming anger and hostility. Type of perspective was manipulated by making some participants think of what emotions are being felt and other participants on why they are experiencing those emotions. In our terms, the former corresponds to a low-level construal whereas the latter corresponds to a high-construal level. They also manipulated the type of perspective, by asking some people to be immersed in the experience, or taking a first-person perspective, and other participants to take a perspective of a distanced observer. In our terms, this corresponds to a manipulation of social distance. The authors hypothesized that a low-level, "what" focus would activate relatively concrete, hot representations of the specific emotions and thus should be associated with a high level of negative affect whereas a high-level, "why" focus may produce either hot representations or cool representations, depending on the type of people's perspective. Specifically, they predicted that a "why" focus would attenuate negative affect only in a self-distanced perspective but not in a self-immersed perspective.

Emotional response of anger was measured implicitly, by a word completion task, and explicitly, by asking par-

ticipants about their mood. The results showed, as predicted, that participants who focused on the reasons underlying their feelings (a high-level, why construal) and maintained a distanced social perspective (an increased social distance) manifested the lowest levels of anger on both explicit and implicit measures. In our terms, these results indicate an interactive effect of construal level and social distancing, such that emotions decrease when both are high. It would be interesting to repeat this study with higher-level emotions such as guilt. CLT would predict that in that case, distance would not attenuate emotional reaction but might in fact increase it.

Theories on affective reactions to exemplars versus categories also suggest that the former elicit more intense affective reactions than the latter (Sherman, Beike, & Ryalls, 1999). For example, while the idea of "saving whales" leaves people relatively unemotional, "saving Willy" (a concrete whale) often touches them deeply and is reflected in an enhanced willingness to donate money to that end (Kogut & Ritov, 2004; Sherman et al., 1999). As in other cases of distance effects on emotion, we predict this to be the case with low-level emotions more than with high-level emotions. Thus, we predict that compassion toward a single whale may be paradoxically reduced if one thinks about an entire category of suffering whales, but that feelings of guilt and shame (e.g., for polluting water) would not be reduced by shifting one's attention from one concrete victim to an entire category of suffering victims.

Summary: The Effect of Psychological Distance on Affect

A considerable amount of theoretical and empirical work suggests that psychological distance reduces the intensity of affective responses. People react less strongly to temporally and physically distant events than to close events. They feel less for more socially distant individuals and react less strongly to less likely occurrences. CLT not only provides a unifying framework for these various effects but also posits that these effects would be weaker for emotions that are of a higher level of construal either because they are central or because they require transcending the immediate experience. Thus, CLT suggests that the effects of distance on affect depend on level of construal, in the same way that the effect of distance on prediction and evaluation depends on level of construal.

Creativity

The last area in which we examine the implications of CLT is creativity. Creativity has been assumed to profit from abstract thinking (e.g., Finke, 1995; Ward, 1995), and performance on a variety of creativity tasks seems to depend on more abstract construals of problem components. For example, creativity on alternative-uses tests (e.g., generating reasons why to greet somebody; Friedman & Förster, 2002; Schoppe, 1975) should be enhanced by construing the action more abstractly (e.g., as a gesture of communication) rather than more concretely (e.g., as "saying hello"). Therefore, whereas the former might lead to solutions that are more remote and

diverse from the actual object, the latter might render common associates accessible, impeding innovation (see Marsh, Ward, & Landau, 1999). If creativity is enhanced by abstract representation of problem elements and if, as discussed earlier, distant perspectives engenders higher-level construals, then psychological distancing may promote creative thinking.

The Effect of Future Temporal Perspective on Creativity

In a series of studies, Förster, Friedman, and Liberman (2004) tested the idea that distancing would enhance creativity by manipulating distant versus near-future time perspective and gauging performance on a variety of creativity tasks. One of the studies assessed performance on insight problems. The following is an example: "A prisoner was attempting to escape from a tower. He found a rope in his cell that was half as long enough to permit him to reach the ground safely. He divided the rope in half, tied the two parts together, and escaped. How could he have done this? [Solution: He unraveled the rope lengthwise and tied the remaining strands together]." The natural way to imagine "cutting the rope in half" does not involve unraveling it. One needs to abandon this concrete image and represent the action more abstractly in order to construe this action in an alternative way. Förster and colleagues asked participants to think about themselves and their lives as they would be a year later (or the next day) and then imagine working on the insight problems at that time. For three such problems, participants displayed more insight in the distant-future condition than in the near-future condition. Interestingly, Förster and colleagues (2004, studies 2 and 3) found that temporal distancing facilitated insight not only in verbal tasks but also in visual tasks, which require abstraction of coherent images from fragmented or "noisy" visual input (e.g., the Snowy Picture Test and the Gestalt Completion Test; see Friedman & Förster, 2000, 2002). Other studies demonstrated that temporal distancing facilitates abstract reasoning but not concrete reasoning (Förster et al., 2004, studies 4 and 5).

Creative Insight and Other Psychological Distances

Anecdotal evidence and some research findings suggest that other dimensions of distance might produce similar effects on creativity. People sometime feel that they had their most ingenious ideas in circumstances quite distant from and dissimilar to their usual working environment. "Incubation" may also testify to a similar connection between distancing and creative insight. Sometimes, after repeated and fruitless attempts to solve a problem, the solution may pop up after one takes some distance from the problem by leaving the problem for a while and doing other things (temporal distancing) or by changing the physical context (spatial distancing). It has been argued that one could become more innovative in solving technological problems by imagining oneself as a little dwarf entering the subject matter of the problem at hand (e.g., entering the computer chip, to solve the problem of their overheating), or to change one's physical location to a

very atypical one (e.g., sitting under one's office desk) in order to "break set" and achieve a fresh look at the problem (Helfman, 1992). Adams (1986) and de Bono (1985; see also Butler & Kline, 1998) suggest that considering the perspective of other people who are involved in a problem might help generate better and more creative solutions. Systematic research on these issues is lacking, and further research is needed to better understand the effect of psychological distancing on creativity and reasoning.

Distancing, decontextualization, and abstraction seem to play a role not only in creative problem solving but also in production and perception of art. In art in general and in modern art in particular, distancing oneself from the concrete shape or material of a piece of art or from its mundane nature appears to be an important prerequisite for appreciating its artistic value. What is true for the perception of art also holds for its production: Deciding that a mundane object is or can be an object of art affords some abstraction. In fact, artistic perception requires abstraction of new meaning from concrete, directly experienced percepts, a meaning that is oftentimes different than the most common and usual abstractions people apply in everyday life. In that, artistic perception is similar to solving insight problems (Arnheim, 1969). Thus, although not empirically tested, distancing and abstraction seem to play a major role in creative problem solving, creative perception, and creative production. We believe that empirically exploring this possibility would be a fruitful avenue for future research.

INTERRELATIONS AMONG DIMENSIONS OF PSYCHOLOGICAL DISTANCE

In the final section of this chapter we examine the idea that all the dimensions of psychological distance are interrelated. We think that this should be the case because they share the feature of being distances from the same thing—one's direct experience—and because, as a consequence of diverging from direct experience, they have similar effects on construal. This section reviews empirical evidence regarding explicit and implicit associations among distance dimensions.

Social Distance and Other Dimensions of Psychological Distance

We now review research testing the interchangeability of social distances dimensions. We examine research on the effects of temporal distance and spatial distance on social distance and then turn to research on the reverse effect, namely, the effect of social distance on temporal and spatial distances.

The Effect of Temporal Distance on Social Distance

A series of studies by Stephan (2004) examined the effect of temporal distance on social distance. We predicted that an increase in temporal distance would produce a corresponding increase in social distance. One study, for

example, used politeness as an indicator of social distance. As mentioned in the first section of this chapter, research on politeness assumes that politeness varies as a function of social distance (Brown & Levinson, 1987). Therefore, the degree of politeness a speaker chooses may be used as an indicator of his or her perceived social distance from the recipient of the message. In our study, participants wrote instructions for a person who was expected to read them either in the near future or in the distant future. For example, participants wrote sightseeing suggestions for a tourist who was supposed to arrive on the following day or 1 year later. Then, participants rated how polite they intended to be in phrasing their suggestions. As predicted, participants indicated higher levels of politeness for the tourist who was expected in the more distant future.

The Effect of Spatial Distance on Social Distance

Spatial distance has been recognized for a long time as a major factor in creating and maintaining social ties (Festinger, 1951). For example, it has been shown that friendship is more likely to develop among spatially close than distant individuals, unless an initial antagonism has existed in the relationships (Festinger, 1951; Schiffenbauer & Schiavo, 1976). This is hardly surprising, as increasing physical proximity may create opportunities for social interaction and expose people to similar experiences (see Festinger, Schachter, & Black, 1950; Priest & Sawyer, 1967). Would a similar relation hold if distance is manipulated independently of these additional factors?

In a study aimed to answer this question, Reichman and Ben Arie (2004) examined the effect of actual sitting distance on politeness. They entered the first meeting of a SAT preparation course. The participants were adults who did not know each other in advance. Participants were asked to write two notes (one explaining how to use the course web site, and the other asking for advice on how to prepare for an exam) to a person sitting next to them, to a person sitting in another class, behind the wall, or to a person in a similar class in another town. After writing the notes, participants rated their own responses for intended politeness. We found that participants addressed more politely others who were in another class or in another city compared to others who were in the same class. Thus, spatial distance affected social distance, which was expressed, in this study, by the chosen level of politeness.

The Effect of Social Distance on Temporal Distance

Stephan (2005) conducted a study to examine the effect of social distance on temporal distance, using politeness to manipulate perceived social distance. Participants were asked to imagine two people conversing and one of them telling about an action he or she intended to perform. Participants then read a statement that was phrased in either normative language or colloquial language. For example participants in the colloquial (normative) condition read: "Sharon decided to keep an eye

on Lisa's baby (to watch Lisa's baby more carefully)." Colloquial utterances are less polite and indicate greater social proximity than normative utterances. Participants indicated how much time later the protagonist would perform the action. Consistent with our prediction, the mean enactment time for the colloquially phrased statements was nearer than for the normatively phrased statements, indicating that closer social distances produced a perception of sooner enactment times.

The Effect of Social Distance on Spatial Distance

Studies on personal space show that social distance affects the spatial distance people prefer to keep from each other. The more familiar and comfortable people are with each other, the closer the physical distance they maintain from each other (for a review, see Hayduk, 1983). People also tend to physically distance themselves from feared or stigmatized others (e.g., AIDS patients—Mooney, Cohn, & Swift, 1992; stereotyped groups—Macrae, Bodenhausen, Milne, & Jetten, 1994; Worthington, 1974). In these studies, however, socially distant targets were also less attractive. To distinguish between these two factors, we manipulated social distance as the degree of politeness used between interlocutors. In our study, participants received a sketch on which the location of the speaker was marked and read a phrase that the speaker said to the addressee. The phrase was either colloquial or normative, for example, "My brother is taking our family car, so the rest of us will stay at home (will be stuck at home)." Participants indicated on the sketch the location of the addressee. As predicted, the use of more polite (normative) language by the speaker produced a perception of a greater physical distance between the interlocutors, as compared to the use of less polite (colloquial) language. Thus, this study demonstrates that people who address each other more politely are expected to communicate across greater spatial distances. Colloquial language, which signified social closeness, produced estimates of smaller spatial distances.

Automatic Associations among Distance Dimensions

We claim that different dimensions of psychological distance share an important aspect of meaning, namely, that they all are distances from direct experience and as such require construal. Moreover, it is possible to assume that psychological distance would be an important aspect of stimuli that would be spontaneously encoded. The Stroop paradigm (Stroop, 1935) offers an apt way to examine these predictions. In a typical Stroop task, participants are faster at naming the ink color of semantically compatible words (the word "blue" or the word "sky" printed in blue ink; the words "green" or the word "grass" printed in green ink) than at naming the ink color of semantically incompatible words (the word "blue" or the word "sky" printed in green ink; the word "green" or the word "grass" printed in blue ink). These results are interpreted as suggesting that reading the words and assessing their semantic meaning is automatic (happens spontaneously, without participants' intention and de-

spite the fact that it does not help in performing the experimental task), and that there is shared meaning between the two dimensions of the task (ink color, the semantic meaning of the words).

A series of experiments by Bar-Anan, Liberman, Trope, and Algom (2005) demonstrated a similar effect with distance-compatible versus distance-incompatible stimuli. The experiments applied a picture-word version of the Stroop task, in which the participants discriminate between cues of one psychological distance dimension while ignoring cues of another psychological distance dimension. We reasoned that if psychological distance is a shared meaning of spatial distance and the other three dimensions, then it would be easier to perform the task when the relevant and the irrelevant cues are congruent in psychological distance than when the relevant and irrelevant cues are incongruent in terms of psychological distance. For example, we predict that participants would identify a stimulus as spatially proximal faster when the irrelevant stimulus is a word that denotes psychological proximity (e.g., the word "we," which represents social proximity, printed on a spatially proximal object) rather than a word that denotes psychological distance (e.g., the word "others," which represents social distance, printed on a spatially proximal object).

Bar-Anan and colleagues (2005) used perspective pictures (e.g., a picture of an alley of trees or a picture of rolling hills). An arrow pointing to either a proximal or a distal point on the landscape was shown on the picture, and a word denoting a psychologically proximal entity ("tomorrow," "friend," "we," or "sure") or a psychologically distal entity ("year," "enemy," "others," or "maybe") was printed on the arrow (see Figure 15.1). In some of the experiments, the task was spatial discrimination, namely, participants indicated whether the arrow pointed to a spatially proximal or distal location. In other experiments, the task was semantic discrimination, namely, participants indicated whether the word on the arrow was, for example, "we" or "others." In both types of tasks, and across all four dimensions of distance, participants were faster in responding to distance-congruent than to distance-incongruent stimuli. These results demonstrate that people assess the psychological distance of stimuli that pertain to spatial distance, temporal distance, social distance, or hypotheticality, even when this information is irrelevant to their current goal and that these various distances share a common aspect of meaning. We interpret these results as initial evidence that psychological distance is a basic, automatically activated aspect of each of these dimensions.

CONCLUSION

As this review illustrates, there is a large amount of research across the behavioral sciences on how people respond to events from the recent versus distant past, near versus distant future, to spatially near versus far objects, to themselves versus others, and to real versus hypothetical, probable versus improbable events. Different theoretical approaches and research paradigms have been

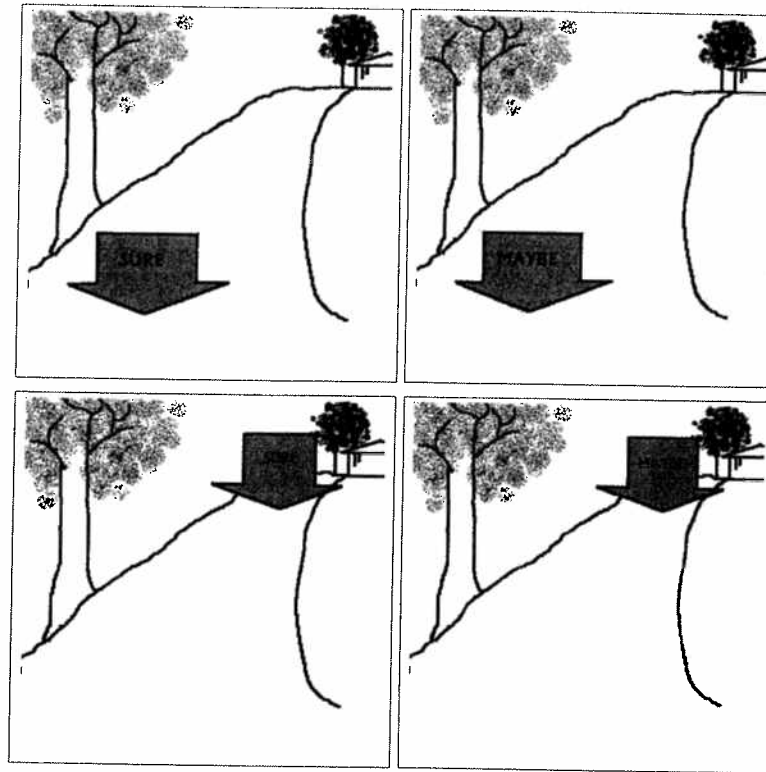


FIGURE 15.1. Stimuli used in the Stroop task, examining associations between spatial distance and hypotheticality. Reaction times in both distance discrimination and word discrimination tasks were faster with congruent pairs (distant with “maybe”; proximal with “sure”) than with incongruent pairs (distant with “maybe”; proximal with “sure”).

proposed for each of those dimensions. Without denying the uniqueness of each dimension, we propose that they also have something in common, that they all constitute dimensions of psychological distance. At their point of origin is one’s direct experience of the “here and now.” Transcending this point entails constructing mental models of what is not directly experienced, and the farther removed an object is from direct experience on any distance dimension, the higher (more abstract) the level of construal of that object.

Consistent with this proposal, the research reviewed in this chapter suggests that different distance dimensions are interrelated. For example, distancing an object on one dimension may make it seem more distant on other dimensions, and the psychological distance of objects is assessed spontaneously, across different dimensions. Moreover, a large body of research shows that temporal distance, spatial distance, social distance (e.g., self vs. other and ingroup vs. outgroup), hypotheticality, and (im)probability are all associated with higher levels of construal. That is, the same information about more distant objects is represented more schematically in terms of few superordinate, core features of the object. These construals, in turn, expand one’s horizons and guide prediction, evaluation, and action with respect to psychologically more distant entities. Indeed, the present review shows, for example, that distancing an event may increase or decrease one’s confidence in predicting the event depending on whether the event is more likely or

less likely under high-level construals than low-level construals. Correspondingly, distancing an event may increase or decrease its attractiveness depending on whether the high-level value of the event is more positive or less positive than its low-level value. Again, these effects appear to hold across different distance dimensions.

The present review suggests, then, that (1) different distance dimensions are related to each other, (2) distancing on any of these dimensions is associated with higher levels of construal, and (3) they are, at least to some extent, interchangeable in their effects on prediction, evaluation, and choice. These three sets of findings suggest that psychological distance, as conceptualized here, may capture a fundamental aspect of meaning and may provide a unifying framework for understanding a wide range of seemingly unrelated social psychological phenomena.

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