

Transcending the Now: Time as a Dimension of Psychological Distance

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The evaluation of events can differ dramatically based upon whether the event is considered in the near or distant future. Construal Level Theory¹ suggests that temporal shifts in evaluation are driven by differences in the mental **construal** of near and distant events. In particular, CLT posits that distant events are represented by their essential, **abstract**, and **global** features (high-level construals), whereas near events are represented by their **peripheral**, **concrete**, and local features (low-level construals). In the current chapter we use this framework to examine temporal shifts in **representation**, prediction, evaluation and behavior. We begin by discussing the concept of level of construal, as well as the theoretical rationale behind CLT's core assumption. Next, we review empirical research on differences in the consideration of near and distant events. Finally, we conclude by placing research on **temporal distance** within the context of a more general approach to understanding **psychological distance**.

Level of Construal

The concept of level of construal begins with the basic notion that objects and events are classified into categories despite the fact that no two objects or events are identical. Thus, categorization requires that one disregard unique features of the given object, and therefore involves an implicit decision about which features are central to the object and which are more incidental. Take, for example, the categorization of an object as a book. This categorization highlights the object's similarity to other books and involves the decision that the function of the book is its central property, disregarding other properties such as the book's color and size. Of course, a concrete representation can lend itself to multiple abstract representations. An abstract representation is selected among different possible abstractions according to context-defined relevance, which, in turn, may be affected by one's goals. For example, for someone interested

in reading, the categorization of an object as a book would be relevant; for someone interested in sorting their recycling, “paper object” might be a more relevant abstract conceptualization of the same object. Regardless of the particular abstract representation that has been chosen, moving to the abstract level involves omitting the features that are perceived to be less important to the abstract construct in question while retaining those considered more central or important.

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, more **structured**, and less ambiguous, than concrete representations^{2,3}. Abstraction thus involves moving to a more schematic, simple and coherent representation.

The process of abstraction is not an all-or-none phenomenon. Representations become more abstract and schematic the more unique, incidental features that are omitted. Thus, object categorization may be thought of as organized hierarchically (e.g. convertible, car, vehicle) with representations that are higher in the hierarchy more inclusive and less concrete⁴. In the same way, traits form hierarchies (e.g., an excellent guitarist, musical, talented) such that more abstract traits are less detailed about the behaviors, objects, circumstances, and people they involve⁵. Further, categories are often structured around goals (e.g. the goal to lose weight). In these cases, goal relevant features (e.g. the number of calories in a bag of chips) are more central than goal irrelevant features (e.g. the crunchiness of the chips). Goal directed actions likewise form hierarchies of abstractness, as goals could be translated into more abstract, **superordinate** goals⁶⁻⁸. 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).

Operationally, one way to distinguish between higher- and lower-level features of an object or event is by asking how much difference it would make if the particular feature was altered or removed. Altering a high-level feature should produce a more substantial change in the concept in question than altering a low level feature. For example, consider the difference between changing the content of an exam and the format of an exam. The exam would be altogether a different thing if the content was changed; this would be much less the case if it was the format that was changed. Thus, the content of the exam comprises a higher-level feature of the exam than the formatting.

To repeat, the basic premise of Construal Level Theory is that distant events are mentally represented in a schematic and abstract manner that includes the central, superordinate features of the event, whereas near events are mentally represented in a less schematic, more concrete manner that allows for the inclusion of incidental, less important features. Why might this be the case? One possible reason for this association stems from the relationship between direct experience and information about an event. Typically, as an event becomes removed from direct experience (e.g. as an event is placed farther into the future), information about the event becomes less available or reliable, leading individuals to form a more abstract and schematic representation of the event. CLT assumes that an association thus forms between psychological distance and level of construal, and that this association is over-generalized, causing individuals to form high-level of construals of distant events and low-level construals of near events even in cases when the amount and reliability of information is constant.

Now that we have laid out the basic theoretical propositions of Construal Level Theory, we examine recent empirical evidence in support of it. We begin by considering the effects of

temporal distance on level of mental representation, and then look at implications of temporal shifts in construal for prediction, evaluation, and choice.

The effect of temporal distance on mental representation

Construal Level Theory suggests that the representation of distant future events will be more abstract, broad, and structured than the representation of near future events. Research has examined this claim as it applies to the categorization of objects, actions, traits, and value driven behavior. For example, in one study, Liberman, Sagristano, and Trope⁹ asked participants to imagine an event (e.g., camping trip) to take place either in 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, toothbrush) into as many mutually exclusive and exhaustive groups as they deemed appropriate. If participants formed more abstract representations of distant future events, then they should generate fewer, more broad categories for distant future events than for near future events. Indeed, this was the case.

In a second study, Liberman et al⁹ examined the structure underlying people's preferences for near and distant events. As expected, multidimensional scaling showed that preferences for distant events were organized around simpler structures than those for near events. Thus, it was more difficult to reduce near future preferences to general underlying dimensions than it was to do so for distant future preferences.

Studies examining the construal of actions have similarly found evidence that more distant actions are construed at a higher level. Liberman and Trope¹⁰ asked participants to imagine themselves engaging in various activities (e.g. reading a science fiction book) either tomorrow or next year and describe these activities. As expected, 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 ¹¹ Level of Personal Agency questionnaire that was originally designed to assess stable individual differences in action identification. The questionnaire presents 19 activities (e.g., "locking a door"), each followed by two restatements, one corresponding to the why (high-level) aspects of the activity (e.g., "putting a key in the lock") and the other corresponding to the how (low-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.

Eyal ¹² extended this analysis by focusing in particular on the construal of events in terms of abstract, value-laden principles. 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 were instructed 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"). 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.

Extending beyond identification measures of construal, Day and Bartels ¹³ examined the extent to which differences in the construal of events influenced ratings of similarity, a construct that has been widely implicated in a variety of fundamental cognitive processes such

as retrieval, categorization, and inference. Similarity ratings were collected for pairs of events sharing either high-level or low-level commonalities, and described as occurring in either the near or distant future. Because information that is more salient in a representation is assumed to be given more weight in judgments of similarity, temporal shifts in representation should influence similarity ratings. Thus, for distant future events, similarity ratings should be largely driven by abstract, structuring information such as goals, causes and relationships, while for near future events similarity ratings should be driven by commonalities in low-level, concrete aspects of the situations. Consistent with predictions, an interaction was observed between temporal distance and commonality level, such that pairs with high-level commonalities were perceived as somewhat more similar in the distant than the near future, while pairs sharing low-level features were perceived as more similar in the near future than the distant future.

Like identifying an event as goal or value driven, ascribing a behavior to an abstract, decontextualized personal disposition involves a high-level construal of behavior¹⁴⁻¹⁶. Thus, CLT predicts that individuals will be more likely to demonstrate the correspondence bias – i.e. the tendency to attribute situationally-constrained behavior to the corresponding personal disposition^{17,18} – when the social target is more distal. Nussbaum, Trope and Liberman¹⁹ used the Jones and Harris²⁰ 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, 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. 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.

If distant behaviors are more closely linked to traits, then people should expect others to behave more consistently across different situations in the distant future than in the near future. Nussbaum et al.¹⁹ tested this hypothesis by asking participants to predict an acquaintance's behavior in four different situations (e.g., a birthday party, 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. 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 across predicted distant future behaviors in the four situations than across predicted near future behaviors.

The structured representation of temporally distant events, indicative of high-level construals, is not limited to verbal tasks. Förster, Friedman, and Liberman²¹ examined performance on visual tasks that require abstraction of coherent images from fragmented or “noisy” visual input (e.g., the Snowy Picture Test and the Gestalt Completion Test²²). If the

representation of distant events is more structured, then participants should be better able to abstract the structure from these visual tasks when they are placed in a temporally distant context. Participants were asked to imagine their lives tomorrow (near future perspective) or on a day one year from now (distant future perspective) and to imagine working on the experimental task on that forthcoming day. As expected, performance on both the Snowy Picture Test and the Gestalt Completion Test was higher in the temporally distant condition than the temporally near condition. Thus, individuals' ability to detect structure in a visual image was facilitated when the task was distanced in time, suggesting that construal effects have implications for perceptual processes as well as language based ones.

Finally, temporal distance may not only affect construal, but may be affected by construal. We argued earlier that an association forms between distance and construal that is over-generalized beyond situations in which distance entails less knowledge. Through this association, the relationship between distance and construal may have become bi-directional, such that events construed at higher level are perceived to be more distant. Liberman, Trope, Macrae and Sherman²³ 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 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.

In sum, extensive research conducted within the framework of Construal Level Theory demonstrates that future temporal distance enhances the level of construal of objects, actions, situations, and people. What are the implications of these differences in construal? What predictions does CLT offer about the manner in which temporal distance impacts prediction, evaluation, and choice? We turn now to examine this set of questions.

The effect of temporal distance on predictions, evaluations, and behavior

Prediction

According to Construal Level Theory, predictions about a distant future event should be based on the implications of high-level rather than low-level construals. Theories are, by definition, abstract constructions of schematic relations among entities in an idealized, noise-free world. When tested empirically, however, theoretical predictions may fail to replicate due to nonsystematic influences of the specific conditions and circumstances of the test situation. Focusing on theories (or high-level construals of experiments) may therefore enhance confidence in theoretical predictions, whereas focusing on nonsystematic factors (low-level construals of experiments) may reduce 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, then, economists should be more confident in predicting that the stock market will fall if interest rates are raised when considering the more distant future. Normatively, this should not be the case; predictions about more distant entities should allow for greater uncertainty regarding unknown factors, and should therefore be made with less confidence because less is usually known about them.

The logic of CLT is consistent with the view that errors in prediction may stem from individuals' over-reliance on schematic models of future situations and neglect of background contextual factors²⁴⁻²⁷. However, while past research compares predictions to actual outcomes, CLT extends this reasoning in order to compare near future and distant future predictions. For example, in one study²⁸ participants imagined replicating five classic findings in psychology. Half of the participants read a short description of the theory that gave rise to the predicted results, whereas the other half did not receive information about the theory, but rather read only the description of the study and the prediction. Participants in both experimental conditions imagined themselves conducting an experiment either tomorrow morning (near future condition) or a year from now (distant future condition) and indicated how confident they were that the predicted effect would be found in their experiment on a 0% to 100% scale. Results indicated that temporal distance increased participants' confidence only when they were provided with a theoretical basis for the predictions. These results support the assumption of CLT that temporal distance enhances confidence in prediction only when this confidence derives from high level constructs.

Several other studies assessed confidence in predicting one's own performance on a general knowledge quiz²⁸. An earlier study empirically established that the knowledge domain of a quiz question is perceived as central and the format of the quiz question as peripheral. Participants expected to take a general knowledge quiz either on the same day or two months later. The quiz consisted of the same set of questions, drawn from a variety of knowledge domains, asked in either a relatively easy or hard format. 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). Participants' perceived ability in each knowledge

domain (e.g., how knowledgeable you are in geography, history etc.) was also measured. The results showed that difficult question format appropriately reduced confidence in near future performance, but failed to reduce confidence in distant future performance. Further, 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. Thus, consistent with CLT, the low level aspect of the quiz (question format) affected confidence in near future outcomes more than in distant future outcomes, while the high-level aspect of the quiz (domain knowledge) affected confidence in distant future outcomes more than near future outcomes.

The Nussbaum et al.¹⁹ studies on the effect of future temporal distance on dispositional attribution were 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.

Evaluation and Behavior

How do people evaluate and make choices about distant future outcomes, as opposed to near future outcomes? An assumption shared by a variety of behavioral scientists is that the value of an outcome is discounted or diminished as temporal distance from the outcomes increases²⁹⁻³². Contrary to the claim of overall time discounting, CLT proposes that the effect of temporal distance on the attractiveness of an option will depend upon 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).

This hypothesis was examined with different manipulations of high vs. low levels of construal: primary, goal related vs. secondary, goal irrelevant sources of value; feasibility vs. desirability and expectancy vs. value in gambles; arguments in favor vs. arguments against an action; abstract and primary attitudes and values vs. concrete and secondary attitudes and values; and high vs. low priority issues in a multi-issue context. We briefly review this literature here, and refer the reader to more extensive reviews elsewhere for more detailed information^{1,10,33}.

Primary versus Secondary Features of Objects. Consider the purchase of a product with multiple features, some of which are related to its primary function and others which are not. According to CLT, as the product becomes removed in time, the weight placed on the primary features relative to secondary features in determining the value of the product should increase. In a test of this prediction, Trope and Liberman³³ asked participants to indicate how satisfied they would be in either the near or distant future with the purchase of one of two radio sets: one that had good sound but a poor built-in clock, and one that had poor sound but a good built-in clock. Given that listening to programs was described as one's goal in buying the set, sound quality is more central than the quality of the clock, and should be emphasized in a higher level construal of the radio set. CLT therefore predicts that the advantage in ratings of the "high quality sound/poor clock" radio set over the "low quality sound/good clock" radio set should be stronger in the distant future than the near future, with ratings of the clock with good sound

increasing and ratings of the clock with bad sound decreasing with temporal distance. The results confirmed these predictions. Further, in additional studies the same temporal changes in preference were found for evaluations of experimental sessions with interesting and boring main and filler tasks as well as experimental sessions with both affective and cognitive goal-relevant and goal-irrelevant features.

Desirability and Feasibility. An important distinction made when considering goal directed action is between desirability and feasibility concerns. Given that desirability refers to the value of an action's end state (and thus pertains to why an activity is performed), and feasibility refers to the ease or difficulty of reaching the end state (and thus pertains to how an activity is performed), higher level construals of actions should emphasize desirability over feasibility concerns to a greater degree than lower level construals of the same actions. CLT therefore predicts that distant future preferences will be guided by desirability concerns over feasibility concerns to a greater extent than near future preferences.

Liberman and Trope¹⁰ tested these predictions in a series of hypothetical and realistic choice scenarios. For example, in one study conducted in a field setting, university students choose between four assignments to be performed in either the near future (given immediately to be due in one week) or the distant future (given 9 weeks later to be due one week afterward). Participants stated how much they would like to do each of the four assignments, which varied in interest (desirability) and ease (feasibility). They were told that the assignments would be distributed according to their preferences. Consistent with CLT, 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 (desirability) for the sake of ease (feasibility). 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 temporal pattern was obtained with various other options ¹⁰.

Feedback seeking is another important decision that often pits feasibility against desirability concerns. Freitas, Salovey and Liberman ³⁴ reasoned that feedback seeking involves a conflict between the goal of gaining information about oneself (a desirability consideration) and the difficulty of going through the process of self evaluation (a feasibility consideration). They therefore predicted and 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 & Trope ¹⁰ 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 over-commit. 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 they may want to engage in at the same time.

The desirability/feasibility distinction may also be used to characterize dimensions of positive gambles in which there exists an opportunity to win a desirable prize. In this situation, the prize can be conceptualized as the desirability, end-state dimension, whereas the probability of

winning is a subordinate consideration having to do with the random mechanism that determines the feasibility of winning the prize. In this view, the prize value pertains to the high-level construal of a gamble, while the probability pertains to the low-level construal. (Indeed, participants have empirically supported the notion that probability in such gambles is subordinated to the payoff³⁵.) According to CLT, then, people will assign more weight to payoffs and less weight to probabilities in deciding for the more distant future. Sagristano, Trope, and Liberman³⁵ found support for this prediction. They invited participants to state the amount of money they were willing to bet on a set of 20 gambles they expected to play on that same day or two months later. The bets varied in probability of winning and expected value. As expected, payoffs predicted the bids participants placed on distant future bets more than bids on near future bets. Probabilities, in contrast, were a better predictor of near future bets than of distant future bets. These findings extend CLT to uncontrollable, random outcomes where the feasibility consideration cannot be overcome by increased effort.

Arguments in favor and against an action. Like feasibility is subordinate to desirability, 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. Consider, for example, a decision to take a medication. We would only inquire about potential side effects if we know that the medication has some health benefit; otherwise, we would decide against taking it without inquiring into side effects. In contrast, we would inquire about potential benefits of the medicine regardless of the existence of side effects; if it does not have side effects information about benefits will tell us if it worth taking, while if it does have some side effects information about benefits will tell us if they outweigh the

side effects.

After establishing these subordination relations in a series of studies, Eyal, Liberman, Trope & Walther³⁶ examined the 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. Participants generated arguments in favor and against new (i.e., non-routine) 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. Earlier in this chapter we argued that values and general attitudes are part of high-level construals and therefore more likely to be evoked to describe a distant future situation. This would imply that values and general attitudes should be more readily applied to and guide choice in situations that are psychologically distant. Sagristano, Eyal, Trope, and Liberman³⁷ conducted a two-stage study to examine this prediction. In the first experimental session, participants indicated their general attitudes toward blood donation, volunteering for psychology experiments, and physical fitness advisement. In a second, purportedly unrelated session, participants were offered an opportunity to engage in those activities either in the next two 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 examining the formation of value-consistent intentions used Schwartz's³⁸ value questionnaire to assess the importance participants assign to a wide range of values (e.g., power, benevolence, 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 future³⁷.

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 proximal perspective, whereas the individual's secondary values are more likely to guide their choice from the psychologically proximal than distant perspective. Investigating this issue, Eyal, Liberman, Sagristano and Trope³⁹ measured or manipulated the centrality of values and examined how they predict behavioral intentions. For example, one study assessed the relative centrality of achievement vs. 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 their personally more central value 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.

Primary and Secondary Concerns within an Interpersonal Context. As with evaluating a single product with multiple features, issues within the context of a single interpersonal negotiation can differ in their centrality and worth. From a CLT perspective, negotiators would be expected to focus more on central concerns and less on peripheral concerns as psychological distance increases. To investigate this idea, Henderson, Trope, and Carnevale⁴⁰ examined behavior within a live negotiation. They found that while 91% of dyads with a temporally distant perspective reached a fully logrolling agreement in which lowest and highest priority issues were fully traded off, only 50% of dyads with a temporally near perspective did so. Results also provided evidence that participants approached the negotiation in a more global, structured manner when it was distanced; participants in the distant future condition were more likely to make integrative, multi-issue offers, than those in the near future condition. Finally, this effect resulted in an increase both in individual and joint outcome for the distant as opposed to near condition participants.

In summary, the studies reported here support the CLT claim that high-level information will receive more weight in decisions about distant future events and low-level information will receive more weight in decisions about near future events. This occurred for primary and secondary features of products, desirability and feasibility aspects of assignments and feedback, payoffs and probabilities of gambles, pros and cons of action alternatives, central and peripheral values, and high and low priority issues in a negotiation context. The effects occurred despite the equal information available for the near and distant future options and despite the equally

irreversible nature of the decision in many of the situations. Further, the studies do not show that participants are simply uncertain or indifferent about their choices for the future. Rather, choices for the future seem to discriminate more clearly between alternatives. We believe this is the case because they are based upon higher level of construal, which are more structured and schematic than construals of near future events. In the final section, having established the utility of the construal level approach to temporal distance, we situate this work within a more general theory of psychological distance.

Temporal Distance as a Dimension of Psychological Distance

In the current chapter, we have argued that because less information is typically known about temporally distant events than temporally proximal events, an association forms between distance and level of abstraction. This association is then over-generalized to situations where equal information is available, leading to the variety of construal effects we have documented. According to the logic of this account, temporal distance should not be alone in this association. As an event becomes farther removed from direct experience on any one of a number of dimensions, it should be represented in a more high-level manner. Recent research on a variety of distance dimensions, including spatial distance⁴¹, social distance⁴², and hypotheticality⁴³ has supported this claim, finding that the more spatially distant, socially distant, or improbable an event, the more it is represented in an abstract, superordinate manner. Further, using an implicit association test paradigm, Bar-Anan, Liberman, and Trope⁴⁴ found evidence for implicit associations between each of these distance dimensions and level of construal (i.e. shorter response times when distance related words were paired with high level construal stimuli and proximal related words were paired with low level construal stimuli than with incongruent pairings).

It may thus be useful to conceptualize various forms of distance dimensions within a unified theory of psychological distance wherein similar principles of construal apply across the different dimensions and the formation of abstract construals is involved in transcending the proximal on all of these dimensions. One implication of this framework would be that the distance dimensions themselves should be interrelated. In fact, recent research has found evidence for this at both the explicit and implicit level. In a series of studies using politeness as an indicator of social distance⁴⁵, Stephan⁴⁶ and Reichman and Ben Arie⁴⁷ found that both temporal distance (writing instructions for a person expected to read them in either the near or distant future) and spatial distance (writing notes for a person in a class in another city or classroom vs. the same classroom) produced a corresponding increase in social distance. Further, communication characterized by socially distant language was expected to be enacted at a later time than communication characterized by socially close language; likewise, two speakers speaking in a socially distant manner were perceived to be at a greater physical distance from one another than speakers communicating in a socially close manner.

Evidence for the automatic association of distance dimensions has been found as well. Bar-Anan, Liberman, Trope, and Algom⁴⁸ used a picture-word version of the Stroop paradigm⁴⁹ in which participants discriminated between cues of one psychological distance dimension while ignoring cues of another psychological distance dimension. They reasoned that if psychological distance is a shared meaning of various distance dimensions it would be easier to perform the task when the relevant and the irrelevant cues were congruent in psychological distance, than when the relevant and irrelevant cues were incongruent in terms of psychological distance. Using perspective pictures, Bar-Anan et al placed an arrow on the picture pointing either to a proximal or a distal point on the landscape shown in 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. 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 dimensions of psychological distance not directly relevant to the current task are activated, and that these various distances share a common aspect of meaning.

Conclusion

According to Construal Level Theory, distant future events are represented in an abstract, schematic manner that emphasizes central and superordinate features (high-level construals), whereas near future events are represented in a concrete, less schematic manner, that includes incidental and subordinate features (low-level construals). Research on the mental representation of near and distant future events supports these assumptions, and research on future prediction, preferences and behaviors shows the range of implications that a construal framework entails. Further, research on other psychological distance dimensions, including spatial distance, social distance, and hypotheticality, indicates that high level construals are associated with psychological distance on any of these dimensions. Thus, while not denying the uniqueness of each of these dimensions, the current analysis suggests that they have something important in common. Conceptualized as dimensions of psychological distance, each related to mental construal, they create a unifying theoretical framework for understanding a range of seemingly unrelated

psychological phenomena, a framework that may allow us to capture a fundamental aspect of meaning.

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