Construal Level Theory as an Integrative Framework for Behavioral Decision-Making Research and Consumer Psychology

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In this comment to Trope, Liberman and Makslak’s lead article, I refrain from any attempt to review or recapitulate the growing body of research in social psychology in general and in consumer science in particular that is explicitly devoted to construal level theory (CLT). Rather, granting the status of CLT as a leading contemporary theory, with rich implications and applications in consumer science, I concentrate on recent phenomena in judgment and decision making for which CLT provides an implicit account. Specifically, CLT affords an integrative framework for understanding a whole variety of preference reversals—a major challenge for students of consumer behavior.

Trope, Liberman, and Wakslak’s (2007) review of the empirical support for construal level theory (CLT) establishes CLT as a leading contemporary theory of mental construal, with rich implications and applications in consumer science. Extending their discussion, this paper concentrates on recent phenomena in judgment and decision making and highlights how CLT provides an integrative framework for understanding a wide variety of preference reversals.

Without doubt Trope and Liberman’s (2003) construal-level approach has become a prominent topic for social psychology in general, and for research on judgment and decision making in particular (see also Liberman, Sagristano, & Trope, 2002; Trope & Liberman, 2000). The lead article of the present JCP issue demonstrates, vividly, that construal level theory (CLT) has rich and important implications for explaining and predicting consumer behavior in such diverse paradigms as purchasing decisions and intentions, brand representation, negotiations, risk taking, and impatience when consumer problems unfold over a longer period of time. CLT affords a sound answer to the call for new large-scale and comprehensive theories with integrative power and a broad domain of application (Kruglanski & Thomson, 1999). In contrast to this paucity of “big theories” in recent psychology, CLT does offer a broad, generative theory of psychological distance. Recent research has already confirmed, and future research will further confirm, the authors’ “… hope that approaching various dimensions under the umbrella of psychological distance will create a unifying theoretical framework that will stimulate exploration and allow us to parsimoniously understand a range of seemingly unrelated psychological phenomena.”

Impressed and overwhelmed by the convergent evidence from so many substantial CLT studies reviewed by Trope, Liberman, and Wakslak (2007)—who can afford covering only the most recent ones—in my comment I refrain from any attempt to recapitulate this huge research program or even to discuss single study in detail. Presupposing that readers will have read and enjoyed the lead article, I rather confine myself to several issues that were not included but could have been included in the review, further enhancing the comprehensiveness and the integrative potential of CLT. Thus, what I have to say is for the most part meant to complement and expand the findings and implications advanced by proponents of CLT with other findings from the judgment and decision-making literature, for which CLT provides an elegant integrative account, although they emerged in different theoretical contexts. My perspective on such implicit or incidental CLT findings draws on a synopsis of all kinds of preference reversals in (consumer) decision and choice that have intrigued and fascinated decision researchers for a long time and that are central to current theorizing in this area. Indeed, I have come to use CLT as an organizing framework for teaching behavioral decision making, as I try to explain students the common underlying principles leading to preference reversals.

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Preference reversals are central to consumer psychology, both theoretically and practically (Chapman & Johnson, 1995; Hsee, 1996; Slovic, 1995). The ultimate goal of advertising and marketing campaigns is to change consumers’ product preferences and choices. Marketing strategies, involving pricing policy or brand extension, are motivated by the possibility that they can impact consumer preferences. Negotiation means to influence one’s opponent’s preferred decision option, after all. The purpose of market surveys and interviews is to capture consumers’ preference structure and the malleability of their preferences across time and context. Given the rationality constraints and the need to maximize payoffs in economic settings, the possibility of preference reversals provides both a threat and a chance to practitioners and scientists.

Preference changes often reflect movements on a psychological-distance dimension, the central variable of CLT. Let us illustrate this with an example that I will continue to use throughout this comment. Imagine a consumer who has to make a (forced) choice between two options or products, say, two different offers for a holiday in some Mediterranean country. Typical of complex multiattribute decisions, the two holiday options differ in terms of several attributes, some of which are central to the inherent value or “desirability” of a holiday trip (e.g., beauty of the country, deep culture, attractions, your idea of what you ever wanted to see and do), whereas other attributes load on “feasibility” aspects (e.g., money and time constraints, convenient airport, language problems, political climate). Assuming that the overall attraction of both options is not too unequal and that one option, D, is superior in desirability attributes whereas the other option, F, is superior in terms of feasibility concerns, the standard CLT finding says that D should be preferred from a large distance, but the preference for F should increase as distance decreases. With regard to temporal distance, the most commonly researched distance dimension, D should be preferred when the holiday is to take place next year, whereas F should be preferred next week or today.

To be sure, there are various distance dimensions that can affect consumer’s choice. Trope et al. (2007) base their review on four major dimensions: temporal, spatial, social, and certainty-related distance. Thus, preference reversals of the two holiday trips, D and F, are not restricted to changes from the far-away to the near future; they may also occur when planning holiday in neighboring versus remote places, for oneself versus for others, or when the certainty of being able to go for holidays is high versus low. For the extensions to be introduced below, though, we have to take into account a couple of other distance dimensions that are no less important psychologically.

The first one is informational distance, defined in terms of the amount of knowledge or relevant data the consumer possesses about the decision options. Regardless of the abstractness or construal level of the available information or the relevance to desirability or feasibility, distance is a monotonic function of sample size, or the numerosity of available facts, experiences, details, and knowledge units. The lesser the distance to an object, the denser the amount of information and, conversely, the denser the information, the lesser the distance.

Related to, but clearly distinct from, informational distance is experiential distance, that is, whether the available information, whatever its amount, is based on first-hand information (e.g., the consumer’s own prior experience) or second-hand and third-hand information (based on communication from other people, literature, or media).

Affective distance is of course related to social distance, but is conceptually distinct in notable respects. For instance, it makes a difference whether consumers learn about the holiday options in “warm,” emotionally charged pictures and films or in “cold,” descriptive text sources. Such variation in the modality and style of advertising should not be confused with social distance distinctions, such as self versus other, ingroup versus outgroup, or distinctions between persons varying in familiarity or similarity to oneself.

Last but not least, I suggest a dimension called perspective distance to account for the influence of the commitment, the myopia, and the exclusion of alternatives that characterize the cognitive and motivational state in a very late, advanced stage of the decision process. For instance, a consumer who has already expended much effort in calculating cost, reading books, organizing excursions, committing oneself to partners or friends will see the decision problem from a, or with a, mindset that blinds him or her for alternative aspects that might lead to alternative decisions.

The question whether the same theory, CLT, applies in the same way to all these distance dimensions, or whether CLT’s domain is confined to a subset of distance effects (e.g., extensional aspects such as time, space, and information density) and less applicable to other aspects (e.g., intensional aspects such as emotional closeness and commitment) is not only an open empirical question, but also an intriguing and very interesting one. Thus, when consumers are emotionally close and tightly committed to a desired good, would the way they construe the objects really shift from its inherent value to its pragmatic value and feasibility?

A SYNOPSIS OF PREFERENCE REVERSALS RELATED TO DISTANCE DIMENSIONS

In any case, whether or not the same invariant theory, CLT, applies to every aspect of distance, all distance dimensions have the potential to produce preference reversals. Let us now turn to the crucial question of how movements on specific distance dimensions can induce changes in decision behavior. Indeed, CLT affords an explanatory framework
for a whole variety of preference reversals and for the apparent violations of rationality norms.

Nature of Decision Task: Choice vs. Pricing

One of the most prominent origins of preference reversals is the nature of the decision task. Consider two lotteries of which, one, the P-lottery, has a higher probability of winning, whereas the other, D-lottery, has a higher outcome in dollars in case of winning. Let the expected utility of the P- and D-lottery not be too different. Then most respondents prefer the P-lottery to the D-lottery when they are offered a direct choice, even though they are typically willing to pay a higher amount of money for D than P when preferences are assessed in a pricing task (cf. Slovic, 1995).

Note in passing that only choice tasks provide support for prospect theory’s (Kahneman & Tversky, 1981) prediction that the more risk-averse option P (i.e., the one with the higher probability of winning) should be preferred when outcomes are positive. On a pricing task, in contrast, decision makers tend to give more weight to the size of the possible outcome than to the probability of winning. Such a reversal resulting from changing weights given to the probability and outcome components of decision problems is corroborated by Sagristano, Trope, and Liberman’s (2002) demonstration that in the near future P-lotteries are preferred, reflecting high weight given to probability (i.e., a measure of feasibility), whereas in the remote future D-lotteries are preferred, as a result of enhanced weighting of the outcome that can be won (i.e., the measure of desirability).

An interesting insight suggested by this analogy is that choice tasks induce a shorter distance than pricing tasks. Choosing between P and D calls for an immediate decision, right now and here, involving a commitment for one of the two options. Pricing induces a more distant perspective; quantifying the price of an object does not entail any commitment or immediate identification with one of the objects. One may therefore attribute the impact of choice versus pricing tasks to a shift on the perspective distance dimension and—to the extent that tasks induce different time perspectives—maybe also a shift on the temporal distance dimension.

Descriptive versus Experienced Probability

Hertwig, Barron, Weber, and Erev (2004) have recently found a new type of preference reversal that originates in different ways of presenting or learning probability information. The chances of winning may be stated numerically or graphically as a summary statistic (descriptive probability) or respondents have to infer the probability inductively from a long series of observations drawn from the lottery (experienced probability). In the former condition, they only get second-hand communication, whereas in the latter case they get first-hand information about the probability—which constitutes a manipulation of experiential distance. Accordingly, the common tendency to overrate very low probabilities (relative to high probabilities) in standard experiments using descriptive probabilities is eliminated when decision makers personally experience how long they have to wait for a small-probability outcome to appear. Similarly, a holiday trip to a fancy place may decrease in attractiveness when the consumer can vividly experience the low probability with which the attractiveness can be really enjoyed, thus leading to a preference shift in favor of a more feasible holiday destination.

Recent (still unpublished) findings from our own lab extend the influence of experiential distance to spatial rather than temporal expansion of probability information. That is, participants did not have to infer the probability of winning a lottery from a sequential series of events, but from a glance at the bowl containing numerous winning or loosing chips. Just as experiencing a low outcome probability in time, over numerous trials, experiencing paucity of winning outcomes spatially, through scanning the bowl, serves to reduce the attractiveness of low-probability options.

Unpacking/Category-split Effects

The “zooming” metaphor leads to another operational definition of perspective distance. As one gets closer to an object, its perception becomes more fine-grained. For instance, as one learns more and more about New York, or as one visits NYC physically, the whole Metropole is unpacked into districts, such as Soho, East Village, or the Bronx, and then into even finer parts such as streets or even blocks within streets or avenues. In the same vein, by reducing perspective distance, consumers attain a better and fine-grained representation of holiday places. As this process of unpacking (Tversky & Koehler, 1994) or category split (Fiedler & Armbruster, 1994) serves to magnify the cognitive impact of a category, it can lead to preference reversals. For example, closer examination of the global high-desirability holiday option D may reveal a number of specific feasibility problems and thereby shift the consumer’s preference to F, the less fancy holiday that entails lesser feasibility problems. As Kruger and Evans (2004) have shown, zooming-in and unpacking a future project may reduce the planning fallacy (Buehler, Griffin, & Ross, 1994), that is, the underestimation of the costs and efforts associated with future projects.

Alternative-outcomes Effect

However, approaching or zooming-in a decision object may not only force the decision maker to concentrate on, and unpack, the focal option, or category, but can also prevent the decision maker from unpacking alternative outcomes. According to Windschitl and Wells’ (1998) alternative-outcomes effect, this can be the source of an intriguing
preference reversal. To illustrate, a consumer may be confronted with a lottery that offers a 1/7 chance of getting the holiday trip for free if the consumers commit themselves to this provider. That is, one out of seven lottery tickets in a bowl carries the consumer’s name. Then the perceived probability of winning and the attractiveness of the lottery are markedly higher when the other six tickets in the bowl belong to six different persons than when all six alternative outcomes pertain to the same person, who has a winning probability as high as 6/7. Packing or unpacking the alternative outcome—depending on perspective distance—can thus influence the consumer’s choice. To be sure, the relative blindness or myopia for alternative outcomes is related to sunk-cost situations (Arkes & Blumer, 1985), in which prior investment and commitment to an inferior option prevents consumers from choosing a better option (as mentioned in Trope et al.’s target article).

Interval Width
Another implication of the “zooming-in” metaphor is that estimates of intervals (e.g., the upper and lower bound of a price interval) increase with perspective distance. As recent unpublished data from our own lab show, the price ranges that consumers find acceptable for certain products (textbooks, computer software) in the distant future are larger than the acceptable ranges right now. The same holds for interval or range estimates of the proportion of consumers who will buy certain products. Interval estimation or interval production measures have been shown to be particularly prone to the overconfidence illusion (Klayman, Soll, Juslin, & Winman, 2006). By shrinking the acceptable price interval, consumers may change their holiday plans as the holiday time gets closer.

Preference Reversals as a Function of Aggregation Level
Ordinal comparisons may change as a function of the aggregation level or the unit of analysis considered. Such reversals, which have been long recognized as ecological bias in social science (Robinson, 1950), have been recently shown to produce systematic cognitive illusions called pseudocontingencies (Fiedler & Freytag, 2004; Fiedler, Freytag, & Unkelbach, in press). Thus, it is possible that girls outperform boys at the level of individual students but at the same time, at the level of schools or school districts, the average performance is higher in those schools is which the proportion of girls in low. By analogy, in the consumer realm, the correlation between price and product quality may be zero or even negative at the level of individual products and yet the same correlation may be very high and positive at the level of markets, providers, or brands. To the extent that a reduction of psychological distance induces a lower aggregation level, consumers may change their preference order.

A consumer who has first compared the average price and the average quality of different holiday providers, preferring the more expensive option D, may change her preference in favor of a less expensive option F as the price–quality correlation disappears at the level of individual hotels or special offers.

Amount of Information and Expertise
Consumer satisfaction is often determined by a single dominant product attribute, such as the panorama view offered by an apartment, whereas other attributes (e.g., location, architecture style, or even price of an apartment) may have little impact on satisfaction. When this is the case, small information samples and low expertise may lead to better decisions and higher satisfaction than large samples and high expertise (Fiedler & Kareev, 2006; Hertwig & Pleskac, 2006; Wilson & Schooler, 1991). The larger the sample size as informational distance decreases and the amount of information increases, the more likely it is that decision makers (or consumers) attempt to consider more attributes at the same time. This may lead to decision conflicts and reduced satisfaction whenever it would be appropriate to follow a lexicographic strategy, that is, to consider only the leading attribute.

Impact of Affective Distance
For a final example of distance-contingent preference shifts, we should not forget the impact of affective distance. As Hsee and Rottenstreich (2004) have shown, reducing affective distance by presenting consumer ads pictorially and vividly, rather than in terms of merely descriptive text formats, can greatly affect the way in which decision options and their utilities are construed. By analogy, whereas holiday F is preferred to D from written descriptions, D may be preferred (in spite of its higher price and more inconvenient location) when consumers are given vivid (video-taped) reports by former visitors.

HOW AUTOMATIC AND OVERLEARNED ARE THE EFFECTS THAT CLT PREDICTS?

Altogether, these various phenomena suggest that CLT’s theoretical scope and its domain of application may be even larger than expected, covering a number of paradigms whose relation to CLT has gone unrecognized. My intention here was to demonstrate that CLT provides a natural integrative account of all kinds of preference reversals, rendering CLT a major theoretical module of modern decision-making research.

Having pointed out so many assets of this theoretical approach, I would like to close my comment with a word of constructive critique about limitations and debatable aspects
of the theory. Given the breadth and the scope of CLT as a generic, multiply applicable framework, it is only natural to meet some empirical inconsistencies and theoretical ambiguities. For instance, the role of high as opposed to low probability of an outcome or goal is somewhat ambiguous. On one hand, high probability is an indicator of proximity, or closeness to a goal, where a highly improbable goal is remote. On the other hand, the feasibility concerns that arise at short distance may reduce the probability of attaining the desired goal (i.e., the desired or ideal goal of a holiday trip is less likely to be attained when the holiday begins soon). Moreover, decision studies (Sagristano et al., 2002) demonstrate that low probability (i.e., the possibility of not winning) is more likely realized for proximal than for distant decisions.

As already mentioned, it is not perfectly clear as to what distance CLT pertains. Is CLT equally applicable to all measures of distance, between now and the future, now and the past, between myself and the decision maker (e.g., the customer), myself and the decision target (holiday), between the decision maker (who is not me) and the target, between the decision process and the decision outcome? Moreover, might different distance dimensions interact, causing trimming and ceiling effects such that, for instance, temporal distance will only matter if social distance is not too large, or any aspect of informational distance only matters when affective distance exceeds some threshold?

Intriguing but also problematic in this regard is the CLT proponent’s strong assumption that “... an association forms between psychological distance and abstraction, and that this association is overgeneralized so that it influences representation even in situations where there is equivalent information about near and distant events.” I am skeptical here and I want to formulate a competing assumption. Rather than assuming that CLT effects are overlearned distance associations, detached from any difference in the stimulus information associated with high and low distance options, could there not be a common denominator such that all distance effects are mediated by the same basic inequality of information about distal and proximal objects?

As a general rule, the effective sample of stimulus information that drives the cognitive decision process is larger for proximal than for distant decision objects. Even when the experimenter-provided information is held constant, the effective stimulus sample about distant and proximal objects may still differ markedly, due to self-generated inferences, associations, and memorized knowledge. From a short distance, judges and decision makers will enrich decision options with more self-generated inferences, self-references, past experiences, imagined scenarios, scruples, world knowledge, and affective associations than from a long distance. As a consequence, the effective stimulus input—that is, the net result of experimenter-provided and self-generated information—is richer with decreasing distance. Reducing distance on any dimension—whether temporal, spatial, social, affective, informational, or perspective—can be assumed to increase the effective stimulus input. Even symbolic cues, or “primes,” that merely allude to distance versus proximity may induce substantial changes in the effective stimulus input, producing more complex, multidimensional, and more conflict-prone decisions, as distance decreases. If this is the case, only those cues or primes that influence the substantial information accrual process will automatically change consumer behavior.

CONCLUDING REMARK

If my suspicion is justified that distance effects may not be totally automatic, overlearned, and detached from informational differences between near and distant objects, this has some notable implications for the process through which distance effects lead to preference reversals. Short-distance judgments and decisions may be less clear-cut, more multidimensional, and more conflict-prone because they rely on a larger effective sample of information than large-distance assumptions. It is funny to note, but also reflective of the contribution of Israeli scientists, that the theoretical key to understand this generic law was well articulated by a scientist, Dany Algom, who comes from the same home university, Tel Aviv, as Yaakov Trope and Nira Liberman, CLT’s two main proponents. Algom and his colleagues (Chajut & Algom, 2003) demonstrated, repeatedly and convincingly, that with a decreasing amount of information considered at a time (through cognitive load or distracters), there is a systematic increase in performance on tasks that require differential weighting of important and unimportant aspects. In cognitive psychology, such tasks are known as selective-attention tasks. Given a tradeoff between central and peripheral aspects of a decision problem, pointing in opposite directions, the peripheral aspects will not be visible and not cause much conflict when distance is large. However, as distance is reduced, the amount of effective information driving the decision process will increase, making peripheral aspects visible and decision conflicts apparent, up to the point where peripheral feasibility concerns may dominate the central desirability concerns.

From an economic or utilitarian point of view, a different question is whether reliance on central or peripheral aspects leads to better decisions, defined in terms of benefits and costs, or consumer satisfaction. An informed answer to this ultimate question, of course, depends on the payoff structure associated with the decision problem. For some choices, such as the holiday decision used throughout this paper, the final outcome will be mainly determined by the central, hedonic value of the decision option, whereas satisfaction with other decisions, such as planning the costs of an investment, relies heavily on feasibility.

Ironically, though, the precise utility function for subjective benefits and costs may itself be subject to distance
effects. What appears good right now (e.g., a teenager buying a cell phone) may be regretted in a week (because money is exhausted), but may then again cause strong satisfaction in the long run (due to regular social contact). However, as research on affective forecasting suggests, such time-contingent changes in the consumptive value of consumer goods are unlikely to be anticipated at the time when decisions are made, that is, when framing and construal levels take place. Therefore, they do not seem to fall within the domain of CLT proper.

Trope, Liberman, and Wakslak are aware of these open questions when they conclude that “there remains much work to be done on both a theoretical and applied level.” Without contesting this truism, however, as a reader of their review I was first of all deeply impressed by how much substantial evidence has been already obtained and how many important insights have been already gained from only five or six years of CLT research.

REFERENCES


