Maximizing Progress: High-Level Construals Promote Sensitivity To Goal Progress Asymmetries

THESIS

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Abstract

The current work examines the effect of construal level on goal pursuit decisions. Past work has shown that high-level construals promote primary over secondary concerns in goal decisions. Past work has also shown that one determinant of what is primary is the attainment value of that goal. Here, we propose that the degree of progress afforded to a goal also determines which goals are primary versus secondary. Across two studies, we show that high-level construals make people sensitive to goal progress asymmetries inherent in the situation. That is, the notion that some goals are afforded more progress by the situation than others. To test this, we manipulate construal level and give participants a mixed-motive social dilemma that pits one’s self-interest goals against one’s goals of helping the group. We vary the game such that either one’s help-others goals (Study 1) or one’s self-interest goals (Study 2) are afforded by the situation. We find that high-level construals promote decisions in line with situational goal affordances.
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Chapter 1: Introduction

Construal Level Theory

One factor that plays a major role in determining peoples’ goal pursuit decisions is their subjective construals. Two individuals can witness the same event and have markedly different perceptions - or construals - of the event (Bruner, 1957; Griffin & Ross, 1991). For example, people construe the phrase “A little rebellion is a good thing” differently when it is attributed to Jefferson than Lenin (Asch, 1948). Similarly, an individual can construe the same situation differently. For example, people construe a bike trip more positively after it has completed than while it is ongoing (Mitchell, Thompson, Peterson, & Cronk, 1997). Different situations thus have multiple possible interpretations or construals. Differences in construals can be between persons (two people interpreting the same situation differently) or within persons (the same person interpreting the same situation differently at different times). These construals can vary on a number of dimensions (e.g. vividness, emotionality, etc). Construal level theory (Trope & Liberman, 2003; Trope, Liberman & Wakslak, 2007) proposes that one important dimension that construals can vary on is level of abstractness. People can construe a situation more abstractly (high-level construals) and focus on the broader features (see the forest for the trees), or they can construe a situation more concretely (low-level construals) and attend to the more narrow, specified features (see the trees).
Construal level theory says that people engage in the process of abstraction when events are psychologically distant, that is, they are removed from the here and now. Events that are directly removed from the here and now cannot be directly perceived, and therefore require abstraction in order to build a representation of them. To represent a trip in the distant future, we must abstract from what we know about trips in general. A distant trip lacks specific, contextualized, details (low-level information). We do, however, have a wealth of schematic knowledge of trips in general. It is this schematic knowledge that we draw on to represent a future trip. In other words, we abstract from this schematic knowledge to form our representation of this future trip. This is in contrast to events that are psychologically near, which have more concrete, specific details surrounding them. Trips about to occur thus do not require one to draw on schematic knowledge of trips in general in order to be represented. Importantly, this distance to abstraction link is over learned, so even when psychologically distant stimuli are not impoverished, this process of abstraction occurs regardless.

According to construal level theory, high-level construals are the product of abstraction and involve focusing on primary, central features and discarding or ignoring secondary, incidental features (Trope & Liberman, 2010). What is considered primary is inherently based on one’s goals with regards to what is being abstracted. This is because one’s goals will dictate what is relevant about a given object or situation, and thus what is represented at a high level. For example, I may construe a textbook either concretely or abstractly. The low-level construal of the book will focus on the incidental features of the book: its size, weight, page count, and whether or not it has a picture on its cover. The
high-level construal will be much different: construing a book at a high-level construal requires abstracting from one particular book and therefore extracting the primary features of textbooks. One possible high-level construal of a textbook consists of learning and knowledge because these are the central features of textbooks. However, this is only one possible high-level construal. As stated above, a person’s goals will dictate what is primary or secondary for a given object. The primary features of a textbook are “knowledge” and “learning” only if one has a learning goal. For someone who is in need of a decorative coffee table book, the primary features will be much different. For this person, the high-level construal will consist of qualities such as “attractiveness of the cover” and “impressiveness to guests.” This highlights two important points. First, an object’s features are not “primary” or “secondary” in an objective sense, rather they are only primary in relation to an individual’s goals with regards to that object. Second, high-level construals need not be composed solely of abstract concepts such as “learning” and “knowledge”, sometimes very specific and detailed aspects such as “weight” or “size” can be primary and thus represented in a high-level construal. In sum, abstraction requires extracting the primary elements of an object or situation. The relation of the object to one’s goals determines what is primary.

The way we construe something influences our decision-making. Our decisions use our construals as inputs, and since construals can differ remarkably for a given stimulus, our decision-making will be tied to our construals because they serve as the input for our decisions. Trope and Liberman (2000) demonstrated this by having participants imagine they were shopping for a radio to listen to music in the kitchen, thus
giving participants the goal of “listening to music.” Participants read about two radios, both one of which had a good clock but poor radio, whereas the other had a good radio but poor clock. In this situation, the radio function is primary because participants had been given the goal of listening to music, whereas the clock function was secondary. Participants induced to construe the items at a higher level preferred the good radio but poor clock. Participants induced to construe the items at a lower level did not favor one item over the other. This lends support to the idea that high-level construals promote extracting the primary features of a given object. In this example, the radio features were primary given the goal of listening to music, and as such these features were promoted under high-level construal.

One implication is that by extracting what is primary with regards to our goals, high-level construals will give greater weight to the goal-relevant features of the various choice options. In other words, because we are extracting what is primary with regards to our goals, high-level construals should allow us to more easily observe which decision will lead to fulfillment of these goals. For example, consider the scenario of deciding whether or not to eat chocolate cake. For this scenario, the two goals in play are “enjoy the delicious cake” and “be healthy and/or diet.” For those who have a dieting goal, the primary features of “eating chocolate cake” would be “breaking my diet”, “poor self-control”, and “oily, gross fat.” High-level construals would thus evaluate eating chocolate cake less positive for someone with the dieting goal. Low-level construals, on the other hand, would not focus on the primary features of this goal-decision, and consequently would also attend to the features such as “tastes good” (which is secondary to ones
dieting goals) and consequently would lead to a more positive evaluation of eating the chocolate cake. Similarly, given a goal structure where academics is more important than partying and given a decision between studying and going out, high-level construals would focus one’s attention towards those elements of studying/going out that reflect that decisions impact on the more important goal of studying. In this way, high-level construals promote one’s “primary” goals over secondary goals, because primary goals determine what elements in a set of alternatives will be highlighted. So, in the same way that high-level construals promote primary over secondary concerns in persuasion and item evaluation, high-level construals should promote primary goals over secondary goals.

This is exactly what Fujita et al. (2006) found in a series of studies. They gave participants a set of self-control dilemmas – dilemmas that pit goals of different attainment value against one another – and found that higher-level construals promoted self-control. In one study, participants were connected to electrodes and asked to grip a handgrip for as long as possible to get diagnostic personality information. In this scenario, obtaining diagnostic personality information has greater attainment value than avoiding the pain of the handgrip because most people value this information. Participants who had been induced to construe the task abstractly held the handgrip for longer. In an extension to this Fujita and Han (2009) found that under high-level construal, participants with dieting goals were more likely to choose a healthy rather than unhealthy food snack as compensation for the study. As with the above study, people with dieting goals value maintaining their diet much more than they value eating an
unhealthy snack. So whereas the initial studies by Trope & Liberman (2000) found that primary goals are promoted by the situation, the above studies demonstrated that this is also true when two goals are pitted against one another.

What Makes a Goal Primary?

In the above conceptualization, high-level construals promote one’s primary goals. But what is a primary goal? Whether a goal is primary or not has largely been defined by the goal’s attainment value to the individual. The more value conferred by attaining/completing a goal, the more primary that goal is. Consider the student who has a “succeed academically” goal and a “partying” goal. When forced to choose between the two (for example, on a Thursday night when he can choose between partying and studying), high-level construals should promote whichever goal has greater attainment value to the student. Thus if academics have greater attainment value, high-level construals should make the student more likely to study. However, if partying has greater attainment value, high-level construals should make the student less likely to study and more likely to party. It is important to note that high-level construals do not promote objectively better behavior, just behavior that is consistent with one’s more global goals.

One goal can be primary to another in a different sense beyond goal attainment value: goals can differ to the extent that they are afforded by a particular situation. Take for example a student who equally values partying and academic goals. For this student, it is unclear what high-level construals would promote. In the present paper I propose
that it is not always the goal attainment value that determines which is primary in a situation, but rather which goal is best afforded.

Inherent in many goal-dilemma choices is an asymmetry in the amount of progress one can make towards a given goal. Sometimes the situation affords a large degree of progress on one goal, but minimal progress on the other. If both of these goals are of equal importance, the individual should choose whichever goal the situation best affords to maximize one’s goal opportunities. To illustrate this, consider the working mother whose professional success and mothering goals are of equal attainment value. On a given evening, it is unclear whether the mother will play with her children or do work. Assuming that three hours of work and three hours of mothering allow for equal progress on the respective goal, it remains unclear how the working mother will act. However, suppose the mother has an important presentation the next day. In this case, the situation is affording the professional goal greater progress because the working mother has an opportunity to make great progress on her professional goals. However, suppose instead that the mother has no presentation the next day, but rather her child is having their orchestra concert that night. For this situation, the parenting goal is afforded by the situation because it allows a greater degree of progress for her parenting goals relative to her professional goals.

In this way, a goal is primary not only given the importance of that goal, but also the degree of progress afforded to that goal by the situation. Crucially, this means that higher-level construals should promote whichever goal the situation offers more progress towards, so long as these goals are of equal importance.
Goal progress has been previously discussed with regards to a progress and commitment frame (Koo & Fishbach, 2008) and in a single-goal frame (Bonezzi, Brendl, & De Angelis, 2011). However, it has yet to be tested what role goal progress has in defining what is primary versus secondary under high-level construals. To investigate this, we wanted a scenario where people could make either maximal progress on a single important goal, or minimal progress on two important goals. If we are right in our assertion that the degree of goal progress contributes to what is primary, then high-level construals should promote choices in line with maximal goal progress.

Mixed Motive Social Dilemmas

To test this, we turn to the methodology of social dilemmas. Social dilemmas are dilemmas that pit one’s self-interest goals against one’s goals of helping others. Social dilemmas represent a good backdrop to test our theory because social dilemmas can be constructed such that progress toward one goal versus the other is asymmetrical. Many public goods dilemmas are situations where an individual can sacrifice a small amount of progress on their self-interest goal in exchange for a larger degree of progress towards one’s help others goal. For example, donating a small amount of money to the Red Cross so that the less fortunate can receive aid. Sometimes, however, others are asking one to sacrifice a great deal of progress on one’s own goals so that the group can receive a trivial increase for themselves. In other words, one is asked by the group to sacrifice significantly so that the group can receive minor luxuries. One example of this is ancient Egyptian slavery, where slaves provide help to those in power (e.g. constant palm-leaf fanning, strawberry feeding, transportation carrying, etc.) but the help they provide often
pales in comparison to the degree that their self-interested goals are hindered. Very few people would choose to become a slave. A similar example can be adapted from the trolley car literature. Suppose a trolley car is rolling down the tracks at a moderate speed and is about to hit several people. Due to its speed, it will only wound them, possibly breaking a few bones. Suppose you are high above the track and have the option of jumping in front of the trolley thereby stopping it, but killing yourself due to the fall. Again, it seems highly suspect to sacrifice so much of oneself to spare others some minor discomfort. The present research investigates the impact of high-level construals on our goal-pursuit decisions in situations where certain goals are afforded.
Chapter 2: The Present Studies

In this research, we give participants a mutually exclusive choice between advancing their self-interest goal versus their help-others goal. Critically, we vary which goal is largely afforded by the situation, such that sometimes helping others is largely afforded (Study 1) and other times helping oneself is afforded (Study 2). It is important to note that in choosing these goals, we are making the assumption that both helping oneself and helping others are of relatively similar importance to most people. We expect that higher-level construals should promote whichever goal is maximally afforded by the situation. To this end, we designed a new mixed-motive social dilemma game that allows us to manipulate progress on both self-interested and help-others goals. Participants were asked to imagine they were playing the game with four other people. Participants were told that they (themselves) had to make payoff decisions that would affect both themselves and others in the game. These decisions consisted of nine binary-choice scenarios that pitted participants’ help-others goal against their self-interest goal. We did this by forcing participants to choose between unbalanced payoffs for themselves and for the others in the group. We manipulated goal progress via payoffs, with the logic that the more money given to either the self or the others, the more progress one made on the respective goal. To make progress asymmetric, and therefore have the situation afford one goal over the other, we made the decisions such that either the others (Study 1) or
oneself (Study 2) could receive a large amount (a great degree of progress on a single goal), or everyone could earn a smaller amount (relatively less progress on both goals). We predict that higher-level construals should promote decisions that capitalize on goal progress opportunities. Specifically, when the social dilemma is such that help-others goals are afforded, higher-level construals should promote decisions that help others. When self-interest goals are afforded, higher-level construals should promote decisions that help oneself.

Study 1

Method

Participants. 56 Ohio State University undergraduate students participated in the experiment in exchange for partial course credit. Gender information was not collected.

Construal level manipulation. Participants first completed a the Why/How task (Freitas, Gollwitzer, & Trope, 2004), a previously validated task that has been shown to induce higher- versus lower-level construals, which then carry over to subsequent unrelated tasks. Participants either provide reasons why they strive towards a goal (high-level construal) or means for striving towards that goal (low-level construal). For example, participants are asked to consider a goal (e.g. “improving and maintaining health”) and list either why they strive toward this goal or how they strive towards this goal. Half of participants received the “why” version of the task, inducing them to think at a higher-level construal and half received the “how” version of the task, inducing them to think at a lower-level construal. For both Study 1 and Study 2, participants did two

*Mixed-motive social dilemma.* Following the why/how task, participants were then presented with the mixed motive social dilemma. This questionnaire presented participants with nine scenarios consisting of two options each. The first option (which we label the “help others” option, as it advanced one’s help others goals) remained constant across scenarios and was as follows:

Option A
- You personally will receive $0
- The other four people in the group will receive $100\(^1\)

This option was the goal-afforded option: people always had the option of receiving nothing for themselves and giving the group a large amount. The self-interest option, Option B, offered some money to the participant, but at a relatively large cost to others. For example, scenario 5 was as follows:

Option B
- You personally will receive $5
- The other four people in the group will receive $50

Participants always had to make a choice between the help-others option (goal afforded option A) and the self-interested option (goal not afforded, option B). Only the self-interest option changed across scenarios. For the first scenario, the self-interest option offered participants $1 and the group $90. On each subsequent scenario, we increased the

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\(^1\) For both Study 1 and Study 2, it was ambiguous as to whether the amount the group received was per person or divided amongst the group.
amount offered to the participant by one, and decreased the amount offered to the group by ten. The final scenario thus offered participants the choice between the above help-others option and the option of getting nine dollars for themselves and having the group get only ten dollars (see Appendix A). In this particular instantiation of our mixed-motive dilemma, the help-others goal is maximally afforded by the situation relative to the self-interest goal. Specifically, one can help others to a greater extent than one can help oneself in every instance of the game. By using this methodology, we assume that people will start off choosing the help-others option (because $1 is relatively little to most people) and only switch to the self-interested option as the scenarios progress. Each subsequent scenario allows the participant to get a little more for themselves at a great cost to the group. Therefore, the longer that participants stay with the help-others goal, the more sensitive they are to situational goal affordances.

In addition to the scenarios, participants were instructed that their responses would be anonymous and that others would not know the individual made the decision or how much money they could have received. Further, participants were told the money came with the condition that group members could not share the money with the participant.

Results and Discussion

To determine if construal level influenced participants’ decisions, we calculated the scenario for which participants switched from the ‘help-others’ option to the ‘self-interested’ option. For example, if a participant chose the help-others option for scenarios one through five, and the self-interest option for scenarios six through nine, their “switch
point” would be coded as six because they switched to being self-interested at scenario six. Participants who never switched to the self-interest option were coded as switching on scenario ten, whereas participants who were always self-interested were coded as switching on scenario one. Because this measure requires a single switch point, participants who switched back and forth (N = 6) and those who started off self-interested and switched to helping others (N = 4) are excluded from this analysis, leaving 46 participants total. Because these numbers are small, we feel confident assuming that generally people switch from helping others to being self-interested. High-level construals should, therefore, encourage people to maintain with the goal afforded option for longer, relative to low-level construals and we should see high-level construal participants switching to the self-interested option at a later scenario than the low-level construal participants.

Figure 1 shows the breakdown of participants’ decisions. As predicted, participants in the high-construal condition (M = 7.05, SD = 3.60) switched to acting selfish later than participants in the low construal condition (M = 4.71, SD = 3.88), \( t(44) = 2.11, p = .04 \) (Figure 2). This suggests that high-level construals do indeed promote decisions consistent with goal affordances.
Figure 1. Percentage of people selecting the help-others option.

Figure 2. Average scenario participants switched from helping the group to helping themselves.
Although we interpret these findings to suggest that higher-level construals promote sensitivity to goal affordances, one could alternatively suggest that higher-level construals merely promote greater concern for the group. Some recent researchers (Sanna, Chang, Parks, & Kennedy, 2009) have suggested just this. We believe that high-level construals promote attention to goal progress and goal attainment value rather than increase the attainment value of one’s help-others goal. However, the present data cannot conclusively say either way which of these interpretations is correct. Study 2 addresses this alternative interpretation by making the self-interested relative to help-others goals maximally afforded by the situation.

Study 2

In Study 1, the help-others goal was afforded by the situation because participants could choose to give the group a relatively large sum of money ($100). Study 2 sought to make participants’ self-interested goals afforded by reversing the payoffs: participants could receive a large amount of money ($100) for themselves and have others playing the game get nothing, or they could sacrifice a large amount of their money so that the others would get a small amount (sacrifice $10 dollars of their own for each dollar the group earned). The game was thus structured so that in every instance, one can help one’s self to a greater extent than helping others. Thus, the situation afforded one’s self-interested goals over those of the group.

Method
Participants. 38 Ohio State University students participated in the experiment for course credit.

Construal level manipulation. As in Study 1, participants completed the why/how manipulation prior to performing the mixed motive social dilemma.

Mixed motive social dilemma. Study 2 reversed the payoff structure of Study 1, such that participants now always had the option of earning a large amount ($100) for themselves yet allocating nothing for others, or earning a much smaller amount but permitting others to earn a little (sacrifice $10 dollars of their own for each dollar the group earned). For example, scenario five was the following:

Option A

- You personally will receive $100
- The other four people in the group will receive $0

Option B

- You personally will receive $50
- The other four people in the group will receive $5

As in study 1, participants were told the money came with the condition that they could not share it with the others (see Appendix B). Thus, this time one’s selfish goals are afforded by the situation, and we expect to see abstract construals promote selfish decisions.

Results and Discussion

Again, we used an analysis of switch point to determine if construals were impacting participants’ decisions. As for study 1, we assumed people would generally
start helping others and switch to being self-interested. We believe this will be the case because the marginal benefit of $100 versus $90 is not as great for many people as the notion of “throwing the group a bone.” As such, we expect people to generally at least start out helping the group a little at a large cost to themselves. However, unlike the previous study, one’s self-interested goals are afforded to a greater extent than one’s help-others goals. As such, we now expect people in high-level construal to switch to being self-interested earlier than those in low-level construal. In other words, we expected those in high-level construal to make more goal-affordances consistent decisions, which in this case is acting self-interested. As in Study 1, we examined the average scenario at which participants switched from helping the group to behaving selfinterested. For this study, we wanted to show that high-level construals should promote people to switch to being selfish at an earlier scenario. We again excluded participants who behaved inconsistently (switched back and forth, N = 5) and those who switched from being self-interested to helping the group (N = 7).

Participants’ decisions are summarized in Figure 3. As predicted, participants in the high-construal condition (M = 4.43, SD = 3.7) switched to the self-beneficial option earlier (M = 7.07, SD = 3.7) t (36) = 2.22, p = .03 (Figure 4). This suggests that those under high-level construal were more sensitive to the situational goal affordances than those under low-level construal. This provides additional evidence that high-level construals promote goals that are afforded by the situation.
Figure 3. Percentage of people selecting the self-interested option

Figure 4. Average scenario participants switched from helping the group to helping themselves.
Chapter 3: General Discussion

In two studies, we found evidence that high-level construals promote decisions that maximize the efficiency of situations that present goal-progress asymmetries. In Study 1, participants under high-level construal were more likely to sacrifice a small amount of personal gain so that others could gain a lot. In Study 2, participants under high-level construal were more likely to choose a large gain for themselves over a small gain for the others. For both of these studies, the payoff asymmetries afforded greater progress toward one goal over the other. In both these studies, this was the goal that was promoted by high-level construals. Therefore, high-level construals promoted decisions that allowed for maximal progress towards a single goal as opposed to minimal progress towards a different goal. This suggests that high-level construals make people sensitive to goal-progress asymmetries inherent in the situation.

What Makes a Goal Primary?

It has been shown previously that high-level construals promote one’s more primary goals over less important temptations (Trope & Liberman, 2000; Fujita et al., 2006). High-level construals constitute abstraction, and abstraction involves extracting the primary elements of a given stimulus with respect to one’s goals. Thus far, the conceptualization of what determines primary goals has largely focused on the amount of value or satisfaction individuals receive when completing them (the “attainment value” of
the goal to a person). The present research extends the notion of what makes a goal primary versus secondary for a given decision by including the asymmetric degree of progress towards the goals – an inherent feature of the situation. With this conceptualization, one can now use construal level theory to make predictions about how people will decide between two goals of equal value: under high-level construal, they should be sensitive to the degree of progress that the situation affords.

**Construal Levels and Mixed-Motive Dilemmas**

The present studies also help to clarify some existing research on construal level theory and social dilemmas. As noted above, work by Sanna et al. (Sanna, Chang, Parks, & Kennedy, 2009; Sanna, Lundberg, Parks, & Chang, 2010) has investigated construal level effects on mixed-motive social dilemmas. Using a shared-resources fishing game, the authors found that high-level construal makes people more likely to act prosocially by returning fish to the shared pond. From this, the authors conclude that high-level construal induce people to act more cooperatively in social dilemmas. To explain these findings, they offer several possible explanations. First and foremost, they suggest that high-level construals promote group concerns because these concerns are more global than individual concerns. In other words, it changes the attainment value of the goal of helping the group. Secondly, they note that moral principles are more abstract, and as such may be promoted by high-level construals. Thirdly, high-level construals promote considerations of feasibility over desirability, and thus may promote the more desirable option of helping the group. Finally, they suggest that high-level construals promote self-control, and forgoing short-term gains for long-term gains requires self-control.
However, the authors do not directly test any single mechanism, so the underlying process remains unclear.

The present research suggests an alternative explanation of these data: that returning fish into the pond allows for maximal advancement towards one of two important goals. Our data suggest that high-level construals makes people sensitive to what is primary versus secondary rather than changing the attainment value of the goal of helping others. The fishing game used by Sanna and colleagues is such that returning more fish to the pond is primary because it a) allows for greater advancement of one’s self-interest goals over time and b) allows advancement of one’s ‘help the group’ goals (versus not advancing this goal at all). From this perspective, these results are quite in line with what we would predict. However, whereas Sanna and colleagues perspective suggests that high-level construals as a general rule promote cooperation, the present studies suggest a more nuanced set of predictions. Specifically, the current findings suggest high-level construals will promote helping the group only when helping the group is afforded greater advancement relative to helping oneself. If, instead, helping oneself is afforded by the situation, high-level construals should promote self-interested behavior. Indeed, in our results in Study 2, when the situation affords greater advancement of helping one’s self relative to others, higher-level construals promoted self-interest over help-others goals.

It is interesting to note that many mixed motive social dilemmas are quite similar to the one used by Sanna. Many of them have the form where helping the group is in fact the option that is maximally afforded by the situation. For example, a standard public
goods dilemma gives individuals the choice between taking from a shared resource either a small amount (which allows the resource to be sustainable and available to everyone for longer) or a large amount (which gives the individual a one-time large amount, but denies others any gain as well as any subsequent gain for the individual). In these social dilemmas, the cooperative option is primary because it allows for non-trivial progress on both one’s self-interest goal and one’s ‘help-others’ goal. This is in contrast to the selfish options, which often allow for only short-term progress on one’s self-interest goal. For these games, our findings suggest that high-level construals should emphasize maximizing one’s goal opportunities and thus promote decisions that make maximal progress on two goals rather than minimal progress on one. However, not all choices involving self-interest goals versus other-interested goals must have this form. Indeed, in many situations, it would be highly costly to help others instead of yourself. We propose, and believe these studies support, the idea that sometimes it is perfectly reasonable to follow one’s self-interested motives in lieu of one’s other-interested motives, provided that one’s self-interest motives are properly afforded by the situation. We further believe that high-level construals should promote cooperation only when the cooperative option is maximally afforded by the situation. In dilemmas where self-interested motives are

\[2\] It should be noted one big difference between many social dilemmas and our mixed motive dilemma is the notion of risk taking. In our game, there is no risk-taking involved, it is clear what the outcomes will be. The element of risk-taking in many social dilemmas may complicate the impact of high-level construal. High-level construals promote considerations of desirability, whereas low-level construals promote considerations of feasibility (Liberman & Trope, 1998). In the domain of risk-taking, this has the effect of people focusing on payoffs at high-level construal and probabilities at low-level construal (Sagristano, Trope, & Liberman, 2002). Since risk-taking is a major part in many social dilemmas, this must be taken into account when trying to predict people’s behavior in social dilemmas under varying levels of construal.
afforded by the situation, high-level construals should promote decisions in line with self-interest motives.

Opportunity Maximization

We have suggested that goal progress is an important determinant in goal-pursuit decisions, and that high-level construals make people attentive to progress asymmetries. For the present paper, we have focused on situations in which the two competing goals have roughly equal attainment value because it is under these conditions where the effect of asymmetric goal progress is most apparent in determining what is primary versus secondary. However, the goals need not be of equal importance for progress to have an impact on whether a goal is primary or not. As alluded to above, both goal attainment value and degree-of-progress are important determinants whether or not a goal is primary or secondary. This means that the “overall decision value” of a given option can be influenced by degree-of-progress even if attainment value is not equal. Said differently, in a normative sense, while deciding between two valued goals one should consider both attainment value and progress afforded. These two variables will determine what options are primary versus secondary. We believe that high-level construals will make people sensitive to both of these variables.

One can mathematically represent this normative model. Suppose I have two goals, G1 and G2, and these goals have “arbitrary goal importance points” of G1 = 100 and G2 = 70. All else being equal, if I must choose between the two I should choose G1. However, if we add in the parameter of goal progress the story potentially changes. For example, if G1 is only minimally advanced by the situation (“arbitrary progress
coefficient” \( P_1 = .5 \) but \( G_2 \) is maximally advanced by the situation \( (P_2 = 2) \), then the optimal decision changes. Now the “overall decision value” is a function of both \( G \) and \( P \).

So if we multiply the two together\(^3\) we get overall decision value of \( 100 \times .5 = 50 \) and \( 70 \times 2 = 140 \). In this example, then, opportunity maximization would dictate one to pursue \( G_2 \), even though it is the less important goal. This suggests that if I can make maximal progress on a less important goal as opposed to minimal progress on a more important goal, I should pursue the less important goal from a normative standpoint.

This mathematical analysis also highlights an important distinction. Goal progress considerations will only influence the decision if the goal is at least somewhat valued. If I do not care about a goal, the amount of progress I could make towards that goal is not relevant. In math terms, if my goal attainment value is 0, it doesn’t matter what the progress coefficient is, because anything multiplied by 0 remains 0.

Attention to situational goal affordances is necessary for us to maximally achieve all of our important goals, and high-level construals promote their consideration in our goal-pursuit decisions. The present model takes both goal attainment value and potential goal progress as parameters for goal decisions. We label this model – using both goal attainment value and situational goal affordances as input into our goal-pursuit decisions – as opportunity maximization. By using goal affordances, we can maximize our opportunity to pursue and obtain our valued goals. Opportunity maximization is promoted by high-level construals because abstraction allows one to consider the primary

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\(^3\) Here we use the combination of progress and goal importance as multiplicative. However, we merely use this linear combination to illustrate how they may work together. At present we make no claims about which has greater weight for determining overall decision value.
features of a goal decision, namely progress and attainment value. This is likely a key part of good at self-regulation - the extent to which we can manage and maintain all of our goals. Paying attention to the goal affordances will help us resolve dilemmas where we must choose between multiple important goals. In this way, we will be able to balance our goals instead of seeking one at the expense of others. High-level construals will promote decisions in line with opportunity maximization because the elements that constitute the base of opportunity maximization are the same that are extracted in the process of abstraction and subsequently used in making goal-pursuit decisions.

Future Directions: A Third Parameter for Opportunity Maximization

Thus far we have argued that high-level construals promote opportunity maximization because they promote attention to asymmetric goal-affordances inherent in the situation. However, another possibility exists: that those under low-level construal do not even engage in the computation of the potential progress that could be made on a given goal. Since progress itself is an abstract concept – it is rarely tangible or observable – it may require a degree of abstraction to merely calculate the degree of progress. Although the present data cannot tease these two alternative mechanisms apart, this raises the question of what is occurring at low-level construals: if people are not paying attention to goal attainment value and potential goal progress, what are they paying attention to? A possible future direction of study concerns a third possible variable in goal-pursuit decisions: urgency.

Urgency (or “imperativeness”) refers to the degree to which a goal requires immediate action. This may serve as a third parameter that guides peoples’ goal-pursuit
decisions. For example, imagine the student who has a paper due Thursday, and must decide whether to do it on Tuesday or Wednesday night. Overwhelmingly, papers are written closer to their due date, even though neither the attainment value nor anything about the situation has changed so as to allow greater progress on Wednesday instead of Tuesday. What has changed is the urgency of completing the paper – it now requires attention or one’s academic goals will be in jeopardy. The greater the urgency of a goal, the more salient that goal is to the individual. This has the effect of obscuring one’s other goals from consideration. So when one is focusing on the urgency of a goal, they will not be considering alternate goals to pursue until the urgency of a given goal has decreased. I believe, and future research should investigate, that while those under high-level construal are focused more on attainment value and goal progress, those under low-level construal are focused more on urgency.

It is arguable that a focus on urgency can be helpful. Urgency likely has special motivating properties that neither attainment value nor goal progress can match. However, by focusing solely on urgency it will cloud one’s view of goal attainment value and potential goal progress, and may in the long run be detrimental to self-regulation. Additionally, working solely under the imperativeness threat could be unduly stressful and unhealthy in the long run.

I am not suggesting that we should always be blind to issues of urgency. It is often quite important to focus on one’s urgent goals particularly because they are in jeopardy. In such cases, high-level construals likely will be sensitive to considerations of urgency. However, perceptions of urgency may not always be based on the situation at
hand, and may not always favor ones valued goals. Certain goals (e.g. helping others) may rarely feel particularly urgent, and so a focus on urgency will hinder the pursuit of such goals. Further, urgency may cause people to lose sight of their other goals. For example, consider the graduate student who must both conduct research and do well in class. If this student has an exam the next day, the class work will feel particularly urgent relative to the research. This may have the effect of promoting the student to spend all of his time studying, as opposed to dividing it between class and research, even though this does not in fact match opportunity maximization. Taken together, this suggests that urgency itself can be both good and bad depending on the context of the situation.

One final possibility is that good self-regulation is in part one’s ability to align urgency with attainment value and potential goal progress. In other words, our perceptions of what goals are urgent and salient are determined by the parameters of attainment value and potential progress afforded by the situation. If this were the case, one would be able to optimally self-regulate even at low-level construal because ones low-level construals would based on parameters determined by higher-level consideration. If people view such goals as urgent, they will be constantly opportunity maximizing regardless of level of construal.

Conclusion

Most people have a wide array of valued goals that they are trying to fulfill. Goal pursuit decisions that pit these valued goals against one another can be quite conflicting. In navigating the waters of goal pursuit, we can selectively attend to goal attainment value, potential goal progress, urgency, or whatever is made salient by the situation.
Abstracting from a goal-decision set helps us to organize and structure these decisions. High-level construals promote optimal self-regulation through promoting decisions based on the primary features of goal attainment value and potential goal progress.
References


Appendix A: Mixed Motive Social Dilemma With Help-Others Goal Afforded

Thank you for participating in the study! We are interested in how you make decisions.

Please imagine that you are in a group with four other people and you (yourself) must choose between two payoff options for the group. These payoffs are listed in the following 9 scenarios.

Note that in these hypothetical scenarios, the money received comes with the condition that the group members can not give you any of the money they receive. Additionally, the other group members will not know you made the decision and will not know what other option would have been. We realize that this is an unrealistic scenario, but please consider how you think you would act in the given situation.

For the following 9 scenarios, please mark off which option you would choose (option A or option B).

<table>
<thead>
<tr>
<th>OPTION A</th>
<th>OPTION B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. The other 4 people will receive $100</td>
<td>The other 4 people will receive $90</td>
</tr>
<tr>
<td>You will receive $0</td>
<td>You will receive $1</td>
</tr>
<tr>
<td>2. The other 4 people will receive $100</td>
<td>The other 4 people will receive $80</td>
</tr>
<tr>
<td>You will receive $0</td>
<td>You will receive $2</td>
</tr>
<tr>
<td>3. The other 4 people will receive $100</td>
<td>The other 4 people will receive $70</td>
</tr>
<tr>
<td>You will receive $0</td>
<td>You will receive $3</td>
</tr>
<tr>
<td></td>
<td>The other 4 people will receive $100 You will receive $0</td>
</tr>
<tr>
<td>---</td>
<td>---------------------------------------------------------</td>
</tr>
<tr>
<td>4.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The other 4 people will receive $100 You will receive $0</td>
</tr>
<tr>
<td>5.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The other 4 people will receive $100 You will receive $0</td>
</tr>
<tr>
<td>6.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The other 4 people will receive $100 You will receive $0</td>
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<tr>
<td>7.</td>
<td></td>
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<tr>
<td></td>
<td>The other 4 people will receive $100 You will receive $0</td>
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<tr>
<td>8.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>The other 4 people will receive $100 You will receive $0</td>
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<tr>
<td>9.</td>
<td></td>
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</tbody>
</table>
Appendix B: Mixed Motive Social Dilemma With Self-Interested Goal Afforded

Thank you for participating in the study! We are interested in how you make decisions.

Please imagine that you are in a group with four other people and you (yourself) must choose between two payoff options for the group. These payoffs are listed in the following 9 scenarios.

Note that in these hypothetical scenarios, the money received comes with the condition that you can not give any of your money to the other people in the group. Additionally, the other group members will not know you made the decision and will not know what other option would have been. We realize that this is an unrealistic scenario, but please consider how you think you would act in the given situation.

For the following 9 scenarios, please mark off which option you would choose (option A or option B).

<table>
<thead>
<tr>
<th>OPTION A</th>
<th>OPTION B</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You will receive $100, and</td>
<td>OR You will receive $90, and</td>
</tr>
<tr>
<td>The other 4 people will receive $0</td>
<td>The other 4 people will receive $1</td>
</tr>
<tr>
<td>2. You will receive $100</td>
<td>OR You will receive $80, and</td>
</tr>
<tr>
<td>The other 4 people will receive $0</td>
<td>The other 4 people will receive $2</td>
</tr>
<tr>
<td>3. You will receive $100</td>
<td>OR You will receive $70, and</td>
</tr>
<tr>
<td>The other 4 people will receive $0</td>
<td>The other 4 people will receive $3</td>
</tr>
</tbody>
</table>
4. You will receive $100  
The other 4 people will receive $0  
OR  You will receive $60, and  
The other 4 people will receive $4

5. You will receive $100  
The other 4 people will receive $0  
OR  You will receive $50, and  
The other 4 people will receive $5

6. You will receive $100  
The other 4 people will receive $0  
OR  You will receive $40, and  
The other 4 people will receive $6

7. You will receive $100  
The other 4 people will receive $0  
OR  You will receive $30, and  
The other 4 people will receive $7

8. You will receive $100  
The other 4 people will receive $0  
OR  You will receive $20, and  
The other 4 people will receive $8

9. You will receive $100  
The other 4 people will receive $0  
OR  You will receive $10, and  
The other 4 people will receive $9