

The Pros and Cons of Temporally Near and Distant Action

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The present research demonstrated that in considering an action, considerations against (*con*) the action tend to be subordinate to considerations in favor of (*pro*) the action in that cons are considered only if the level of *pro* is sufficient, whereas *pro*s are considered independent of the level of cons (Studies 1A and 1B). The authors therefore concluded that *pro*s constitute a higher construal level than cons and predict, on the basis of temporal construal processes (Y. Trope & N. Liberman, 2003), that *pro*s would be more salient in making decisions for the more distant future, whereas the reverse should hold for cons. As predicted, participants generated more *pro*s and fewer cons toward new exam procedures (Study 2), public policies (Study 3), and personal and interpersonal behaviors (Studies 4–6) that were expected to take place in the more distant future. This research also examined the limiting conditions and the evaluative consequences of these shifts.

Decisions regarding future actions are often based on the arguments one generates in favor of (*pro*) and against (*con*) taking the action. These decisions may be made a short time or a long time before actually taking the action. For example, in deciding whether to take a trip overseas, one might consider the opportunity to relax and visit interesting sights (*pro*s) as well as the possible dangers and the fear of traveling alone (*con*s). Does the fact that the trip is about to take place in a few days or in a few months influence the type of considerations that are brought to mind? More specifically, do reasons for taking the trip as compared with reasons against taking it play a different role in one's decision depending on whether the trip is distant as opposed to near in time?

Although the *pro*s and *con*s of real-life decisions are often considered from different time perspectives, there has been no research on temporal shifts in the generation and utilization of these two types of arguments. The present studies were designed to

close this empirical gap. We propose that the temporal distance from a future action differentially influences the salience of *pro* and *con* considerations, so that *pro*s become more salient as temporal distance from the action increases, whereas *con*s become more salient when temporal distance decreases. This proposal derives from the assumption of construal level theory (CLT) that distant future events are construed at a higher level than are near future events (Liberman & Trope, 1998; Trope & Liberman, 2003). We claim that *pro*s constitute a higher level of construal than *con*s because *con*s are subordinate to *pro*s in the sense that when an action is considered, the subjective importance of *con*s depends on the existence of *pro*s more than the importance of *pro*s depends on the existence of *con*s.

CLT proposes that individuals form more schematic representations, or higher level construals, of information about more distant future events. High-level construals abstract the essential qualities of events and, therefore, consist of superordinate and more central features. In contrast, low-level construals may include subordinate, less essential features of events. Thus, whereas representations of near future events are rich with details, representations of distant future events omit secondary and incidental features of events. Consistent with CLT, research on temporal shifts in construal (Liberman, Sagristano, & Trope, 2002; Liberman & Trope, 1998; Nussbaum, Trope, & Liberman, 2003) has shown that when the same events are expected in the more distant future (e.g., "a month from now" vs. "tomorrow"), the events are more likely to be classified, described, and explained in terms of superordinate features, categories, and prototypes. For example, one study found that participants were more likely to describe

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daily activities (e.g., “moving into a new apartment”) in terms of superordinate end states (“starting a new life”) rather than in terms of subordinate means (“packing and carrying boxes”) when the activities were expected in the more distant future (Liberman & Trope, 1998, Study 1). Using multidimensional scaling of evaluations of future outcomes, another study found that fewer dimensions underlie evaluations of distant future than near future outcomes (Liberman et al., 2002, Study 4).

CLT further proposes, and several lines of research actually have shown, that the evaluative implications of superordinate, high-level aspects of future events have a greater influence on preferences regarding distant future than near future options, whereas subordinate, low-level aspects have a greater influence on preferences regarding near future than distant future options (for a review, see Trope & Liberman, 2003). One series of studies examined temporal changes in the influence of desirability (the value of an action’s end state, a high-level aspect) and feasibility (the ease or difficulty of reaching the end state, a low-level aspect) on preference (Liberman & Trope, 1998). These studies have shown that temporal distance increases the weight of desirability aspects and decreases the weight of feasibility aspects in preferences regarding future activities. For example, one study described a guest lecture as either interesting or uninteresting and as being given at a convenient or inconvenient time and asked participants to indicate their interest in attending it in either the near future or in the distant future. As predicted, the effect of interest level (desirability) on preference increased with temporal distance, whereas the effect of convenience of the timing (feasibility) decreased with temporal distance.

Construal Level, Subordination, and Asymmetry in Conditional Importance

The subordination of low-level construal aspects to high-level construal aspects entails an asymmetry in the conditional importance of these two types of aspects. This asymmetry means that the importance of the low-level aspects is dependent on the value of the high-level aspects more than the importance of the high-level aspects is dependent on the value of the low-level aspects. For example, when considering an action, feasibility considerations are important only if the action is desirable and not if it is undesirable, but desirability remains important whether feasibility is high or low. To demonstrate the subordination of feasibility (means) to desirability (ends), Sagristano, Trope, and Liberman (2002) presented participants with information about either the desirability or the feasibility of an action (e.g., the attractiveness of a job and the difficulty of getting the job). Participants indicated the importance of feasibility (desirability) information, given that the desirability (feasibility) was either high or low. The results showed that the importance of feasibility information was much lower when the desirability of the option was low than when it was high (e.g., interest in information about the likelihood of getting the job depended on the job’s attractiveness). However, interest in desirability remained high regardless of whether feasibility was high or low (i.e., interest in information regarding the attractiveness of the job remained high and relatively independent of the likelihood of getting it). In other words, interest in feasibility of an option depended on its desirability more than interest in the desirability of the option depended on its feasibility. This finding is consistent

with the assumption that feasibility considerations are subordinate to desirability considerations.

The same asymmetry was found to hold true for the relationship between probability of winning (the feasibility of winning) and monetary payoff (the desirability of winning) in gambling decisions (Sagristano et al., 2002). For example, Sagristano et al. (2002; Study 1) presented participants with choices among lotteries that were said to vary in probability of winning and payoff. Participants indicated their interest in receiving information about the probability (payoff), given that the payoff (probability) was either high or low. The results showed that participants’ interest in finding out the probability of winning was much lower when they were told that the payoff was low than when they were told that the payoff was high. In contrast, participants’ interest in finding out what was the payoff was high regardless of whether the probability was known to be high or low. Here too, then, interest in probability depended on payoff more than interest in payoff depended on probability, indicating that interest in probability was subordinated to interest in payoff.

The notion of asymmetric conditional importance is consistent with the attitude and decision-making literature on the use of central versus peripheral aspects of choice alternatives. This literature has suggested that because of limited information-processing capacities, evaluation and choice are rarely formed by the integration of information about all the aspects of the options but proceed, instead, in a hierarchical manner. The construction by aspects principle (McGuire, 1985), the sequential processing model (Jacard & Becker, 1985), and the elimination by aspects rule (Tversky, 1972; Tversky & Sattath, 1979) all propose that when forming an evaluation, the central aspects of the object are considered regardless of the value of the secondary aspects, whereas secondary aspects are considered only if the central aspects are satisfactory.

Temporal Construal and Changes in the Weight of Pros and Cons

We propose that in considering a course of action, pros (reasons for taking the action) constitute high-level, superordinate construals, whereas cons (reasons against taking the action) constitute low-level, subordinate construals. If this is true, then the relationship between pros and cons should manifest the same structural property, asymmetric conditional importance, previously found for other high-level versus low-level aspects. This proposal assumes that an action will not be undertaken unless it has some advantage. Therefore, the disadvantages of an action need to be considered only if the action has some advantage. In contrast, whether or not an action has some disadvantage does not in itself determine whether or not the action will be undertaken. Therefore, the advantages of an action need to be considered regardless of whether the action has or does not have some disadvantage.

Consider, for example, the decision to undergo a medical treatment. If we know that the treatment has some health benefit for us, we would inquire about its potential side effects before making a decision, but if the treatment has no benefit for us, we would decide against taking it without further inquiry about its side effects. In contrast, we would inquire whether a medical treatment has health benefits not only when we know the treatment has no side effects but also when we know it has some side effects. When

the treatment is known to have no side effects, information about its benefits may tell us whether the treatment is worth taking. When the treatment is known to have some side effects, we may still inquire about the benefits of the treatment in order to determine whether they outweigh its side effects. Thus, the importance of side effects depends on whether the treatment is known to have benefits, but the importance of benefits is independent of whether the treatment is known to have side effects.

More generally, in deciding whether to undertake an action, con considerations become unimportant when there are no pro considerations, whereas pro considerations are still important when there are some con considerations. The dependence here is asymmetric: The importance of cons depends on having pros, but the importance of pros is relatively independent of having cons. As discussed above, this asymmetry indicates a hierarchical relationship in which pro considerations are superordinate to con considerations and thus constitute a higher level of construal of a decision. Studies 1A and 1B were designed to directly test the asymmetric conditional importance of pro and con considerations.

If pro considerations constitute a higher level of construal than con considerations, then CLT would predict that pros would be relatively more salient than cons in decisions for the distant future than the near future. For example, in deciding whether to take a trip overseas in the more distant future, the argument “visiting interesting places” (pro) would become more salient than the argument “being in dangerous situations” (con). Of course, the direction of an argument (pro vs. con) is not the sole determinant of its level of construal. Other determinants of construal level (e.g., whether an argument concerns feasibility vs. desirability aspects of an action) may amplify or offset the difference between pro and cons in construal level. For example, when pros concern desirability aspects and cons concern feasibility aspects, the difference between pros and cons in construal level will be amplified, but when pros concern feasibility aspects and cons concern desirability aspects, the difference between pros and cons will be attenuated. We propose that independent of other construal level factors, cons tend to be subordinate to pros and therefore tend to be more salient in thinking about the relatively near future. Studies 2–6 were designed to test this prediction and its implications for temporal shifts in the evaluation of future decision alternatives.

The predicted temporal shifts in the salience of pro and con arguments are generally consistent with conflict theories (Lewin, 1951; Miller, 1944). These theories propose that as temporal distance from an outcome increases, the strength of both approach and avoidance forces decreases but the discounting rate of avoidance forces is steeper. Because conflict theories do not directly address temporal shifts in the influences of pro versus con considerations, we can only speculate about their predictions on this question. One possibility would be to conceptualize pros as approach forces and cons as avoidance forces. In this case, conflict theories would predict that the strength of both pros and cons would decrease over time, with cons being discounted over time more steeply than pros. As a result, cons would be more prominent than pros for near future outcomes in comparison with distant future outcomes. This prediction is consistent with CLT. However, conflict theories would predict time discounting of both pro and con consideration, whereas CLT predicts time discounting of con considerations but not of pro considerations. A second possibility is to conceptualize approach versus avoidance forces as positive

versus negative aspects of the situation, respectively. It should be noted, however, that both pros and cons may refer to both positive and negative aspects of a situation. For example, when considering taking a trip overseas, “interesting sites” (a positive aspect) and “not crowded” (an absence of a negative aspect) may both be considered as pro arguments, whereas “expensive flights” (a negative aspect) and “no sports facilities” (an absence of a positive aspect) may be considered as con arguments. Therefore, this conceptualization of approach versus avoidance leaves conflict models silent with respect to the question of how temporal distance affects the relative salience of pros versus cons.

Overview of Studies

Studies 1A and 1B tested the assumption that con considerations are subordinate to pro considerations in the same way that feasibility is subordinated to desirability and expectancy is subordinated to value. We expect that the subjective importance of cons would depend on the number of pros more than the subjective importance of pros would depend on the number of cons. Studies 2–6 examined temporal shifts in the salience of pro and con arguments. Participants in these studies freely generated pro and con arguments regarding a variety of plans, policies, and personal and interpersonal behaviors. Studies 3–6 also assessed attitudes and behavioral intentions regarding these options. We predicted that the number of pro arguments relative to con arguments would increase with temporal distance and thus produce more favorable (or less unfavorable) attitudes and intentions regarding the more distant future options.

Study 1A. The Subordination of Cons to Pros

Method

Participants. Participants were 72 undergraduate psychology students (55 women) from Tel Aviv University, ages 19–28, who took part in the study for course credit.

Procedure. Participants received a one-page questionnaire that contained information about a loan for tuition. They read the following instructions in Hebrew:

Imagine that you work on a computer station at the university, browsing through the web site of the student union. You come across an offer for a loan for tuition and decide to check it out. An offer of one of the banks is presented followed by a review of a specialist hired by the student union to evaluate the advantages and disadvantages of the offer. You click to read the review of the specialist. You manage to see that the specialist indicates that the loan has no [some] advantages [[disadvantages]], but at that point the computer freezes and you are unable to log in again.¹

Four versions varied between participants the dimension specified (advantages vs. disadvantages) and the level of the specified dimension (none vs. some). Following each description, participants rated on a scale ranging

¹ The alternatives for the two factors, level of dimension (no, some) and type of dimension (advantages, disadvantages), are represented by square brackets and double square brackets, respectively, to indicate that they were manipulated independently. Thus, there were four different versions of questions: some advantages, no advantages, some disadvantages, and no disadvantages.

from 0 (*low chance*) to 100 (*high chance*) the likelihood that they would continue searching for the nonprovided dimension:

Would you make the effort to log in again at another occasion in order to see if the offer has any disadvantages [advantages], or do you feel that you have all the information you need in order to reach a decision about the loan?

Results and Discussion

The level of the provided dimension has opposite meanings as advantages versus disadvantages, because having some pros (relative to no pros) promotes the action (e.g., taking the loan), whereas having some cons (relative to no cons) inhibits the action. We coded the levels of provided dimension according to whether they promoted the action (some pros, no cons) or inhibited the action (no pros, some cons).

A 2 (provided dimension: pro vs. con) \times 2 (direction of provided dimension: promote vs. inhibit action) analysis of variance (ANOVA) on the interest in the nonprovided dimension revealed a main effect for direction of provided dimension, $F(1, 68) = 5.41$, $p < .05$, indicating that the interest in the nonprovided dimension was greater when the information given promoted the action ($M = 75.71$) than when the information inhibited the action ($M = 62.43$). The main effect for provided dimension was not significant ($F < 1$). More important, the Provided Dimension \times Direction of Provided Dimension interaction was significant, $F(1, 68) = 3.92$, $p < .05$. As can be seen in Table 1, the interest in cons when there were no pros was considerably lower ($M = 52.22$) than the interest in cons when there were some pros ($M = 77.22$), $t(70) = 3.05$, $p < .01$. However, the interest in pros remained high regardless of whether there were no cons ($M = 74.12$) or some cons ($M = 72.11$), $t(70) < 1$, *ns*. Thus, as predicted, the interest in cons depended on whether pros were provided more than the interest in pros depended on whether cons were provided. Study 1B conceptually replicated these results with a different context and in a within-subjects design.

Table 1
Interest in the Nonprovided Dimension Given the Provided Dimension and Its Function (Studies 1A and 1B)

Provided dimension	Function of provided dimension	
	Promote action	Not promote action
Study 1A: Loan for tuition		
Pros		
<i>M</i>	77.22	52.22
<i>SD</i>	21.37	30.21
Cons		
<i>M</i>	74.12	72.11
<i>SD</i>	21.93	24.63
Study 1B: Hire workers		
Pros		
<i>M</i>	75.43	34.00
<i>SD</i>	19.90	29.82
Cons		
<i>M</i>	75.71	68.29
<i>SD</i>	23.43	22.94

Study 1B. The Subordination of Cons to Pros: A Replication

Method

Participants. Participants were 35 undergraduate management students (18 women) from Tel Aviv–Jaffa College, ages 22–30, who volunteered to participate in the study.

Procedure. Participants received a one-page questionnaire with the following instructions in Hebrew:

Imagine that you are working in a human resource department of a big company in which there is an urgent need for new workers. As part of your job you receive interview summaries from manpower agencies in which the advantages and disadvantages of different applicants are summarized. Your job is to go over the summaries and decide whether the application should be forwarded to the head of the human resource department for further consideration. There are many applicants and the head of the department cannot consider all of them. There are many long and detailed interview summaries and you realize you don't have the time to read all of them thoroughly.

Participants read about four applicants who either had no advantages, no disadvantages, some advantages, or some disadvantages. They then rated how interested they were in continuing reading about an applicant's standing on the unspecified dimension: "The file indicated that the applicant has some [no] disadvantages [[advantages]], how interested would you be in continuing reading the file in order to find out whether the applicant has advantages [[disadvantages]]?" (see Footnote 1). The order with which the applicants were presented was counterbalanced across participants.

Results and Discussion

As in Study 1A, we conducted a 2 (provided dimension: pro vs. con) \times 2 (direction of provided dimension: promote vs. inhibit hiring) ANOVA on the interest in the nonprovided dimension. The ANOVA revealed a main effect for provided dimension, $F(1, 34) = 35.67$, $p < .01$, indicating that the interest in pros ($M = 72.00$) was greater than the interest in cons ($M = 54.72$), and a main effect for direction of provided dimension, $F(1, 34) = 59.48$, $p < .01$, indicating that the interest in the nonprovided dimension was greater when the information given promoted the action ($M = 75.57$) than when the information given inhibited the action ($M = 51.15$). More important, as can be seen in Table 1, an interaction effect, $F(1, 34) = 17.45$, $p < .01$, indicated that the difference in interest in cons when there were some pros ($M = 75.43$) versus no pros ($M = 34.00$), $t(34) = -8.11$, $p < .01$, was greater than the difference in interest in pros when there were no cons ($M = 75.71$) versus some cons ($M = 68.29$), $t(34) = 1.42$, $p = .16$. As in Study 1A, this interaction effect supports our prediction that the interest in cons depends more on the existence of pros than the interest in pros depends on the existence of cons.

In sum, Studies 1A and 1B demonstrate that when people consider reasons for and against an action, con considerations are subordinate to pro considerations. Hence, one might first search for pros, and only if there is a sufficient number of pros continue to examine whether there are any cons. It should be noted, however, that although pros are necessary for deciding to take an action and cons are not, the latter may tilt the balance between acting and not acting and as such could be perceived as particularly important. Thus, our claim concerns the subordination of cons to pros and not

the overall importance of pros relatively to cons in decisions. We address this point in more detail in the General Discussion section.

The next four studies examined temporal shifts in the salience of pro and con consideration. If cons are subordinate to pros, as the results of Studies 1A and 1B suggest, then CLT predicts that pros would become more salient as temporal distance from an action increases, whereas cons would become more salient as temporal distance from the action decreases.

Study 2. Temporal Shifts in Pro and Con Arguments Regarding Exam Procedures: A Field Study

This study examined the effect of temporal distance on the salience of arguments in favor of and against introducing changes in final exam procedures. The study was presented as a survey conducted by the university on students' attitudes toward different types of exams. Students were presented with four potential changes in their final exam in a course (e.g., including more open-ended questions) and generated considerations in favor of and against each possible change. Some of the students participated in the study at the beginning of the semester, a long time before the final exam, and the others at the end of the semester, a short time before the exam. We predicted that the number of pros relative to cons would be larger in a distant perspective compared with a near perspective.

Method

Participants. Participants were 56 economics students (35 women) from the Open University of Israel, ages 21–36. The study was conducted in two sections of an introductory economics course (27 and 29 participants) during class time. The groups were randomly assigned to either the near or the distant future condition. There were no differences between male and female participants in the results reported below.

Procedure. One class participated in the study during the second meeting of the semester, 3 months before the final exam (distant future condition), and the other class participated in the study during the last week of the semester, 2 weeks before the final exam (near future condition). Participants were told that they were taking part in a survey conducted by the university's Teaching Committee and that the purpose of the survey was to collect information about students' attitudes toward different types of exams in order to improve exam procedures.

Participants were instructed to think about their final exam and to write arguments in favor of and against four possible changes in the exam: An open-ended exam, an exam with open notes, an "honor" exam, and allowing written explanations for answers in multiple choice questions. Each plan was presented on a separate page that was divided into two sections entitled "Reasons in Favor of the Plan" and "Reasons Against the Plan." Participants were instructed to write as many arguments as they wanted in each of the sections. The orders of presentation of the plans and the pro and con sections were counterbalanced across participants and had no effect on the results reported below.

Results and Discussion

A Reason (pro vs. con) × Plan (1–4) × Time (near vs. distant future) multivariate analysis of variance (MANOVA) was performed on the number of reasons, with reason and plan as within-subjects factors and time as a between-subjects factor. The analysis yielded an effect for plan, $F(3, 54) = 8.08, p < .01$, indicating that participants wrote more arguments for some plans than for others.

This effect is of no importance for our purposes. There was no effect for reason or time ($F_s < 1$). More important, the analysis revealed the predicted Reason × Time interaction, $F(1, 54) = 4.34, p < .05$. As can be seen in Table 2, pros were more prevalent in the distant future than in the near future ($M_s = 1.04$ and 0.84 , respectively), $t(54) = 1.31, p = .20$, whereas cons were less prevalent in the distant future than in the near future ($M_s = 0.90$ and 1.03 , respectively), $t(54) = 1.01, p = .30$. The Reason × Time × Plan interaction effect was not significant ($F < 1$), indicating that the effect of time on the relative number of pros and cons was uniform across plans.

As predicted, then, students generated more pro arguments and fewer con arguments regarding their exam procedures when the

Table 2
Mean Number of Pros and Cons for Near and Distant Exam Procedures (Study 2)

Temporal distance	Pro	Con	Total	Pro/(pro + con)
Test with open-ended questions				
Near ($n = 27$)				
<i>M</i>	0.74	0.78	0.76	.49
<i>SD</i>	0.76	0.85		
Distant ($n = 29$)				
<i>M</i>	1.07	0.93	1.00	.54
<i>SD</i>	1.13	0.80		
Total ($n = 56$)	0.91	0.86		
Test with open notes				
Near ($n = 27$)				
<i>M</i>	1.26	1.00	1.13	.56
<i>SD</i>	1.10	0.96		
Distant ($n = 29$)				
<i>M</i>	1.62	0.72	1.17	.69
<i>SD</i>	0.90	0.75		
Total ($n = 56$)	1.45	0.86		
"Honor" test				
Near ($n = 27$)				
<i>M</i>	0.26	1.30	0.78	.17
<i>SD</i>	0.45	0.87		
Distant ($n = 29$)				
<i>M</i>	0.31	1.00	0.66	.24
<i>SD</i>	0.60	0.89		
Total ($n = 56$)	0.29	1.14		
Explanations for multiple-choice questions				
Near ($n = 27$)				
<i>M</i>	1.11	1.07	1.09	.51
<i>SD</i>	0.82	1.00		
Distant ($n = 29$)				
<i>M</i>	1.17	0.93	1.05	.56
<i>SD</i>	0.93	0.65		
Total ($n = 56$)	1.14	1.00		
Total of plans				
Near ($n = 27$)				
<i>M</i>	0.84	1.03	0.94	.45
<i>SD</i>	0.78	0.92		
Distant ($n = 29$)				
<i>M</i>	1.04	0.90	0.97	.54
<i>SD</i>	0.89	0.77		
Total ($n = 56$)	0.94	0.97		

exam was expected in the more distant future, although neither effect was significant. These findings provide initial support for the hypothesis that pro arguments are relatively more salient than con arguments in considering distant future than near future plans. The present study had the advantage of examining attitudes in a realistic setting. This, however, came at the expense of experimental control. It is possible that participants in the two time conditions differed not only in their temporal distance from the plans but also in their knowledge about the exam, the course materials, and the instructor (e.g., how open she was to changes). In addition, because this study did not measure participants' attitudes toward the proposed plans, it could not assess how the differential salience of pros versus cons over time affected their attitudes. Study 3 was designed to resolve these problems and extend our earlier findings by experimentally manipulating temporal distance, soliciting participants' pro and con arguments regarding future plans, and measuring their attitudes toward those plans.

Study 3. Temporal Shifts in Pro and Con Arguments Regarding Social Plans

Participants considered the possibility that various plans (e.g., 1 week free of parking tickets in Tel Aviv) would be implemented either in the near future or the distant future and wrote arguments in favor of and against each plan. We predicted that the number of pro arguments relative to the number of con arguments would increase with temporal distance. Participants also reported their attitude toward the implementation of each plan, and we examined whether an attitude change over time was related to the number of pros versus cons they wrote.

Method

Participants. Participants were 46 undergraduate psychology students (35 women) from Tel Aviv University, ages 19–28, who participated in the study as part of their introductory course requirements. The experiment was conducted in individual sessions. Participants were randomly assigned to either the near or the distant future condition. There were no differences between male and female participants in the results reported below.

Procedure. Participants signed up for an experiment on attitudes toward social issues. They were instructed to think about the possible implementation of hypothetical plans either in a few days (near future condition) or in a year (distant future condition). They were then asked to imagine the week in which these plans were to take shape and consider each plan and its possible implications. Participants were instructed to write all the reasons for and against implementing each of the following plans: (a) Tel Aviv City Council is planning not to give parking tickets during 1 week; (b) the Constitution, Law and Justice Department is planning to hold a referendum on the future of the Jewish settlements in the West Bank; (c) the two main TV channels are planning not to broadcast news programs for 1 week; (d) the city councils of Tel Aviv, Haifa, and Jerusalem are planning to prohibit passenger cars (except those owned by residents) from entering the city; and (e) the police are planning intense enforcement of traffic regulations at road junctions during the weekend. Each plan was presented on a separate page that was divided into two sections entitled "Reasons in Favor of the Plan" and "Reasons Against the Plan." Participants were instructed to write as many arguments as they wanted in each of the sections. The orders of presentation of the plans and the pro and con sections were counterbalanced across participants and had

no effect on the results reported below. After writing pros and cons for all five plans, participants rated their attitude toward the implementation of each plan on a 15-point scale ranging from -7 (*strongly oppose*) to $+7$ (*strongly support*).

Results and Discussion

Number of pros and cons. A MANOVA on the number of pros versus cons, with time (near vs. distant future) as a between-subjects factor and reason (pro vs. con) and plan (1–5) as within-subjects factors, showed an effect of plan, $F(4, 44) = 7.45$, $p < .01$, indicating that participants wrote more arguments about some plans than others. More important, as predicted by CLT, a significant Time \times Reason interaction was obtained, $F(1, 44) = 13.87$, $p < .01$. As can be seen in Table 3, pros were more prevalent in the distant future than in the near future ($M_s = 2.43$ and 2.08 , respectively), $t(44) = 1.58$, $p = .12$, whereas cons were less prevalent in the distant future than in the near future ($M_s = 2.07$ and 2.44 , respectively), $t(44) = -1.78$, $p = .08$. The Time \times Reason \times Plan interaction was not significant, $F(4, 176) = 1.68$, $p = .16$, indicating that no single plan significantly deviated from the temporal pattern of pro versus con reasons.

Attitudes toward the social plans. We computed for each participant the mean number of pros divided by the mean number of pros and cons he or she generated, across plans. As expected, the proportion of pros significantly predicted attitudes ($\beta = .45$, $p < .01$), indicating that participants who generated more pros and fewer cons held more positive attitudes.² We also examined the effect of temporal distance on participants' attitudes. A MANOVA on the attitudes, with time (near vs. distant future) as a between-subjects factor and plan (1–5) as a within-subjects factor, did not reveal a significant effect of temporal distance, $F(1, 43) < 1$, or an interaction effect, $F(1, 43) < 1$. Thus, time significantly affected the number of pros versus cons, which, in turn, significantly affected attitudes, but there was no significant relation between time and attitudes. Because there was no effect of time on attitudes, we did not further examine the combined effect of time and proportion of pros on attitudes.

In sum, the results of the present study support the prediction of CLT regarding the effect of temporal distance on the prominence of pros versus cons. Participants generated more pro arguments and fewer con arguments when considering distant future social plans than near future social plans. Attitudes toward the plans did not become more positive over time delay, but the increase in the proportion of pro arguments did significantly contribute to reduce the somewhat negative effect of time delay on attitudes toward the plans.

² A regression analysis with the number of pros and the number of cons and their interactions with time as separate predictors of attitudes did not reveal significant interaction effects of Pros \times Time and Cons \times Time. Thus, the effect of pros on intention was not stronger with increasing temporal distance, and the effect of cons on intentions did not get weaker over temporal delay, as could have been predicted by the logic of CLT (e.g., Liberman & Trope, 1998; Trope & Liberman, 2000). We believe this was the case because participants generated reasons both in favor of and against an action and therefore could not ignore them later on when forming their attitudes and intentions.

Table 3
Mean Number of Pros and Cons for Near and Distant Social Plans (Study 3)

Temporal distance	Pro	Con	Total	Pro/(pro + con)
No parking tickets in Tel Aviv				
Near (<i>n</i> = 23)				
<i>M</i>	1.70	2.65	2.18	.39
<i>SD</i>	1.22	1.43		
Distant (<i>n</i> = 23)				
<i>M</i>	2.26	2.04	2.15	.53
<i>SD</i>	1.18	1.11		
Total (<i>n</i> = 46)	1.98	1.51		
Referendum on the settlements' future				
Near (<i>n</i> = 23)				
<i>M</i>	1.78	2.17	1.98	.45
<i>SD</i>	0.90	0.98		
Distant (<i>n</i> = 23)				
<i>M</i>	2.43	2.09	2.26	.54
<i>SD</i>	1.08	1.08		
Total (<i>n</i> = 46)	2.11	2.13		
No news broadcasts on TV				
Near (<i>n</i> = 23)				
<i>M</i>	1.70	2.61	2.16	.39
<i>SD</i>	1.33	1.08		
Distant (<i>n</i> = 23)				
<i>M</i>	2.22	1.74	1.98	.56
<i>SD</i>	1.20	1.01		
Total (<i>n</i> = 46)	1.96	2.18		
No cars in the big cities				
Near (<i>n</i> = 23)				
<i>M</i>	2.96	2.48	2.72	.54
<i>SD</i>	1.52	1.16		
Distant (<i>n</i> = 23)				
<i>M</i>	3.00	2.48	2.74	.55
<i>SD</i>	1.62	1.12		
Total (<i>n</i> = 46)	2.98	2.48		
Police enforcement operation				
Near (<i>n</i> = 23)				
<i>M</i>	2.26	2.30	2.28	.50
<i>SD</i>	1.05	1.15		
Distant (<i>n</i> = 23)				
<i>M</i>	2.22	2.00	2.11	.53
<i>SD</i>	1.17	0.85		
Total (<i>n</i> = 46)	2.24	2.15		
Total of plans				
Near (<i>n</i> = 23)				
<i>M</i>	2.08	2.44	2.26	.46
<i>SD</i>	1.12	1.16		
Distant (<i>n</i> = 23)				
<i>M</i>	2.43	2.07	2.25	.54
<i>SD</i>	1.25	1.03		
Total (<i>n</i> = 46)	2.26	2.26		

In Studies 2 and 3, participants had little control over the actual implementation of the proposed plans. The following studies sought to extend the findings from the earlier studies by examining temporal shifts in pros and cons regarding controllable courses of action.

Study 4. Temporal Shifts in Pro and Con Arguments Regarding Interpersonal Behaviors

Participants imagined various interpersonal behaviors (e.g., spending time in the cafeteria with another student) either in the near future or in the distant future and wrote reasons why they might or might not perform the behavior. We predicted that relative to the number of cons, the number of pros would increase over temporal distance. In addition, participants indicated the likelihood of actually performing the behavior. This enabled us to examine the effect of pros and cons on the subjective likelihood of performing the behavior in the near and the distant future.

Method

Participants. Participants were 76 undergraduate psychology students (66 women) from Tel Aviv University, ages 20–28, who participated in the study as part of their introductory course requirements. The experiment was conducted in individual sessions. Participants were randomly assigned to either near or distant future conditions. There were no gender effects on the results reported below.

Procedure. The study was modeled after an experimental paradigm devised by Wilson and LaFleur (1995). Participants were told that the purpose of the study was to learn about decision making in interpersonal relationships. They were instructed to think of all the same-sex students that currently studied with them in at least one course. They then chose a student whom they did not know well and expected to meet at least once a week for the remainder of the semester. Participants were asked to focus on that person throughout the study and to write down the initials of his or her name (if they did not know the name, they were asked to write XX).

Participants imagined themselves and their lives during the following week (near future condition) or during a week 3 months later, in the next semester (distant future condition). They were instructed to write all the reasons for and against performing each of the following four behaviors: (a) spending time with the student in the cafeteria, (b) asking the student why he or she looked troubled, (c) avoiding responding rudely when the student held them up after class and repeatedly asked them questions, and (d) trying to prevent a conversation in which their friends gossiped about the student. Each behavior was presented on a separate page that was divided into two sections entitled “Reasons in Favor of the Behavior” and “Reasons Against the Behavior.” Participants were instructed to write as many arguments as they wanted in each of the sections. The orders of the behaviors and the pro and con sections were counterbalanced across participants and had no effect on the results. After writing pros and cons for all four behaviors, participants rated the likelihood that they would actually perform each behavior on a 0 (*no chance*) to 100 (*sure to perform the behavior*) scale.

Results and Discussion

Number of pros and cons. A Reason (pro vs. con) × Behavior (1–4) × Time (near vs. distant future) MANOVA was performed on the number of reasons, with reason and behavior as within-subjects factors and time as a between-subjects factor. The analysis yielded a main effect of reason, $F(1, 74) = 11.92, p < .01$, indicating that participants wrote more pros than cons ($M_s = 2.18$ and 1.77 , respectively), and a main effect of behavior, $F(1, 74) = 3.44, p = .06$, indicating that participants wrote more reasons for some behaviors than for others. More relevant here, the MANOVA yielded a significant Time × Reason interaction, $F(1, 74) = 18.39, p < .01$. As can be seen in Table 4, the number of pros was higher in the distant future than in the near future ($M_s = 2.36$ and 2.00 ,

Table 4
Mean Number of Pros and Cons for Near and Distant Behaviors (Study 4)

Temporal distance	Pro	Con	Total	Pro/(pro + con)
Spend time in the cafeteria with the person				
Near (<i>n</i> = 38)				
<i>M</i>	1.89	1.87	1.88	.50
<i>SD</i>	1.27	1.32		
Distant (<i>n</i> = 38)				
<i>M</i>	2.34	1.16	1.75	.67
<i>SD</i>	1.27	1.00		
Total (<i>n</i> = 76)	2.12	1.52		
Ask the person about his or her bad mood				
Near (<i>n</i> = 38)				
<i>M</i>	1.74	1.97	1.86	.47
<i>SD</i>	1.27	1.33		
Distant (<i>n</i> = 38)				
<i>M</i>	2.45	1.76	2.11	.58
<i>SD</i>	1.03	1.10		
Total (<i>n</i> = 76)	2.10	1.87		
Try not to act rudely toward the person				
Near (<i>n</i> = 38)				
<i>M</i>	2.42	2.16	2.29	.53
<i>SD</i>	1.18	1.48		
Distant (<i>n</i> = 38)				
<i>M</i>	2.45	1.63	2.04	.60
<i>SD</i>	1.43	1.28		
Total (<i>n</i> = 76)	2.43	1.89		
Prevent a gossip conversation about the person				
Near (<i>n</i> = 38)				
<i>M</i>	1.95	2.37	2.16	.45
<i>SD</i>	1.27	1.76		
Distant (<i>n</i> = 38)				
<i>M</i>	2.21	1.24	1.73	.64
<i>SD</i>	1.02	1.00		
Total (<i>n</i> = 76)	2.08	1.80		
Total of behaviors				
Near (<i>n</i> = 38)				
<i>M</i>	2.00	2.09	2.05	.49
<i>SD</i>	1.25	1.48		
Distant (<i>n</i> = 38)				
<i>M</i>	2.36	1.45	1.91	.62
<i>SD</i>	1.19	1.10		
Total (<i>n</i> = 76)	2.18	1.78		

respectively), $t(74) = 1.90, p = .06$, whereas the number of cons was lower in the distant future than in the near future ($M_s = 1.45$ and 2.09 , respectively), $t(74) = -3.14, p < .01$. The Reason \times Time \times Behavior interaction was not significant, $F(1, 74) < 1$, indicating that the effect of time on the relative number of pros and cons was uniform across the different behaviors.

Behavioral intentions. As in Study 3, we computed for each participant the mean number of pros divided by the mean of pros and cons the participant generated, across behaviors. As before, the proportion of pros significantly predicted intentions ($\beta = .64, p < .01$), so that participants who wrote more pros and fewer cons

tended to have stronger behavior intentions. A MANOVA on the behavioral intentions, with time (near vs. distant future) as a between-subjects factor and behavior (1–4) as a within-subjects factor revealed a main effect for time, $F(1, 72) = 13.08, p < .01$, indicating that the behavioral intentions were stronger for the distant future ($M = 69.10$) than the near future ($M = 54.61$). There was also a main effect for behavior, $F(1, 72) = 10.82, p < .01$, indicating that the likelihood of acting was higher for some behaviors than for others. A Time \times Behavior interaction, $F(1, 72) = 5.27, p < .01$, indicated that the effect of time was stronger for some behaviors than for others.

To examine whether the proportion of pros mediated the effect of temporal distance, behavioral intentions were regressed on the proportion of pros and time (near future coded as 0, distant future coded as 1) in a simultaneous regressions analysis (Baron & Kenny, 1986; Kenny, Kashy, & Bolger, 1998). To examine the indirect effect (via proportion of pros) of time on attitudes, we used a test that was originally suggested by Sobel (1982) and modified by Baron and Kenny (1986). The mediation effect of the pros proportion was significant ($Z = 2.82, p < .01$). When controlling for the effect of time on the relative number of pros, the effect of time on attitudes was eliminated, changing from $\beta = .37, p < .01$, to $\beta = .16, p = .09$. Thus, the proportion of pros mediated the effect of temporal distance on behavioral intentions.

In sum, as predicted, when participants were deciding whether to perform a behavior, the number of arguments in favor of performing the behavior, as compared with the number of arguments against performing it, increased when the behavior was expected to take place in the more distant future. Temporal shifts in pros versus cons resulted from both an increase in pros and a decrease in cons over temporal distance. In addition, temporal distance increased the subjective likelihood of performing the behavior, and this effect was mediated by the effect of time on the preponderance of pros. Thus, the tendency to form stronger behavioral intentions for the more distant future seems to be partly due to the greater salience of pros relative to cons regarding the more distant future behavior.

Study 5. The Order of Generating Pros and Cons and Their Content

The present study addressed three issues. First, we sought to rule out the possibility that the effect of temporal distance on intentions via the salience of pros versus cons was due to the fact that the intentions were assessed immediately after the pros and cons had been explicitly weighted against each other. We therefore varied the order of generating arguments and reporting behavioral intentions, and we expected our earlier findings to replicate regardless of order. Second, this study was designed to provide additional evidence for the assumption that cons are subordinate to pros by examining the order in which participants spontaneously generated these two types of reasons. If cons are subordinate to pros, then participants should spontaneously generate pros before generating cons. Third, we analyzed the content of the pro and con reasons participants wrote as pertaining to feasibility or desirability con-

siderations.³ We examined the possibility that pros should refer more often to desirability considerations than to feasibility considerations and that the reverse should hold for con considerations. In addition, we examined how the effect of time on feasibility versus desirability is related to its effect on pros versus cons. One possibility is that the effect of temporal distance on pros versus cons would be derivative of its effect on desirability versus feasibility. Alternatively, the type of consideration (desirability vs. feasibility) and its direction (pro vs. con) could be related but separable dimensions of level of construal. In this case, the temporal changes in the number of pro versus con reasons should be independent of whether they referred to desirability or feasibility. That is, temporal distance would increase the number of pros relative to cons whether the reasons referred to feasibility or desirability.

Method

Participants. One hundred twenty-three students (59 women) from Boston area universities completed the questionnaires as part of a general battery. Participants were paid a total of \$15 for their participation in the battery. Participants were randomly assigned to the four Time \times Order conditions. There were no significant differences between male and female participants in any of the results reported below.

Procedure. Participants were asked to imagine considering next week (a year from now) each of four behaviors and to generate arguments in favor of and against the behaviors. The behaviors were (a) starting a healthy diet, (b) watching news on TV, (c) going out to the movies with friends, and (d) making an appointment for a medical checkup. Each behavior was presented on a separate page with an instruction to write reasons for and against engaging in the behavior next week (a year from now). Unlike the previous studies, participants were not provided with separate spaces for pros and cons. The order of the behaviors was counterbalanced across participants and had no effect on the results. Half of the participants wrote the arguments for all four behaviors before indicating the likelihood of actually performing the behaviors, whereas the other half wrote the arguments after indicating the behavior likelihoods. The behavior likelihoods were indicated on a 0–100 scale.

Two judges, blind to time conditions, coded the reasons as pertaining to the desirability of the behavior (why I would perform the behavior) or to the feasibility of the behavior (how I would perform the behavior). For example, in considering watching the news on TV, the pro reason “learn what is going on in the world” and the con reason “news is biased” were coded as desirability aspects, whereas the pro reason “watching news on TV is easy” and the con reason “it is time consuming” were coded as feasibility aspects. Judges agreed on 94% of the codings. Disagreements were resolved by a third judge.

Results and Discussion

Order of pros and cons. Most of the participants generated both pros and cons (93%), and almost all of them (98%) separated the pros and cons by writing them in two sections, either one below the other or in two columns. In addition, 89% of the participants entitled the two sections as “pros” and “cons.” Thus, when instructed to generate arguments in an open format, participants seemed to spontaneously weight pros against cons. We also counted the number of times participants wrote pros before cons and the number of times they wrote cons before pros. We found that a great majority of participants wrote pros before cons (89%). This finding is consistent with our assumption that pros constitute higher level construals than cons.

Number of pros and cons. A Reason (pro vs. con) \times Behavior (1–4) \times Order (intentions first vs. arguments first) \times Time (near vs. distant future) MANOVA was performed on the number of reasons, with reason and behavior as within-subjects factors and time and order as between-subjects factors. The analysis yielded a main effect of reason, $F(1, 115) = 14.34, p < .01$, indicating that participants wrote more pros than cons ($M_s = 2.62$ and 2.29 , respectively) and a main effect for behavior, $F(3, 115) = 13.82, p < .01$, indicating that participants wrote more reasons for some behaviors than for others. More relevant here, the MANOVA yielded a significant Time \times Reason interaction, $F(1, 115) = 23.65, p < .01$. As can be seen in Table 5, the number of pros was higher in the distant future than in the near future ($M_s = 2.74$ and 2.50 , respectively), $t(121) = 1.84, p = .07$, whereas the number of cons was lower in the distant future than in the near future ($M_s = 2.10$ and 2.48 , respectively), $t(121) = -2.08, p < .05$. As expected, the Reason \times Time \times Order interaction was not significant, $F(1, 115) = 1.12, p = .29$, suggesting that whether the intention to perform the behavior was reported before or after generating reasons did not affect the time-related shifts in the number of pros versus cons.

Direction and type of consideration. To relate time and the direction of the reasons (pro vs. con) to the content of the reasons (desirability vs. feasibility consideration), we performed a Time (near vs. distant future) \times Reason (pro vs. con) \times Consideration (desirability vs. feasibility) \times Behavior (1–4) MANOVA on the number of reasons, with time as a between-subjects factor and reason, behavior, and consideration as within-subjects factors. The analysis yielded three effects in addition to those reported above. First, a main effect of consideration, $F(1, 115) = 95.21, p < .01$, indicated that participants wrote more desirability considerations than feasibility considerations ($M_s = 1.48$ and 0.94 , respectively). Second, as expected, the analysis showed a Time \times Consideration interaction, $F(1, 115) = 3.93, p < .05$. The number of desirability considerations relative to the number of feasibility considerations was higher in the distant future ($M_s = 1.53$ and 0.89 , respectively) than in the near future ($M_s = 1.43$ and 0.99 , respectively). Third, the predicted Reason \times Consideration interaction was significant, $F(1, 115) = 367.98, p < .01$. The number of desirability considerations was higher for pro reasons than for con reasons ($M_s = 2.23$ and 0.73 , respectively), whereas the number of feasibility considerations was lower for pro reasons than for con reasons ($M_s = 0.33$ and 1.54 , respectively). Importantly, the Reason \times Time \times Consideration interaction was not significant ($F < 1$), suggesting that whether the reason pertained to desirability or feasibility aspects of the behavior did not affect time-related shifts in the number of pros versus cons. In sum, we found an effect of time on feasibility versus desirability, but this effect did not account for the effect of time on pros versus cons. The results are summarized in Table 6.

³ Content analysis of pro and con reasons is reported only for Study 5 and not for Studies 2–4 mainly because of a difficulty in coding reasons in terms of construal level and in obtaining a reasonable reliability between judges. In Study 6, the desirability and feasibility of behaviors were manipulated, and therefore reasons' content was constrained to the Desirability \times Feasibility combination of each behavior.

Table 5
Mean Number of Pros and Cons for Near and Distant Behaviors (Study 5)

Temporal distance	Pro	Con	Total	Pro/(pro + con)
Starting a healthy diet				
Near (<i>n</i> = 58)				
<i>M</i>	2.76	2.24	2.50	.55
<i>SD</i>	1.32	1.33		
Distant (<i>n</i> = 61)				
<i>M</i>	3.15	2.05	2.60	.63
<i>SD</i>	1.70	1.18		
Total (<i>n</i> = 119)	2.96	2.14		
Watching the news on TV				
Near (<i>n</i> = 60)				
<i>M</i>	2.32	2.52	2.56	.48
<i>SD</i>	1.24	1.20		
Distant (<i>n</i> = 63)				
<i>M</i>	2.49	2.06	2.28	.55
<i>SD</i>	1.42	1.46		
Total (<i>n</i> = 123)	2.40	2.28		
Going to the movies with friends				
Near (<i>n</i> = 60)				
<i>M</i>	2.57	2.78	2.68	.48
<i>SD</i>	1.39	1.28		
Distant (<i>n</i> = 63)				
<i>M</i>	2.98	2.32	2.65	.56
<i>SD</i>	1.46	1.43		
Total (<i>n</i> = 123)	2.78	2.54		
Making an appointment for a medical check-up				
Near (<i>n</i> = 60)				
<i>M</i>	1.90	2.37	2.64	.44
<i>SD</i>	1.15	1.09		
Distant (<i>n</i> = 63)				
<i>M</i>	2.37	1.98	2.68	.54
<i>SD</i>	1.36	1.31		
Total (<i>n</i> = 123)	2.14	2.17		
Total of behaviors				
Near (<i>n</i> = 60)				
<i>M</i>	2.50	2.48	2.49	.50
<i>SD</i>	1.28	1.22		
Distant (<i>n</i> = 63)				
<i>M</i>	2.74	2.10	2.42	.57
<i>SD</i>	1.48	1.35		
Total (<i>n</i> = 123)	2.62	2.29		

Behavioral intentions. We computed for each participant the mean number of pros divided by the mean of the sum of pros and cons the participant generated, across behaviors. This proportion significantly predicted intentions ($\beta = .53, p < .01$), indicating that the greater the relative number of pros, the higher the reported likelihoods of performing the behaviors. A MANOVA on the behavioral intentions, with time (near vs. distant future) and order (intentions first vs. arguments first) as between-subjects factors and behavior (1–4) as a within-subjects factor revealed a main effect for behavior, $F(3, 113) = 15.43, p < .01$, indicating that the mean likelihood for performing the behaviors was higher for some behaviors than for others. More important, the main effect of time

was significant, $F(1, 113) = 70.74, p < .01$, indicating that the mean likelihood for performing the behaviors was higher in the distant future than in the near future ($M_s = 74.18$ and 49.51 , respectively). There was also a Time \times Behavior interaction, $F(1, 113) = 11.86, p < .01$, indicating that the effect of temporal delay was greater for some behaviors than for others. The Time \times Order and the Time \times Behavior \times Order interactions were not significant ($F < 1$). Thus, the effect of temporal distance on the intention to perform the behaviors was not influenced by whether intentions were reported before or after generating reasons.

Regression analyses were conducted to test whether the proportion of pro reasons mediated the effect of temporal distance (near future coded as 0, distant future coded as 1) on intentions to perform the behaviors. The mediation effect was significant ($Z = 3.42, p < .01$). When controlling for the effect of time on the proportion of pros, the effect of time on attitude was reduced from $\beta = .60, p < .01$, to $\beta = .47, p < .01$. Thus, the proportion of pros partially mediated the effect of temporal distance on intentions.

In sum, this study, unlike the earlier ones, used an open argument generation format and varied the order of generating arguments and reporting intentions. Replicating our earlier findings, it showed that temporal distance enhanced the salience of pros and reduced the salience of cons, which, in turn, increased the reported likelihood of performing the behaviors. This replication suggests that the effect of temporal distance on intentions via the salience of pros is not simply due to the fact that the intentions were reported immediately after explicitly weighting the pros and cons against each other.

Consistent with our assumption that cons are subordinate to pros, the present study found that most of the participants (89%) spontaneously generated pros before generating cons. This finding corroborates the findings of Studies 1A and 1B of an asymmetry in the conditional importance of pro and cons, that is, the finding that the importance of cons depends on having pros, whereas the importance of pros is independent of having or not having cons. Finally, consistent with earlier CLT research (Liberman & Trope, 1998), content analysis of the reasons showed that desirability considerations were more prominent and feasibility considerations less prominent in decisions regarding the more distant future. Moreover, the content analysis showed that pros more often referred to desirability considerations than to feasibility consider-

Table 6
Mean Number of Desirability and Feasibility Considerations in Pros and Cons Regarding Near and Distant Behaviors (Study 5)

Behavior	Near future	Distant future
Pro—desirability		
<i>M</i>	2.06	2.40
<i>SD</i>	0.98	1.08
Pro—feasibility		
<i>M</i>	0.32	0.34
<i>SD</i>	0.40	0.43
Con—desirability		
<i>M</i>	0.81	0.66
<i>SD</i>	0.54	0.50
Con—feasibility		
<i>M</i>	1.66	1.43
<i>SD</i>	0.71	0.87

ations, whereas the reverse held true for cons. However, as predicted, temporal shifts in the weight of pros versus cons and temporal shifts in the weight of desirability versus feasibility considerations were independent of each other. These results provide convergent evidence for our proposal that pro versus con and feasibility versus desirability are separable dimensions of level of construal. The next study further examines the effect of temporal distance on feasibility versus desirability and on pros versus cons. However, in this next study, feasibility versus desirability is experimentally manipulated rather than assessed.

Study 6. Temporal Shifts in Pro and Con Arguments Regarding Actions Varying in Feasibility and Desirability

Does temporal distance always shift the balance of arguments in favor of pros? What are the limiting conditions for this effect? According to CLT, the direction of an argument (pro vs. con) is only one aspect that determines its level of construal. Feasibility versus desirability is another such aspect, because feasibility (how) concerns are subordinate to desirability (why) concerns (Liberman & Trope, 1998; Sagristano et al., 2002). For example, an argument may refer to the pros of an action and at the same time refer to its desirability (e.g., I want to take the course) or to its feasibility (e.g., the course fits my schedule). Both higher feasibility and desirability should increase the proportion of pro arguments. However, feasibility and desirability should have opposite effects on the temporal shift toward more pros for the more distant future actions. Because desirability concerns are more prominent in distant future choices, higher desirability should act to enhance the preponderance of pros for more distant future actions. In contrast, because feasibility concerns are more prominent in near future choices, higher feasibility should act to reduce the preponderance of pros for more distant future actions. Thus, when an action is desirable but unfeasible, temporal distance should increase pro arguments (deriving from the high desirability of the action) relative to con arguments (deriving from the low feasibility of the action). However, when an action is feasible but not very desirable, temporal distance may not increase and may even reverse the preponderance of pro arguments (deriving from the high feasibility of the action) relative to con arguments (deriving from the low desirability of the action).

The present study tested these predictions by examining the pros and cons for actions varying in feasibility and desirability. We predicted that both higher feasibility and desirability would increase the proportion of pros. However, we expected that higher desirability would increase the shift toward more favorable arguments for the more distant future actions, whereas higher feasibility would counteract this temporal shift. We also assessed behavioral intentions in order to replicate our earlier finding that temporal distance increases the influence of desirability relative to feasibility and to examine whether the balance of arguments mediates these effects.

Method

Pretest. A pretest was conducted in order to select behaviors that participants perceived as either low or high in desirability and either low or high in feasibility. Participants were 44 New York University psychology students who participated in the experiment for course credit. They re-

ceived questionnaires that consisted of 20 everyday behaviors varying in the degree of feasibility and desirability. For example, the activity "visiting a person" was presented as "visiting a good friend [an acquaintance] who lives in the neighborhood [who lives far away]." Participants were randomly assigned to one of four conditions, created by a crossed 2 (desirability: high vs. low) \times 2 (feasibility: high vs. low) between-subjects design. Participants rated the desirability, the feasibility, and the probability of engaging in each behavior on a 100-mm graphical rating scale anchored with *extremely low* on one side and *extremely high* on the other side. Apart from this, the scale did not have any verbal or numeric anchors. Behaviors were chosen for the study if they met the following three criteria: (a) The mean probability rating of performing them was moderate (between 40 and 60), (b) the ratings of their high desirability or high feasibility versions on the corresponding dimensions were 70 or higher, and (c) the ratings of their low desirability or low feasibility versions on the corresponding dimensions were 30 or lower. Four activities met these criteria: "visiting a person," "going to a concert," "going to a lecture," and "Xeroxing a paper."

Participants. Participants were 124 undergraduate psychology students (74 women) from New York University, who participated in the study in partial fulfillment of a course requirement. The experiment was conducted in groups of up to 15. Participants were randomly assigned to either near or distant future conditions. There were no differences between male and female participants in the results reported below.

Procedure. Participants were asked to imagine considering whether to engage tomorrow (a year from now) in each of the four behaviors and to generate arguments in favor of and against engaging in the behavior. Each behavior presented a different Feasibility \times Desirability combination, with the four behaviors (visiting a person, going to a concert, going to a lecture, and Xeroxing a paper) being counterbalanced against Feasibility \times Desirability combinations. Each behavior appeared at the top of a separate page that was divided into two sections entitled "Reasons in Favor" and "Reasons Against." The order of the behaviors and the order of the pro and con sections were counterbalanced across participants and had no effect on the results. After writing pros and cons for each behavior, participants indicated the likelihood that they would perform that behavior on a 100-mm graphical rating scale with *extremely low* and *extremely high* as endpoints.

Results and Discussion

Number of pros and cons. We conducted a Reason (pro vs. con) \times Feasibility (high vs. low) \times Desirability (high vs. low) \times Time (near vs. distant future) ANOVA on the number of reasons, with reason, feasibility, and desirability as within-subjects factors and time as a between-subjects factor. The analysis yielded a main effect of reason, $F(1, 122) = 52.80, p < .01$, indicating that participants wrote more pros than cons ($M_s = 3.73$ and 3.26 , respectively). No other main effects were significant ($F < 1$). Consistent with our earlier findings, a significant Reason \times Time interaction was obtained, $F(1, 122) = 9.23, p < .01$. As can be seen in Table 7, the number of pros was higher in the distant future than in the near future ($M_s = 3.84$ and 3.61 , respectively), $t(122) = 1.07, p = .29$, whereas the number of cons was lower in the distant future than in the near future ($M_s = 3.11$ and 3.42 , respectively), $t(122) = -1.47, p = .15$. The analysis also yielded a Desirability \times Reason interaction, $F(1, 122) = 37.30, p < .01$, and a Feasibility \times Reason interaction, $F(1, 122) = 25.19, p < .01$. These interactions indicated that higher feasibility and desirability increased the number of pros and decreased the number of cons.

Most central to the purpose of the present study, the analysis showed a Desirability \times Reason \times Time interaction, $F(1, 122) = 5.55, p < .05$, and a Feasibility \times Reason \times Time interaction, $F(1,$

Table 7
Mean Number of Pros and Cons for Near and Distant Behaviors (Study 6)

Temporal distance	Pro	Con	Total	Pro/(pro + con)
High desirability, high feasibility				
Near (<i>n</i> = 61)				
<i>M</i>	3.90	2.75	3.33	.59
<i>SD</i>	1.57	1.43		
Distant (<i>n</i> = 63)				
<i>M</i>	4.40	2.67	3.54	.62
<i>SD</i>	1.76	1.34		
Total (<i>n</i> = 124)	4.15	2.71		
High desirability, low feasibility				
Near (<i>n</i> = 61)				
<i>M</i>	3.69	3.82	3.76	.49
<i>SD</i>	1.76	1.88		
Distant (<i>n</i> = 63)				
<i>M</i>	4.10	2.97	3.54	.58
<i>SD</i>	1.83	1.49		
Total (<i>n</i> = 124)	3.90	3.39		
Low desirability, high feasibility				
Near (<i>n</i> = 61)				
<i>M</i>	3.70	3.34	3.52	.53
<i>SD</i>	1.65	1.62		
Distant (<i>n</i> = 63)				
<i>M</i>	3.44	3.44	3.44	.50
<i>SD</i>	1.43	1.64		
Total (<i>n</i> = 124)	3.57	3.40		
Low desirability, low feasibility				
Near (<i>n</i> = 61)				
<i>M</i>	3.16	3.75	3.46	.46
<i>SD</i>	1.41	1.74		
Distant (<i>n</i> = 63)				
<i>M</i>	3.40	3.35	3.38	.50
<i>SD</i>	1.41	1.53		
Total (<i>n</i> = 124)	3.35	3.55		
Total of behaviors				
Near (<i>n</i> = 61)				
<i>M</i>	3.61	3.42	3.52	.51
<i>SD</i>	1.60	1.67		
Distant (<i>n</i> = 63)				
<i>M</i>	3.84	3.11	3.48	.55
<i>SD</i>	1.61	1.50		
Total (<i>n</i> = 124)	3.73	3.26		

122) = 9.10, *p* < .01. As predicted, these interactions indicated that desirability and feasibility produced opposite effects on the temporal shifts in the balance of arguments. The Desirability × Reason × Time interaction indicated that increasing temporal distance shifted the balance of arguments toward more pros and fewer cons to a greater extent when desirability was high than when desirability was low. Thus, the proportion of pros increased from near to distant future when desirability was high (*M*s = .54 and .60, respectively, *p* < .01), but not when it was low (*M*s = .49 and .51, respectively). In contrast, the Feasibility × Reason × Time interaction indicated that increasing temporal distance shifted the balance of arguments toward more pros and fewer cons

to a greater extent when feasibility was low than when it was high. Thus, the proportion of pro arguments increased from near to distant future when feasibility was low (*M*s = .47 and .54, respectively, *p* < .01), but not when it was high (*M*s = .56 and .57, respectively). Combining the effects of desirability and feasibility, the increase in proportion of pros from near to distant future was greatest when desirability was high and feasibility low (*M*s = .49 and .58, respectively, *p* < .01). When desirability was low and feasibility high, temporal distance produced the opposite effect, namely, a slightly higher proportion of pros in the near than distant future (*M*s = .53 and .50, respectively).

The effect of feasibility and desirability on behavioral intentions. CLT predicts, and Liberman and Trope (1998) found, that the influence of desirability considerations, relative to the influence of feasibility considerations, is stronger on distant future compared with near future intentions. To test this prediction, we conducted a Time × Desirability × Feasibility ANOVA on the behavior likelihood measure of intentions. This analysis yielded the expected main effects for desirability, *F*(1, 122) = 45.45, *p* < .01, and feasibility, *F*(1, 122) = 24.26, *p* < .01, indicating that the behavioral intentions were stronger when desirability was high (*M* = 60.59) than when desirability was low (*M* = 43.40) and when feasibility was high (*M* = 58.82) than when feasibility was low (*M* = 45.19). More important, the analysis yielded a significant Time × Desirability interaction, *F*(1, 122) = 5.07, *p* < .05. The effect of desirability was stronger in the distant future (*M*s = 42.13 vs. 65.04, *p* < .01) than in the near future (*M*s = 44.72 vs. 55.98, *p* < .01); the means of the specific effects are summarized in Table 8. The Time × Feasibility interaction was not significant, *F*(1, 122) = 1.42, *p* = .25, but was in the predicted direction. Specifically, the effect of feasibility was stronger in the near future (*M*s = 41.91 vs. 58.80, *p* < .01) than in the distant future (*M*s = 48.36 vs. 58.84, *p* < .01). Overall, then, the influence of desirability, relative to the influence of feasibility, increased with temporal distance, thus replicating Liberman and Trope’s (1998) findings.

Behavioral intentions and the number of pros versus cons. The proportion of pros significantly predicted the intentions to perform the high desirability–high feasibility behavior (*β* = .42, *p* < .01), the high desirability–low feasibility behavior (*β* = .37, *p* < .01),

Table 8
Intention to Engage in Near and Distant Behaviors (Study 6)

Desirability and feasibility of behaviors	Near future	Distant future
High desirability, high feasibility		
<i>M</i>	67.57	72.68
<i>SD</i>	26.99	27.76
High desirability, low feasibility		
<i>M</i>	44.39	58.02*
<i>SD</i>	32.18	30.56
Low desirability, high feasibility		
<i>M</i>	50.02	45.00
<i>SD</i>	30.71	32.46
Low desirability, low feasibility		
<i>M</i>	39.43	39.56
<i>SD</i>	29.81	30.48

Note. Ratings were made on a scale ranging from 0 (unlikely) to 100 (likely). * *p* < .05, for difference between near and distant future means.

the low desirability–high feasibility behavior ($\beta = .38, p < .01$), and the low desirability–low feasibility behavior ($\beta = .41, p < .01$). Are the temporal shifts in the effects of feasibility and desirability on behavioral intentions mediated by the temporal shifts in the effects of these dimensions on the balance of arguments? To answer this question with respect to desirability, we computed for each participant the difference in intentions between high and low desirability behaviors (i.e., the effect of desirability on intentions). We also computed for each participant the corresponding proportions of pros (i.e., the effect of desirability on the relative number of pros) and used this effect as a mediator. Temporal distance increased the effect of desirability on the pros proportion, which, in turn, increased the effect of desirability on intentions. This effect was marginally significant ($Z = 1.91, p = .06$). When the effect of desirability on the relative number of pros was covaried out, the effect of time on the effect of desirability on intention changed from .22 to .15. We conducted a similar test for the effect of feasibility. Temporal distance decreased the effect of feasibility on the proportion of pros, which, in turn, increased the effect of feasibility on intentions. This effect was significant ($Z = -2.75, p < .01$). When the effect of feasibility on the relative number of pros was covaried out, the effect of time on the effect of feasibility on intention changed from $-.12$ to $.05$. Thus, temporal distance increased the intention to perform desirable rather than undesirable behaviors, and this effect was mediated by the effect of time on the relative salience of pros. The intention to perform feasible rather than unfeasible behaviors somewhat decreased with time delay, and the change in the salience of pros significantly contributed to making the effect of time delay less negative.

In sum, the results of the present study replicate and extend the results of the earlier studies. Overall, participants generated more pro arguments and fewer con arguments regarding distant future than near future actions, although neither of the two separate effects was significant. Moreover, as predicted, this depended on the feasibility and desirability of the actions. Both feasibility and desirability increased the proportion of pros. However, because desirability is more prominent in the distant future, it increased the shift toward a higher proportion of pros for more distant actions. In contrast, because feasibility is more influential in the near future, it decreased this temporal shift. Thus, when the actions were unfeasible but desirable, temporal distance produced the strongest shift toward more favorable arguments, but when the actions were feasible but undesirable, this effect was eliminated or reversed, that is, the proportion of pros was slightly greater for the near than the distant future actions.

General Discussion

We propose that in deciding whether to undertake an action, cons are subordinate to pros. Consistent with this proposal, we found that the subjective importance of cons depended on whether or not pros were present more than the subjective importance of pros depended on whether or not cons were present (Studies 1A and 1B). The results of Study 5 provide further support for the proposal that cons are subordinate to pros by showing that pros are considered before cons. According to 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. Studies 2–6 tested this prediction by asking participants to generate arguments in favor of and against new 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 in Study 2, social policies in Study 3, and a variety of personal and interpersonal behaviors in Studies 4–6. In Studies 4 and 5, both the increase in pros and decrease in cons over time were significant. In Study 3, only the effect of time on cons was marginally significant, and in Studies 2 and 6, neither effect reached significance, although they combined to a significant interaction. We conducted a meta-analysis of Studies 2–6 to examine whether the two effects of time on pros and time on cons were significant overall. We excluded from the analysis the low desirability–high feasibility condition in Study 6, for which we did not predict these effects to occur. The analysis revealed that both the decrease in cons over time ($d = -.47, p < .05$) and the increase in pros over time ($d = .25, p < .05$) were significant.

We also conducted a meta-analysis to examine the relative prevalence of pros versus cons, separately in each time condition. This analysis revealed that in the distant future, there were significantly more pros than cons, $t(4) = 2.81, p < .05$, whereas in the near future, the numbers of pros and cons were nearly equal, with a nonsignificantly greater number of cons, $t(4) = -1.87, p > .05$. Thus, in the situations examined in the present studies, time delay produced a shift from an essentially balanced set of arguments to a more positive set of arguments, one that favored undertaking the action under consideration.

The last four studies also assessed participants' attitudes or intentions regarding the proposed actions. Mediation analysis found that the effect of temporal distance on participants' attitudes and intentions was partially mediated by the number of pro versus con arguments they generated. The mediation findings suggest that people hold more favorable attitudes (Studies 4 and 5) or less unfavorable attitudes (Study 6) toward more distant plans because they tend to think of more distant future plans in terms of more pros and fewer cons.

A word of caution is in order here. CLT predicts and our studies have demonstrated that the subjective value of distant future options is not necessarily more positive than that of near future options. Rather, the effect of temporal distance on the value of a future option depends on the value associated with high-level and low-level construals of the option. Specifically, when the value associated with high-level construals is more positive than that associated with low-level construals, the attractiveness of an option should increase with temporal distance. In contrast, when the value associated with low-level construals is more positive than that associated with high-level construals, the attractiveness of an option should decrease with temporal distance. For example, Trope and Liberman (2000) found that events in the distant future with positive high-level value and negative low-level value (e.g., "studying in the library") were seen as more attractive than in the near future, whereas events with negative high-level value and positive low-level value ("eating a rich cake") were less attractive with increased distance.

We argue, then, that the direction of an argument (pro vs. con) is only one determinant of its level of construal, and it may be amplified or offset by other determinants of level of construal,

such as whether the argument refers to desirability versus feasibility. The high-level construal of pros will be amplified when they derive from an action's high desirability (a high-level aspect), in the same way that the low-level construal of cons will be amplified when they derive from the action's low feasibility (a low-level aspect). In contrast, the high-level construal of pros and the low-level construal of cons will be attenuated when the pros derive from an action's high feasibility and the cons from the action's low desirability. Therefore, CLT predicts, and Study 6 shows, that when an action is desirable but unfeasible, temporal distance produces the strongest shift toward more pros and fewer cons, but when an action is feasible but undesirable, this shift is annulled and even somewhat reversed.

The level of construal of pros versus cons may be similarly amplified or offset by other determinants of level of construal, such as whether the argument concerns peripheral versus central or contextualized versus decontextualized features of events (Lieberman et al., 2002). For example, CLT assumes that higher level construals are more likely to include essential, goal-relevant features of a decision situation than incidental, goal-irrelevant features of the situation. Consistent with this assumption, Trope and Liberman (2000) found that preferences regarding the more distant future were more influenced by the former type of features on preference and less influenced by the latter type of features. We would expect, then, that the effect of temporal distance on pros versus cons would be amplified when pros refer to central features and cons refer to peripheral features and would be offset when pros refer to peripheral features and cons refer to central features.

An interesting prediction regarding temporal shifts in intentions would be that pros would be related more strongly to more distant behavioral intentions, whereas cons would show the reverse intertemporal pattern. This prediction could not be tested adequately in the current research, because in all of our studies, participants generated the pros and cons. We believe that this restricts any potential variation in the weighting of different reasons because participants are unlikely to discount or dismiss arguments they themselves generated and actually wrote down. Perhaps a different methodology, one in which participants are presented with pro and con arguments of varying strength or quantity, may be more suitable for testing the predicted differential effect of pros and cons on behavioral intention as a function of temporal distance.

Other Time Perspective Theories

Conflict theories. Like CLT, conflict theories (Lewin, 1951; Miller, 1944) predict time-dependent changes in the favorability of action. According to Lewin's (1951) field theory, a prospective action is viewed as an activity region in a person's life space and the positive and negative aspects of the action as attraction and repulsion forces that create approach and avoidance tendencies, respectively. As temporal distance from a decision increases, the strength of both approach and avoidance tendencies decline, but avoidance forces undergo a steeper discounting than approach forces, thus making the distant action more attractive. For example, the fear of heights associated with skydiving should undergo steeper time discounting than the enjoyment of diving in the open air. Therefore, as temporal distance increases, the value of skydiving should increase. If pro considerations are regarded as approach forces and con considerations are regarded as avoidance forces,

conflict models would predict that the strength of both pros and cons would decrease over time delay, but cons would decrease more steeply than pros. In our studies, participants generated more pros for more distant future decisions—a result that would be inconsistent with the assumption that both approach and avoidance tendencies decline with time delay.

It should be noted, however, that conflict models refer to the strength of approach and avoidance forces and not necessarily to the number of pros and cons. These are not necessarily identical, because both pros and cons can refer to positive or negative aspects. For example, arguments in favor of going to a party can be both meeting new people (presence of a positive feature) and avoiding a boring evening at home (absence of a negative feature). Similarly, arguments against going to the party can be both that one's friends are not going (absence of a positive feature) and the loud music (presence of a negative feature). If approach and avoidance are equated with positive and negative aspects rather than with pros and cons, then conflict models would be silent regarding changes in pros and cons with temporal distance.

Optimism and regret. Also relevant here is research on future optimism (e.g., Buehler, Griffin, & Ross, 1994; Nisan, 1972; Savitsky, Medvec, Charlton, & Gilovich, 1998) and time perspective effects on regret (Gilovich & Medvec, 1994). Although this research has not examined temporal changes in pro and cons, it is consistent with the predictions of CLT. A number of studies found that people expect to perform better (Nisan, 1972; Savitsky et al., 1998; Shepperd, Ouellette, & Fernandez, 1996) and have more positive experiences (Mitchell & Thompson, 1994; Mitchell, Thompson, Peterson, & Cronc, 1997) in distant future than near future situations. For example, Savitsky et al. (1998) showed that participants who anticipated a month's delay before having to complete a task (e.g., recall nonsense syllables) expressed greater confidence in their performance than participants for whom the task was imminent. As another example, in their work on the planning fallacy, Buehler et al. (1994) showed that participants constructed scenarios of future task performance that ignored factors that were unrelated to the central features of the task. Thus, when estimating the completion time of a task, the effect of such factors was undermined, thus producing overly optimistic completion time estimates.

Research on time perspective effects on regret (Gilovich & Medvec, 1994) has shown that temporal distance from past decisions increased regret of inactions but decreased regret of actions. For example, in one of the studies, participants read about two students: One decides to transfer to another prestigious school, and the other decides to stay where he is, and they both feel bad about their decision. The majority of the participants indicated that the student who changed schools would regret his decision more in the present and that the student who did not switch schools would regret more his decision in the long run (Gilovich & Medvec, 1994, Studies 3 and 4). According to Gilovich and Medvec (1994), forces that compel action (justifying regrettable action) are more salient than forces that restrain action (justifying regrettable inaction), and the salience of compelling forces increases with temporal distance, whereas the salience of restraining forces decreases with temporal distance. This analysis is consistent with CLT and the present findings. CLT further suggests that the reason for people's tendency to view temporally distant events more favorably is that compelling, pro considerations are at a superordinate

level, relative to restraining, con considerations, and therefore become more prominent over temporal distance. Moreover, CLT suggests a possible boundary condition for these effects; that is, they should be attenuated or reversed when, because of other determinants of level of construal, pros cease to be high-level features and cons cease to be low-level features.

Implications and Future Directions

The research presented in this article has implications for real-life decision situations. We believe that our findings are mostly relevant for decisions regarding new situations and options such as whether to vote for a new candidate in the upcoming elections, whether to enroll in a new course in the university, or whether to go out on a blind date. In such cases, people are likely to engage in a systematic deliberation of pros and cons rather than retrieve a stored attitude from memory. Temporal distance is likely to increase the prominence of pros and thus increase the attractiveness of the action under consideration. If committed to a decision long in advance, people might regret their decision as the time of implementation draws near, because they may find themselves bound to a plan that no longer seems attractive. If not committed in advance, they might regret (in retrospect, after a long time) not being able to follow a path that seems desirable when examined from a distance.

Our results may also have implications for persuasion. Consider, for example, an advertisement campaign for a film festival, which is about to take place next week or 2 months from now. We suggest that in order to make people view the festival more favorably, the advertisement should emphasize advantages (e.g., the quality of the movies) of the festival when still in the distant future and deemphasize the disadvantages of the festival (e.g., cost) when the festival is closer in time. This suggestion can be tested by providing participants with varying numbers of pros and assessing their impact on participants' attitudes and intentions. CLT would predict that pros would have more impact and cons would have less impact when the attitudes and intentions pertain to objects and events in the more distant future.

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