# Representations of the Self in the Near and Distant Future

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Seven studies provide evidence that representations of the self at a distant-future time point are more abstract and structured than are representations of the self at a near-future time point and that distant-future behaviors are more strongly related to general self-conceptions. Distant-future self-representations incorporate broader, more superordinate identities than do near-future self-representations (Study 1) and are characterized by less complexity (Study 2), more cross-situational consistency (Study 3), and a greater degree of schematicity (Study 4). Furthermore, people's behavioral predictions of their distant-future (vs. near-future) behavior are more strongly related to their general self-characteristics (Study 5), distant-future behaviors are seen as more self-expressive (Study 6), and distant-future behaviors that do not match up with acknowledged self-characteristics are more strongly rejected as reflections of the self (Study 7). Implications for understanding both the nature of the self-concept and the way in which distance may influence a range of self-processes are discussed.

*Keywords:* self-concept, distance, time, construal, self-structure

People differ remarkably across situations. Aspects of the self change in response to cues and primes (Bargh & Williams, 2006), the presence of others (Buckingham & Alicke, 2002), the role to which individuals are assigned (Haney, Banks, & Zimbardo, 1973; Milgram, 1963), and countless other variables addressed by social psychologists in decades of research. These situational changes in the self are evident across a variety of measures, including behaviors (Dijksterhuis & Bargh, 2001), attitudes (Lowery, Hardin, & Sinclair, 2001), and self-judgments (Mussweiler & Bodenhausen, 2002; Pelham & Wachsmuth, 1995; Sinclair, Huntsinger, Skorinko, & Hardin, 2005; Trampe, Stapel, & Siero, 2007). In addition, the self may change dramatically across time, as individuals move through life stages from childhood to adulthood (Roberts, Walton, & Viechtbauer, 2006). Indeed, contextualization of the self is so apparent that researchers have begun to question once dominant models of personality (e.g., McCrae & Costa, 1996) and have argued, for instance, that personality itself is a complex set of if–then contingencies in which behavior is expected to vary across situations (e.g., McGuire & Padawer-Singer, 1976; Mendoza-Denton, Ayduk, Michel, Shoda, & Testa, 2001; Mischel & Shoda, 1995). Furthermore, some research has suggested that seeing variability within the self can be adaptive, pointing to psychological benefits both of having a multiplicity of identities (Gergen, 1971; Goffman, 1959; Linville, 1985; 1987) and of seeing the self as being able to change through time and experience (Dweck, 2006; Dweck & Leggett, 1988; A. E. Wilson & Ross, 2003).

At the same time, the experience of a stable sense of selfhood is arguably one of the defining characteristics of humanity (e.g., Mead, 1934; Butterworth, 1992). Individuals seek to know themselves, to maintain a sense of themselves as a single entity who has consistent and enduring qualities, and our intuitions suggest that these consistencies in the self do in fact exist (Bem & Allen, 1974). Indeed, Baumeister (1998) has argued that the "essence of self involves an integration of diverse experiences into a unity" (p. 682). Moreover, mirroring those who point to the benefits of self-variability, other researchers have suggested that having an integrated sense of self can be psychologically beneficial. Donahue and colleagues (Donahue, Robins, Roberts, & John, 1993), for example, argued that self-concept integration is linked to general psychological well-being, recalling James's (1890) portrayal of a fragmented self-concept as a sign of a sick soul (see also McReynolds, Altrocchi, & House, 2000, for a similar conclusion). At a more extreme level, a key marker of borderline personality disor-

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der is a lack of coherent self-representation (American Psychiatric Association, 2000). That is, the self-concept of borderline personality patients may be poorly integrated (Westen & Cohen, 1993), or these individuals may fluctuate between feeling that they have many conflicting and confused selves and feeling no sense of self at all (Heard & Linehan, 1993).

It is perhaps useful, then, to have a contextually rich understanding of the self, while also being able to combine and integrate these various self-expressions into a stable notion of selfhood. But how does one accomplish this? What encourages integration of the self, allowing one to find unity within self variety? When will one's enduring qualities be emphasized in the self-concept, even when considering a self that is situated within a particular context, and when will one perceive the self as being more variable? Are there conditions that render a relatively integrated or contextualized self-representation more or less appropriate?

In the current research, we suggest that adopting a distanced perspective on the self promotes integration of one's disparate selves into a unified representation. Specifically, we argue that a temporally distant perspective promotes a high-level, abstract construal of the self that is structured around invariant, essential self-attributes, whereas a temporally proximal perspective promotes a low-level, more concrete construal of the self, consisting of more specific, contextualized, and unrelated features. In what follows, we explicate the concepts of high- and low-level construal and explain our rationale for suggesting a link between temporal distance and degree of integration within the self-concept. We then describe past research on time and self-representation, highlighting the way in which the current research expands our understanding of the influence of temporal perspective on the self-concept.

## Level of Construal

Recent research conducted within the framework of construal level theory (CLT; Trope & Liberman, 2003) distinguishes between two forms of representation: low-level and high-level construals. Low-level construals are relatively unstructured, contextualized representations that include subordinate and incidental features of events. High-level construals, in contrast, are schematic, decontextualized representations that extract the gist from the available information, emphasizing a few superordinate, core features of events. Thus, whereas low-level construals are rich in details, some of which are incidental or peripheral, high-level construals achieve abstraction by omitting secondary and incidental features.

Adopting a high-level construal of the self would thus involve extracting the essence or gist of the self, imposing an order or structure on self-representation, and using more abstract and superordinate self-identifications. This cognitive process should therefore be one mechanism through which individuals can find unity within the variety that is the self. Indeed, many self-concept researchers explicitly seek to capture this type of self—a self that is abstracted across contexts and settings and reflects perceived self-characteristics that are broad and general. For example, a large stream of research has attempted to measure individuals' perception of their stable personality characteristics, introducing abstraction across situations by asking for reports of general personality traits, typical self-characteristics, and so on, as opposed to personality traits and characteristics expressed within a given context (e.g., Goldberg, 1999; Saucier, 1994; see Mischel & Shoda, 1995, however, for one general critique of this approach).

Of course, it is possible to find variation in the degree to which different self-representations are general in nature, and there may be times when a more abstract or concrete self-representation is highlighted. We contend that one case in which an abstract, decontextualized self-representation will be naturally adopted is when one is considering a self about which one tends to have less specific information, for example, a self that is distant in time. Because one does not know the precise way that a distant self will manifest itself, it is useful to think about that self in an abstract and schematic manner that captures the self's perceived essence or gist. That is, a high-level representation is likely to be a good reflection of the distant self, regardless of the specific way it eventually appears, and so it is this type of representation that most appropriately captures the distant-future self. Put somewhat differently, this gist reflects the aspect of one's current self-knowledge that is most relevant and applicable to an unknown, distant-future self and is, therefore, the most useful way of bridging and projecting from the present self to a future self.

This argument is consistent with the general logic of CLT, in which it is proposed that distance is associated with abstraction and that this relationship is rooted in the link between one's distance from and typical knowledge about an event. That is, as an event is placed farther into the future, individuals tend to know less about the event and are therefore likely to form a more abstract and schematic representation of the event. In this way, CLT assumes that psychological distance becomes associated with abstract processing. This association is presumably then overgeneralized, causing individuals to form high-level construals of distant events and low-level construals of near events, even in cases when the amount and reliability of information is constant.

Indeed, past research found support for the proposal that temporally distant events are represented in a more abstract, structured manner than are near-future events. Liberman, Sagristano, and Trope (2002), for example, found that individuals categorize objects associated with distant-future events into fewer, broader categories than objects associated with near-future events; similarly, individuals organize preferences for more temporally distant events around simpler, more coherent structures. Furthermore, at the level of person perception, Nussbaum, Trope, & Liberman (2003) showed that when making distant-future related judgments about others, individuals increase their tendency to associate behaviors with dispositional, underlying traits rather than situational demands. Accordingly, participants are more likely to make the correspondence bias, underweighting the effect of low-level, situational constraints on observed behavior (Jones & Harris, 1967) when the behavior is used for predicting the distant future rather than the near future. Finally, differences in construal are evident in judgments and decisions made about distant and near-future events. For example, as an event becomes removed in time, central features and superordinate concerns increasingly drive decisions over incidental features and subordinate concerns (Liberman & Trope, 1998; Trope & Liberman, 2000).

Drawing on this body of work and the theoretical rationale outlined above, we suggest that individuals' self-representations will systematically differ as a function of temporal perspective. Specifically, we expect an individual's temporally remote self-concept to be more abstract, simple, and coherent than a tempo-

rally proximal self-concept. For example, a person who thinks of herself in a year from now is more likely to form a clear and consistent self-representation, consisting mostly of general dispositions and tendencies. In contrast, when the same person thinks of herself in the present week, she is likely to form a more complex and less coherent image, consisting of specific, contextualized characteristics that differ across situations. Furthermore, if distance does indeed highlight general, decontextualized self-aspects that are expected to guide behavior irrespective of context, then we would expect individuals to increasingly link distant-future behavior to their general self. Thus, we expect the generalized self measured without any reference to time to be more closely related to behavioral self-predictions made for the distant (vs. near) future. Moreover, this should work in the reverse direction as well; that is, although less may generally be known about the distant future, individuals should increasingly believe that distant-future behavior says something about their general character.

## Prior Research on Time and Self-Representation

The current research is by no means the first to examine the relationship between time and self-representation. In accordance with long standing research suggesting that individuals maintain a variety of self-representations (cf. Markus & Wurf, 1987), a number of researchers have argued that individuals maintain representations of themselves as they have existed or will exist at different points in time (e.g., Nuttin, 1964, 1985; Schutz, 1964; A. E. Wilson & Ross, 2003). Some investigators, for instance, have focused on the variable of time orientation or perspective, an individual's tendency to routinely focus on the past, present, or future (e.g., Nuttin, 1985; Zimbardo & Boyd, 1999). Others have examined the content of temporally remote self-representations, noting the interplay between representations of the self at various time points. For example, Ross and Wilson (2003; A. E. Wilson & Ross, 2003) suggested that evaluations of one's past self are biased so as to shed a positive light on the current self; particularly, in order to perceive improvement in the self, one may derogate and criticize past selves (see also Libby, Eibach, & Gilovich, 2005). Likewise, research on both defensive pessimism (e.g., Norem, 2001; Norem & Cantor, 1986) and future optimism (e.g., Regan, Snyder, & Kassin, 1995; Taylor & Brown, 1988; Weinstein, 1980) has illustrated ways in which people's expectations about themselves and their experiences in different temporal contexts can be influenced by present motivational concerns. For instance, according to the defensive pessimism approach, individuals' perceptions of their future selves and experiences may be overly negative, bracing the self in case of eventual failure and motivating increased preparation to enhance the likelihood of success. Research on future optimism, in contrast, has suggested that individuals generally look at their own futures through optimistic, overly positive glasses, anticipating that their future selves and experiences will be increasingly rosy.

In addition to these accounts of biases in content, some prior research on time and the self is consistent with the current argument that distal future self-representations are schematic, integrated summaries that highlight the gist, or essence, of the self. For example, Freitas, Salovey, and Liberman (2001) found that individuals considering their distant-future goals sought general goal-relevant information addressing the central aspects of the goals, whereas those considering near-future goals increasingly sought more contextualized goal-relevant information addressing secondary goal-relevant concerns. Although not directly examining self-representation, this work illustrates that increases in distance serve to focus attention on more central aspects of self-relevant outcomes. Furthermore, Kivetz and Tyler (2007) found that a distal perspective on the self is increasingly idealistic, versus pragmatic, in nature. Correspondingly, when considering distant-future events, individuals' preferences are influenced by concerns related to identity issues (e.g., does a professor treat students with respect); when considering near-future events, preferences are increasingly influenced by instrumental issues (e.g., does a professor tend to give high grades). Assuming that one's ideals are abstract self-aspects that relate to the self's perceived essence, this is consistent with our assumption that distant self-representations emphasize abstract and essential components of the self. Finally, work by Pronin and Ross (2006) suggested that individuals think about their temporally remote selves much as they would think about another individual and are therefore more willing to ascribe traits to distant-future and past selves than to the present self (see also Frederick, 2003, who suggests that distant-future selves are increasingly dissimilar to the current self).

In the current studies, we attempt to go beyond these prior investigations by directly examining the representation of near- and distant-future selves. Moreover, in contrast to much of the prior research examining distal self-representation, which has suggested that distant-future self-representations contain a specific content—overly optimistic, idealistic, and the like— the current investigation emphasizes differences in the structure of selves varying in temporal distance. According to our account, distant-future self-representations highlight the gist or essence of a person's perceived self; thus, regardless of the particular content of that gist, a distant-future self-representation should be more simply structured and less contextualized than a corresponding near-future self-representation.[1] Furthermore, because distance emphasizes general, decontextualized self-aspects, individuals should more closely relate distant-future behaviors to general self-characteristics.

We test these ideas in a series of seven studies. In Studies 1–4, we look at different aspects of coherent, schematic self-representation versus contextualized, fluid self-representation. We predict that when thinking of a distant-future (vs. near-future) self, individuals will describe their social category memberships in more broad, less contextualized terms (Study 1), will use fewer self-aspects to describe themselves (Study 2), will see themselves as having more similar personalities across social roles (Study 3), and will be faster at identifying whether general trait adjectives are self-descriptive (Study 4). Shifts in self-representation are expected both when considering the self as a whole (Studies 1, 2, and

[1] Of course, it might often be the case that the gist of a person's self-concept is positive, especially in random undergraduate populations. Thus, the relationship between distance and construal might result, on average, in a positivity bias for distant-future self-representations (see also Eyal, Liberman, Trope, & Walther, 2004). The effects that we predict, however, do not hinge on this relationship and should occur regardless of representational content. We return to the issue of differences in content of near- and distant self-representations in the General Discussion section, as well as throughout the individual studies that we describe.

4) and when considering the self within particular situational contexts (Study 3).

In Studies 5, 6, and 7, we turn our focus to behavior, examining the relationship between one's general self-characteristics and behavior that relates to the near or distant future. Because we expect distance to highlight general self-aspects, we predict that one's general self-concept (measured irrespective to time) will be more closely related to predictions one makes about his or her distant-future behavior than to predictions about near-future behavior (Study 5). Furthermore, this should have implications for the degree to which behavior is seen as self-expressive. That is, if people expect their distant-future (vs. near-future) behaviors to be more related to their general self-characteristics then, correspondingly, they should expect their general self-characteristics to be consistent with distant-future behavior. Accordingly, people should be more likely to judge distant-future behaviors as communicating something about the self (Study 6), except when such behaviors are inconsistent with beliefs about oneself in general, in which case they should be more likely to reject these behaviors as expressions of the self (Study 7).

## Study 1: Level of Social Categories

Individuals frequently use social categories to describe and identify themselves (Tajfel, 1974). However, groups or social categories vary widely in their level of abstraction and inclusiveness: Some social categories are broad and wide-ranging (e.g., female, Black), whereas others are more specific and contextualized (e.g., a female executive in General Motors, a Black activist fighting for civil rights). In the current study, we look at the way that temporal distance influences the types of categories people use to describe themselves. On the basis of our assumption that individuals describe distant-future selves in higher level construal terms, we expect participants to use more broad, superordinate social categories to describe themselves in the distant future than in the near future.

### *Method*

*Participants.* Eighty Tel Aviv University students (57 women; 23 men) participated in small groups of 2–4 participants, in partial fulfillment of an introductory psychology course requirement. Participants were randomly assigned to either the near-future condition or the distant-future condition.

*Materials and procedure.* Having signed up for an experiment titled Who Am I, participants were asked to describe themselves in either the near future or the distant future. Instructions for the near-future condition (and distant-future condition, in brackets) were as follows: "Sometime this week [in a week a year from now] another student participating in this study will try to get to know you according to the way you describe yourself."

Participants were then presented with a questionnaire consisting of 14 groups of social categories, organized in hierarchies of two to five levels (see Appendix A for listing of items). For example, one hierarchy was as follows: a person, a man/woman, a young man/woman, a man/woman in his/her early/late 20s, a man/woman aged ____ (a five-level hierarchy, ordered from the broadest, high-level category to the narrowest, low-level category). Participants were asked to choose the one characteristic from each group that seemed to most appropriately describe themselves, having been told that they could skip any categories that they found irrelevant for their self-description.

### *Results and Discussion*

For each participant, we computed the average level of self-identification chosen across the 14 social categories. Because choices within the hierarchies varied from two to five levels (coded by assigning a 1 to the broadest category and continuing in ascending order, such that higher numbers indicated more specific identifications), we standardized responses to each category and used the average of these $z$ scores as our dependent variable ($\alpha = .55$).[2] As predicted, participants used more broad and superordinate terms to identify themselves when they expected their self-descriptions to be read in the distant future ($M = -.12$; $SD = .40$) rather than in the near future ($M = .09$; $SD = .39$), $t(78) = 2.30$, $p < .05$, $d = 0.52$. Thus, a similar attribute of the self (e.g., being a woman) tended to be construed on a higher level when it was used to describe a distant-future self. In Study 2, we extend this finding beyond social identities to self-descriptions more generally, allowing participants to idiosyncratically generate a list of the self-aspects that describe themselves and examining temporal shifts in the number and structure of these self-aspects.

## Study 2: Self-Complexity

One structural component of representation of the self is the level of complexity inherent in this representation. According to Linville (1985, 1987), a complex self-concept consists of a relatively large number of aspects (such as social roles, superordinate traits, and goals), which are distinct from one another in terms of the features that they include. Although self-complexity has largely been looked at as an individual difference variable (e.g., Linville, 1985, 1987), recent evidence suggests that it can vary based on situational factors (e.g., Margolin & Niedenthal, 2000). According to the current theoretical account, one factor that should influence self-complexity is temporal perspective: That is, distant-future self-representations should be characterized by a simpler structure than near-future self-representations.

### *Method*

*Participants.* Ninety Tel Aviv University students (68 women, 22 men) participated in individual sessions in partial fulfillment of an introductory psychology course requirement. Participants were randomly assigned to either the near-future condition or the distant-future condition.

[2] The scale's internal reliability is relatively low, an outcome not surprising given that the scale was constructed by averaging $z$ scores from individual items that each had a different range of responses (i.e., item hierarchies ranged from 2–5 levels). Given the scale's relatively low alpha, however, we conducted an alternative analysis to examine the proportion of items a participant completed for which he or she selected the most broad, inclusive identification. Results were consistent with the $z$ score measure: Participants in the distant-future condition selected the broadest identification a greater percentage of the time than did those in the near-future condition ($M = 49\%$ vs. $M = 41\%$), $t(78) = 2.13$, $p < .05$, $d = 0.48$.

*Procedure.* An adapted version of Linville's (1985) self-complexity sorting task was used to measure self-complexity. Each participant received a packet of 40 randomly ordered cards, with one attribute written on each card. The attributes were chosen from an open-ended self-description pilot test to represent a wide range of characteristics that students use to describe themselves. They included both positive attributes (e.g., optimistic, creative) and negative attributes (e.g., irresponsible, lazy). Participants were asked to use these cards to describe themselves to another person they would meet either in the near future or in the distant future. The instructions were as follows:

> On occasion we try to describe ourselves to someone else who wishes to know us. Imagine that sometime this week [in a week a year from now] you will communicate with someone who doesn't know you very well. This could be any person, for example, a new acquaintance or a classmate. Take a few minutes and try to imagine yourself this week [a year from now] meeting with this person . . . Please describe yourself to this person by using these cards. There are 40 cards, with one trait or characteristic written on each card. Your task is to form groups of traits that go together, with each group describing an aspect of you or your life. You may sort the traits into groups on any meaningful basis. Form as many groups as you desire and make each group contain as many traits as you feel appropriate. You do not have to use all the traits, only those that you feel are descriptive of you. Also, each trait may be used in more than one group, so you may keep reusing traits as many times as you like. If you wish to use a trait in more than one group, you may use one of these blank cards. Simply write the trait on a blank card and then proceed to use it as you would use any other card.

After completing the sorting task, participants were debriefed and thanked for their participation.

Self-complexity measurements were calculated following Linville (1985). For each participant we computed a score that represented the number of independent attributes in the participant's card-sort. This score, which is indicated as $H$, is defined by:

$$H = \log_2 n - (\Sigma_i n_i \log_2 n_i)/n,$$

where $n$ is the total number of attributes (in our study, $n = 40$), and $n_i$ is the number of attributes that appear in a particular group of attributes. For example, if a person forms two groups of attributes, any given attribute may fall into one of four possible group combinations: Group 1 only, Group 2 only, both Group 1 and Group 2, or none of the groups. In this example, the $n_i$ in the formula takes the following values: $n_1$ = number of attributes sorted only into Group 1; $n_2$ = number of attributes sorted only into Group 2; $n_3$ = number of attributes sorted into both Group 1 and Group 2; and $n_4$ = number of attributes sorted into neither group. The maximum value of $H$ is $\log_2 n$. In the present study $n = 40$, such that the maximum $H$ score is 5.32 ($\log_2 40$).

The $H$ score can be interpreted as the minimal number of independent, binary attributes underlying a person's self-description. $H$ increases with the number of groups and decreases the more redundant that the groups are (i.e., with attributes repeating across groups). Thus, high self-complexity results from having a large number of self-aspects with unique characteristics. Low self-complexity results either from having few self-aspects or from having many self-aspects that are highly redundant in terms of the attributes that describe them.

### *Results and Discussion*

The number of groups created in the sorting task ranged from two to nine ($M = 3.5$, $SD = 1.2$), with an average of 5.1 traits in each group ($SD = 2.5$). $H$ ranged from 1.0 to 3.0 ($M = 1.6$, $SD = 0.35$). As expected, self-complexity scores were lower when participants described themselves in the distant future than when they described themselves in the near future ($M = 1.5$ vs. $M = 1.7$, respectively), $t(88) = 2.87$, $p < .01$, $d = 0.61$, suggesting that indeed the distant-future self is represented in a simpler, less complex fashion than the near-future self.

We did, however, consider the possibility that differences in self-complexity between near- and distant-future selves resulted from a general tendency to portray a more favorable (and thus simpler) description of the self in the distant future. An additional sample of 73 participants rated each of the 40 traits used in the sorting task, on a scale ranging from 1 (*very negative*) to 9 (*very positive*). The mean valence of the 40 attributes was 5.16 ($SD = 0.35$). The valence scores of the traits each participant selected in the sorting task were used to calculate a mean positivity score for each participant. Overall, results revealed a general positivity bias; participants selected traits that were relatively positive on average ($M = 6.34$), as compared with the mean valence of the 40 possible attributes, ($M = 5.16$), $t(88) = 14.9$, $p < .001$, $d = 3.18$. This positivity bias, however, did not differ across near-future and distant-future self-descriptions ($M = 6.3$ vs. $M = 6.4$, respectively), $t(88) = 1.17$, $p = .24$. Thus, it does not appear that positivity can explain the time-dependent differences obtained in self-complexity.

In summary, then, participants' self-descriptions had a less complex structure when they described themselves to someone they would meet in the distant future versus the near future. In Study 3, we use an additional measure of self-structure, self-concept differentiation (SCD; Donahue et al., 1993), to more closely examine one aspect of structured self-representation: the degree to which individuals see themselves similarly across social contexts. We argue that individuals think of themselves in more general terms in the distant future, even when considering a self that is situated within a particular context. Accordingly, self-descriptions across different contexts should be characterized by greater consistency when thinking about the self in the distant future than when thinking about the self in the near future.

## Study 3: SCD

According to Donahue and colleagues (1993), individuals can have an integrated, coherent sense of who they are or a fragmented self-concept in which they see themselves as shifting dramatically according to social context. To examine this construct, these researchers have developed a measure of SCD in which individuals describe the personality traits they possess across a variety of important social roles. Although similar in some respects to Linville's (1985) self-complexity measure described in Study 2, an important difference in the two measures is that Linville's procedure asks respondents to spontaneously generate self-aspects of any of a variety of types, whereas Donahue and colleagues' (1993) measure presents individuals with a particular context in which to describe themselves and calculates the overlap in self-descriptions across these contexts (see Campbell, Assanand, & Di Paula, 2000,

and Lutz & Ross, 2003, for a more detailed discussion of differences in these two measures of self-structure). Thus, measurement of SCD is particularly suitable for examining self-concept consistency. As with self-complexity, however, this variable has been largely conceptualized as an individual difference variable. In contrast, in the current study, we suggest that SCD will fluctuate as a function of the self-representation that is currently activated. Specifically, we expect distant-future self-descriptions to show greater consistency across social roles than near-future self-descriptions.

### *Method*

*Participants.* Fifty-five New York University students (41 women, 13 men, 1 participant who did not indicate gender) participated in small groups in partial fulfillment of a course requirement. Participants were randomly assigned to either the near-future condition or the distant-future condition.

*Materials and procedure.* An adapted version of Donahue et al.'s (1993) SCD task was used to examine personality consistency across social roles. Participants rated themselves on a list of personality traits for each of five social roles important to an undergraduate student population: student, son or daughter, friend, employee, and romantic partner. To limit participant fatigue, we followed Sheldon, Ryan, Rawsthorne, and Ilardi (1997) and presented participants with a shorter list of items, each of which had broad personality characteristics applicable across the five social roles. The 44 items included on the list were extraverted, irresponsible, energetic, passive, cheerful, unpunctual, generous, selfish, vigorous, not orderly, perceptive, unintelligent, active, joyless, polite, imperceptive, talkative, dutiful, kind, not energetic, shy, tactful, foresighted, insecure, artistic, scatterbrained, timid, friendly, unhappy, daring, impolite, careless, introverted, considerate, adventurous, orderly, not cheerful, self-confident, inartistic, responsible, inconsiderate, disorganized, intelligent, and tactless. Participants read a brief definition of the social role under consideration and then rated the degree to which each of the 44 attributes was or was not characteristic of the way they saw themselves in that role. All ratings were made on scales ranging from 1 (*very uncharacteristic of me*) to 8 (*very characteristic of me*). In the near-future condition, participants were instructed to think of themselves as they would be in that role tomorrow; in the distant-future condition, participants were instructed to think of themselves as they would be in that role on a day 1 year from now. The order of roles was counterbalanced between the participants and the order of traits varied within each social role.

### *Results and Discussion*

SCD scores, representing the degree to which an individual's ordering of attributes from most to least descriptive varies from role to role, were computed for each participant. Following Donahue et al. (1993)'s method of computing SCD, we used factor analysis to measure the proportion of variance not shared across the five social roles. Specifically, we created individual data files for each participant and restructured these files such that the personality items for each role, rather than participants, were treated as the unit of analysis. Next, we factor analyzed each participant's personality ratings across the five social roles. The first principal component, representing the variance shared by the five roles, was extracted, with the remaining variance used as a measure of SCD. Higher values indicate more unshared variance across the roles and, hence, higher SCD. This index, which is derived from correlations between role identities, can be interpreted as the degree to which a respondent's ordering of the attributes differs across roles and can also be expressed as the mean intercorrelation among the role identities.[3] For instance, the lowest SCD score in the current sample (3.51) corresponded to a mean interrole correlation of .96. This respondent's ordering of attributes in any one role identity was almost perfectly predictable from his or her ordering of the attributes in any other. In contrast, the highest SCD score in the sample was 51.45, which corresponded to a mean interrole correlation of .37; this respondent's ordering of attributes was considerably more variable across roles.

As expected, participants' near-future selves were more differentiated ($M = 23.96$; $SD = 12.13$) than were participants' distant-future selves ($M = 17.05$; $SD = 10.05$), $t(53) = 2.21$, $p < .05$, $d = 0.61$. That is, people described their personalities as being more consistent across social roles when thinking of themselves in a year from now than when thinking of themselves tomorrow. We also examined whether, in general, participants tended to rate themselves more positively in the distant future than in the near future. Eight judges, who were students from the same population as the respondents, classified each of the 44 traits into one of three groups: (a) positive traits, (b) neutral traits, and (c) negative traits. Classification was based on agreement among at least five of the judges. Twenty traits were classified as positive (e.g., cheerful, generous, intelligent), 19 as negative (e.g., irresponsible, unhappy, impolite), and 3 as neutral (shy, talkative, and introverted). Two traits (vigorous and inartistic) did not meet the criterion of agreement among five or more judges and were thus omitted from further analyses. To examine whether time influenced participants' average positive, negative, and neutral trait ratings, we conducted a 2 (time) $\times$ 3 (valence of attributes) mixed design analysis of variance (ANOVA). Evidence of a general positivity bias was revealed by a strong main effect of trait valence: Positively valenced traits were rated the most self-characteristic ($M = 5.90$), followed by neutral traits ($M = 4.12$), and then negative traits ($M = 2.63$) $F(2, 106) = 212.00$, $p < .001$, $\eta_p^2 = .80$. However, there was no main effect of temporal distance nor any interaction between time and valence ($F$s $< 1$.) Thus, there was no evidence to suggest that the temporal shifts in SCD were driven by changes in the degree to which participants rated themselves positively.

In sum, the results are supportive of our proposal that the distant-future self is represented in a more general, decontextualized manner than is the near-future self. One interesting implication of this idea is for the facility with which people can make general trait judgments. If people indeed think about their distant-future self in a general way then this should facilitate the general trait judgments that people make about their distant-future self. In contrast, if people think about their near-future self in a more contextualized fashion, this should impede their making general

[3] Donahue and colleagues (Donahue et al., 1993) provide the formula for the relationship between $R$, the mean of the interrole correlations, and $E$, the eigenvalue of the first principal component, as $R = (E\text{-}l)/(N - 1)$, where $N$ is the number of variables in the correlation matrix (five in the current case).

trait judgments about their near-future self. In Study 4, we examine this directly using a classic me/not me reaction-time paradigm.

## Study 4: Me/Not Me Trait Judgments

A number of previous studies suggest that having a self-schema about a trait leads one to more quickly identify that trait as either self-descriptive or not self-descriptive (e.g., Kuiper, 1981; Markus, 1977). That is, having a strong opinion of a trait's self-descriptiveness manifests itself in faster reaction times when making judgments in a me/not me trait categorization task. In the current study, we use this paradigm to examine our proposition that the making of general trait judgments will be facilitated when thinking of a distant-future self as opposed to when thinking of a near-future self. If distant-future self-representations are more closely related to one's general self, this should enable individuals to more quickly decide whether a general characteristic is self-descriptive when thinking about a distant-future (vs. near-future) self. Furthermore, if this effect is related to structural components of self-representation, rather than to having a more positive outlook on a distant-future self, then this effect should not be influenced by the valence of the adjectives in question (i.e., faster acceptance of positive traits and rejection of negative traits).

### *Method*

*Participants.* Forty-three New York University students (30 women, 12 men, 1 of unknown gender) participated in partial fulfillment of a course requirement. Participants were randomly assigned to near- and distant-future conditions.

*Procedure.* Upon arrival for the study, participants were led to individual computer cubicles. Instructions presented on the computer screen explained that the experimenters in this study were interested in understanding the way that people think about and describe themselves. Participants were asked to imagine their lives either tomorrow (near-future condition) or on a day in 1 year from now (distant-future condition) and to write a paragraph describing themselves and their life at that time. Next, participants in the near-future [distant-future] condition were told that "In order to continue describing yourself tomorrow [on a day in one year from now], we would like you to decide whether a series of adjectives will describe you at that time." Participants were presented with a series of adjectives selected from Anderson (1968). They were instructed to decide as quickly as possible, while still being accurate, whether that trait applied to the themselves by pressing either the right control key (labeled *me*) if the word described them or the left control key (labeled *not me*) if the word did not describe them. Ten practice adjectives were presented, followed by a list of 96 adjectives, presented in random order. One third of these adjectives were positive in valence (e.g., honest, friendly), one third were negative (e.g., envious, lazy), and one third were neutral (e.g., casual, impressionable). Each adjective remained onscreen until the participant pressed a key; the computer recorded both responses and response latencies. After completing the rating task, participants responded to a number of follow-up items, including the degree of effort they put into the experimental task (1 = *very little;* 7 = *very much*) and demographic information, and participants were then debriefed and thanked for participation.

### *Results and Discussion*

Participants' average reaction time to the 96 adjectives was computed; because of the skewed nature of reaction time data, analyses were performed on the natural log transform of these average reaction times.[4] As expected, participants were faster at making me/not me judgments when describing themselves in the distant future ($M$ = 1,045.68; $SD$ = 220.51) than when describing themselves in the near future ($M$ = 1,175.45; $SD$ = 190.33), $t(37) = 2.12$, $p < .05$, $d = 0.73$. This occurred despite participants in the two conditions reporting placing an equal amount of effort into the experimental task ($M_{\text{distant}} = 5.21$ vs. $M_{\text{near}} = 5.20$, $p > .98$).[5] Actual judgments, however, did not appear to systematically differ between conditions. That is, participants made a similar number of me versus not me decisions overall in the distant-future and near-future conditions. Moreover, this was true across positive, neutral, and negative adjectives ($p$s $> .29$; see Table 1 for means and standard deviations). Thus, differences in reaction time of the adjective judgments would seem unrelated to differences in the content of these judgments.

Furthermore, to examine whether the reaction time findings themselves fluctuated as a function of adjective valence, we ran a 2 (time) × 3 (adjective valence) mixed design ANOVA with time as a between-subjects factor and adjective valence as a within subjects factor. As with the simple $t$ test, this analysis revealed a main effect of time, $F(1, 37) = 4.64$, $p < .05$, $\eta_p^2 = .11$. In contrast, there was no evidence of a Time × Adjective Valence interaction ($F < 1$), suggesting that the main effect of time did not differ as function of adjective valence. Of secondary interest here, results also revealed a main effect of valence, $F(2, 74) = 31.35$, $p < .001$, $\eta_p^2 = .46$; judgments of positive adjectives ($M$ = 1,006.93) were made more quickly than were judgments of negative adjectives ($M$ = 1,139.33), which were made more quickly than were judgments of neutral adjectives ($M$ = 1,184.51).

Finally, we also considered whether the effect of temporal distance varied as a function of the decision (me vs. not me) that participants made about the adjective in the task. A 2 (time) × 2 (me/not me decision) mixed design ANOVA with time as a between-subjects factor and me/not me decision as a within-subjects factor yielded a significant main effect of me/not me decision, $F(1, 37) = 32.67$, $p < .001$, $\eta_p^2 = .47$, whereby participants made faster me decisions ($M$ = 1,082.09) than not me decisions ($M$ = 1,135.84). Of more relevance to the current purpose, the analysis revealed the expected main effect of time, $F(1, 37) = 5.34$, $p < .05$, $\eta_p^2 = .13$. In contrast, there was no evidence of a Time × Me/Not Me decision interaction ($p > .30$), suggesting that the main effect of time did not differ as a function of whether the adjectives were judged to be self-characteristic.

[4] In line with Bargh and Chartrand's (2000) recommendation, individuals' responses were trimmed for outliers (responses > 2.5 $SD$ from the individual participant's mean reaction time) before computing this average. In addition, reaction times of four participants were outliers and were dropped from the reported analysis. The pattern of results does not change if these outliers (which were located above and below the condition means) are included in the data set.

[5] Because of a computer malfunction that occurred subsequent to the experiment, data for the effort item was missing for 6 participants.

Table 1
*Percentage of Me (vs. Not Me) Responses as a Function of Temporal Distance: Study 4*

| | Near future | | Distant future | |
|---|---|---|---|---|
| Word type | *M* | *SD* | *M* | *SD* |
| Positive (%) | 84.05 | 14.28 | 85.31 | 12.75 |
| Neutral (%) | 54.77 | 12.77 | 59.06 | 12.62 |
| Negative (%) | 26.48 | 20.63 | 31.55 | 17.33 |
| Overall (%) | 55.10 | 10.90 | 58.66 | 9.63 |

*Note.* For near future, $n = 19$; for distance future, $n = 20$. All mean pairs did not differ by condition ($ps > .28$).

In summary, then, individuals were quicker to make judgments about whether traits were self-descriptive when thinking of a distant-future versus near-future self. This supports our contention that as compared with the near-future self, the distant-future self is more easily judged in terms of general trait characteristics.

In the following studies, we examine implications of the present analysis for the predictions and inferences people make about their future behavior. Traditional measures of the general self-concept (without time specification) assess decontextualized and stable attributes (e.g., the type of person one typically is). We expect that the general self, thus assessed, is more likely to be reflected in predictions people make about their behavior in the more distant future than those of the near future. This should occur because temporal distance highlights general, decontextualized determinants of behavior, and general self-characteristics are just such factors. In contrast, because near-future behaviors are perceived more contextually in terms of specific situational factors, people should be less likely to base their behavioral predictions on a general sense of self. Furthermore, if distant behaviors are indeed expected to be more in line with one's general disposition, we should find a higher degree of cross-situational consistency for expected distant-future behavior than expected near-future behavior. We examine these ideas in Study 5.

## Study 5: Cross-Situational Behavioral Predictions

Individuals typically expect themselves to behave consistently across situations (e.g., McConnell, Rydell, & Leibold, 2002). At the same time, people can sometimes recognize the way in which the social situation influences their behavior in the here and now (e.g., Jones & Harris, 1967; Mischel & Shoda, 1995). According to the current approach, when predicting distant-future behavior, participants are more likely to consult the general self, whereas when predicting near-future behaviors they are more likely to take into consideration the specifics of the situations. As a result, individuals should expect themselves to act more consistently across diverse situations expected to occur in the distant future than those of the near future. Furthermore, predictions made about distant-future behavior should more closely relate to the perceptions people have of their general self-characteristics. The current study examines these predictions.

### *Method*

*Participants.* Seventy-five Tel Aviv University students (55 women, 17 men, 3 participants who did not indicate gender) participated in small groups of 2–4 participants, in partial fulfillment of an introductory psychology course requirement. Participants were randomly assigned to either the near-future condition or the distant-future condition.

*Materials and procedure.* Materials for this experiment were included among other unrelated studies. Participants first completed a self-description questionnaire in which they rated themselves on 15 bipolar traits, with 3 traits representing each of the Big Five trait dimensions (McCrae & Costa, 1996, 1997): Extraversion (quiet–talkative, passive–active, inhibited–impulsive), Agreeableness (selfish–unselfish, unfriendly–friendly, boastful–modest), Conscientiousness (irresponsible–responsible, frivolous–serious, disorganized–organized), Neuroticism (agitated–calm, emotional–reserved, insecure–secure) and Openness to Experience (uncreative–creative, uninquisitive–curious, blunt–sharp). Participants were instructed to provide general self-ratings, that is, to describe their typical characteristics. Ratings were made on scales ranging from 1 to 9, anchored with the opposite trait terms.

After completion of the self-description questionnaire, participants answered unrelated surveys for about 30 min. They then responded to an adapted version of Van-Heck, Perugini, Caprara, and Fröger's (1994) Tendencies-in-a-Situation Scale, originally designed to assess cross-situational consistency of traits (see also Nussbaum, Trope, & Liberman, 2003, Study 2). Specifically, participants were asked to imagine themselves in three situations to occur either in the next couple of days (near-future condition) or a few months later (distant-future condition). The situations were having an argument with someone, meeting with unfamiliar people, and attending a birthday party. The order of the three situations was counterbalanced across participants. Participants indicated how they would behave in each situation on the same 15 bipolar traits as in the self-description questionnaire that they had completed earlier in the study, along with 5 filler traits (e.g., weak–strong, strict–lenient) that varied from situation to situation. Ratings were made on scales ranging from 1 to 9, anchored with the opposite trait terms. For example, the argument situation read as follows:

> Suppose that in the next couple of days [a few months from today] you will have an argument with someone. How do you think you will behave? How passive or active will you be? How unfriendly or friendly will you be?"

After making these judgments, participants were debriefed and thanked for their participation.

### *Results and Discussion*

*Self-ratings and behavior predictions.* Within-subject correlations between each participant's general self-ratings and situation-specific behavior predictions were computed separately for each of the three situations. These three coefficients were then transformed into $z$ scores and averaged in order to create a single index reflecting the extent to which a participant's anticipated behavior in specific situations was related to his or her general trait self-ratings. As expected, the correlations between general self-ratings and predicted behavior were higher when predictions were made for the distant future rather than for the near future ($r = .76$ vs. $r = .67$, respectively), $t(73) = 2.23$, $p < .05$, $d = 0.52$.

*Cross-situational consistency.* One way of examining consistency across situations is to compute the variance of each trait across the three behavioral situations; the higher the variance in a particular trait, the greater degree to which a participant predicted that he or she would show different levels of that trait while having an argument, meeting unfamiliar people, and attending a party. In line with this logic, we computed the variance across the three situations for each of the 15 traits. Next, in order to create an index of cross situational consistency for each of the Big Five dimensions, we took an average of these variance scores across the three traits tapping each of the Big Five trait dimensions (see Table 2).

Near-future and distant-future cross-situational variance scores were subjected to a 2 (time) × 5 (Big Five trait dimension) ANOVA, with time as a between-subjects factor and the Big Five trait dimensions as a within-subjects factor. In line with our hypothesis that participants would expect themselves to behave more consistently across distant-future situations than across near-future situations, the analysis yielded a significant main effect of temporal distance, $F(1, 73) = 4.82$, $p < .05$, $\eta_p^2 = .06$, in which cross-situational variance was lower in the distant-future condition than in the near-future condition ($M = 1.1$ vs. $M = 1.7$, respectively). This pattern did not vary across the Big Five trait dimensions, as indicated by the nonsignificant Time × Big Five trait dimension interaction ($F < 1$). Of secondary interest here, a main effect of trait dimension, $F(4, 73) = 14.08$, $p < .001$, $\eta_p^2 = .16$, indicated that participants expected themselves to show greater cross-situational consistency in behavior related to some traits (e.g., conscientiousness) than in behavior related to other traits (e.g., neuroticism).

Another way to look at cross-situational consistency is to examine the extent to which behavior predictions are correlated across the three behavioral situations. If behaviors are correlated then behavior in one situation could be predicted from behavior in other situations. We thus computed within-subject correlations reflecting the relationship between participants' behavioral predictions in one situation and their behavioral predictions in the other situations. Correlations were computed for each pair of situations separately, and the resulting three coefficients were *z* transformed and averaged. In line with our former findings, the cross-situational correlations between distant-future behaviors were higher than the correlations between near-future behaviors (*r*s = .74 and .59, respectively), $t(73) = 2.81$, $p < .01$, $d = 0.66$.

Table 2
*Cross-Situational Variance Scores as a Function of Temporal Distance: Study 5*

| | Near future | | Distant future | |
|---|---|---|---|---|
| Trait dimensions | *M* | *SD* | *M* | *SD* |
| Extroversion | 2.02 | 2.28 | 1.53 | 1.65 |
| Agreeableness | 1.38 | 1.33 | 1.03 | 0.94 |
| Neuroticism | 2.39 | 2.27 | 1.66 | 1.26 |
| Openness | 1.45 | 1.80 | 0.52 | 0.62 |
| Conscientiousness | 1.13 | 1.13 | 0.61 | 0.75 |
| Overall | 1.67 | 1.41 | 1.07 | 0.73 |

*Note.* For near future, $n = 43$; for distant future, $n = 32$. Trait ratings were made on a 1–9 bipolar scale.

Finally, we considered whether a tendency to make more moderate predictions about distant-future behavior might be responsible for the greater consistency in these predictions. To examine this, we computed each participant's mean behavior prediction score for each of the five trait dimensions across the three situations. As can be seen in Table 3, distant-future prediction scores did not differ from near-future prediction scores. Indeed, a Time × Trait Dimension ANOVA yielded a nonsignificant main effect of time ($F < 1$), making it unlikely that the greater cross-situational consistency in distant-future predictions stems from a tendency to make more moderate predictions about distant-future situations.

In sum, the results are consistent with our proposition that the self called on to predict distant-future behavior is general and decontextualized. As expected, individuals' expectations of their distant-future behavior were more strongly related to their general self-conceptions and were more consistent across a variety of different behavioral situations than were expectations of near-future behavior. Indeed, this is somewhat counterintuitive: A person's general self measured in the present is more congruent with behaviors she or he predicts for the distant (vs. near) future, despite the fact that less should be known about what the self might be like in the distant future. We should, however, note here that these findings do not speak to the issue of predictive accuracy (cf., T. D. Wilson & Gilbert, 2003; T. D. Wilson & LaFleur, 1995). That is, the current results suggest that behavioral predictions for the near and distant future differentially relate to general self-conceptions, but we do not know whether participants were more accurate in their predictions for the near future or in their predictions for the distant future. We suspect that accuracy will depend on whether the predicted behavior is typically determined by specific situational factors (in which case near-future predictions should be more accurate) or by more general dispositional factors (in which case distant-future predictions should be more accurate), although this point remains speculative until clarified by future research.

In our final two studies we expand on the current finding that distant-future behavioral predictions more closely match general self-characteristics by examining the reverse association. That is, given that distant-future behaviors are more strongly linked with general self-characteristics than are near-future behaviors, individuals should be more likely to think that distant-future behaviors communicate something about the general self.

## Study 6: Future Behaviors as Expressing the Self

In Studies 1–4, we argue that distant-future self-representations are more abstract, schematic, and consistent than are near-future self-representations. Furthermore, our findings in Study 5 suggest that distant-future behavioral expectations are more strongly related to one's general self-characteristics than are near-future behavioral expectations. Put differently, these findings suggest that individuals more closely link their distant-future actions to their general self than they do their near-future actions, which are increasingly expected to be influenced by the situational context. For example, an individual imagining himself at a party to occur in a year from now would expect to act in a gregarious manner only if being gregarious fits who he generally is. In contrast, someone imagining himself at a party to occur tomorrow would be more likely to consider the effect that the party context will have on his level of gregariousness and would thus be less likely to base his

Table 3
*Behavior Prediction Scores Across Three Situations as a Function of Temporal Distance: Study 5*

| | Near future | | Distant future | |
|---|---|---|---|---|
| Trait dimensions | *M* | *SD* | *M* | *SD* |
| Extroversion | 5.50 | 1.10 | 5.33 | 1.19 |
| Agreeableness | 6.39 | 0.97 | 6.40 | 0.89 |
| Neuroticism | 5.50 | 0.84 | 5.46 | 1.05 |
| Openness | 6.37 | 0.90 | 6.88 | 0.89 |
| Conscientiousness | 6.74 | 0.87 | 7.02 | 1.12 |
| Overall | 6.10 | 0.51 | 6.22 | 0.55 |

*Note.* For near future, $n = 43$; for distant future, $n = 32$. Trait ratings were made on a 1–9 bipolar scale.

expectations of how gregarious he will be at the party only on the extent to which being gregarious is part of his general self-concept. In the current study, we look at implications of this conceptualization for the degree to which behaviors are seen as self-expressive. If people expect their general self-characteristics to drive their distant-future behavior, then they might correspondingly expect their distant-future behavior to convey information about their general self-characteristics. We thus expect individuals to judge distant-future behaviors, more so than near-future behaviors, as saying something about who one is generally.

### *Method*

*Participants.* Sixty Tel Aviv University students (53 women, 7 men) participated in small groups of 2–4 participants, in partial fulfillment of an introductory psychology course requirement. Participants were randomly assigned to either the near-future condition or the distant-future condition.

*Materials and procedure.* The experimental questionnaire was included in a packet containing materials for several unrelated studies. Participants were presented with a list of 25 activities (e.g., "adopting a kitten," "organizing a surprise party for a friend," "participating in a political rally"). Activities were chosen to represent a wide range of extracurricular behaviors that students frequently engage in. Participants were asked to imagine themselves doing each activity sometime in the present week (near-future condition) or in a week a year later (distant-future condition) and to indicate the extent to which doing this activity would say something about them. Specifically, for each activity, participants responded to the following item: "If you behave in the described way, how much will it express who you are, that is, how much will it say something about you, your character and your preferences?"

Responses were made on a scale ranging from 1 (*not at all express who I am*) to 9 (*very much express who I am*).

### *Results and Discussion*

The average of the self-expressiveness ratings for the 25 activities was used as the dependent measure (Cronbach's $\alpha = .72$). As predicted, activities imagined in the distant future were perceived as more self-expressive than were activities imagined in the near-future ($M = 5.96$ vs. $M = 5.03$, respectively), $t(58) = 4.96$, $p < .001$, $d = 1.30$.

In order to examine whether this effect was contingent on the desirability of the activities, we had eight student judges from the same population as the respondents assess the desirability of the 25 activities. Desirability was considered as either the pleasantness of the activity or its importance. The judges were asked to classify the activities into three groups: (a) pleasant, enjoyable activities; (b) neutral activities; and (c) unpleasant, unlikable activities. In addition, they were asked to classify the same set of behaviors again, according to a different criterion: (a) important, valuable activities; (b) neutral activities; (c) unimportant, nonvaluable activities. The final classification of each activity was based on agreement among at least five of the eight judges.

Most activities were judged as desirable: either pleasant (10 activities) or important (5 activities) or both (2 activities). The remaining 8 activities were judged as neutral (5 activities) or undesirable (1 unpleasant, 1 unimportant, and 1 both unpleasant and unimportant). Separate mean scores of self-expressiveness were computed for desirable and for undesirable or neutral activities. A mixed design ANOVA conducted on these scores, with time as a between-subjects factor and desirability as a within-subjects factor, revealed a significant main effect of time, $F(1, 58) = 19.04$, $p < .001$, $\eta_p^2 = .25$. In line with the previous analysis, activities that were imagined in the distant future were seen as more self-revealing than were the same activities when imagined in the near future ($M = 5.7$ vs. $M = 4.8$, respectively). Furthermore, this effect was obtained for both desirable activities ($M = 6.5$ vs. $M = 5.4$), $t(58) = 4.99$, $p < .001$, $d = 1.31$, and undesirable or neutral activities ($M = 4.8$ vs. $M = 4.3$), $t(58) = 2.07$, $p < .05$, $d = 0.54$, although the effect was somewhat stronger for desirable than for undesirable activities, $F(1, 58) = 2.90$, $p = .09$, $\eta_p^2 = .05$. Of secondary interest here, results also revealed a main effect of desirability, $F(1, 58) = 78.83$, $p < .001$, $\eta_p^2 = .58$, with desirable activities seen more as expressing oneself than were neutral or undesirable activities ($M = 5.9$ vs. $M = 4.5$, respectively).

Overall, then, individuals judged distant-future behavior, more than near-future behavior, as expressions of their general character. It is important, however, to point out that this was the case when participants were asked to consider how much a series of random behaviors would be self-expressive if they choose to pursue them. What would occur if, in contrast to these types of behaviors, individuals first thought about their general self-characteristics and then considered activities that went against these general traits? According to the current perspective, if participants have indicated that they in general think of themselves in one way, they would expect themselves to act in a manner consistent with that fashion in the distant future. Therefore, they should judge situations in which they did not act in a trait consistent manner as not being reflective of the self. In other words, whereas behaviors in general should be seen as more self-expressive when performed in the distant future, this should not be the case for countertrait behaviors. We consider this hypothesis in Study 7.

## Study 7: Self-Congruence of Countertrait Behaviors

### *Method*

*Participants.* Forty-four Tel Aviv University students (35 women, 9 men) participated in small groups of 2–4 participants, in

partial fulfillment of an introductory psychology course requirement. Participants were randomly assigned to either the near-future condition or the distant-future condition.

*Materials and procedure.* Participants signed up for an experiment titled Self-Description. At the start of the study, they completed a self-description questionnaire in which they were asked to describe their typical characteristics. Participants rated themselves on 20 positive (e.g., optimistic, punctual) and negative (e.g., unconfident, messy) traits chosen from the same pretest data as in Study 2. Ratings were made on a scale ranging from 1 (*not at all describes me*) to 9 (*very much describes me*). Next, participants were asked to imagine themselves in 20 different scenarios in the present week (near-future condition) or in a week a year later (distant-future condition). Each scenario depicted a behavior that was designed to contradict one of the 20 traits that had been rated by participants in the earlier stage of the experiment. For example, the scenario "you arrive half an hour late to a job interview" is inconsistent with the trait "punctual," and "your class notes are complimented for being tidy and organized" is inconsistent with the trait "messy." For each scenario, participants indicated the extent to which it would be congruent with their underlying, general self by answering the following question: "If you find yourself in this situation, how much will you feel it is 'you,' that is, how much will it reflect your 'real' self, be consistent with what you really are?" Responses were made on a scale ranging from 1 (*not at all like myself*) to 9 (*very much like myself*).

### *Results and Discussion*

Our measure in the current study was intended to capture the degree to which trait-inconsistent behaviors are seen as self-congruent. It was therefore critical for the behaviors presented in the scenarios to in fact negatively correlate with the corresponding traits measured at the study's start. Accordingly, before proceeding with our between-condition analysis, we computed the correlations between the participants' ratings of the self-descriptiveness of each trait and the extent to which countertrait behaviors were considered self-congruent. Twelve of the 20 original trait-behavior pairs showed medium to high negative correlations ($r \leq -.30$; see Appendix B for these item pairs). The remaining pairs showed minimal, nonsignificant correlations and were therefore not used in subsequent analyses.

Within-subjects correlations were computed between traits and countertrait behaviors. Not surprisingly, these correlations were negative (average $r = -.61$), indicating that the more a trait was seen as self-descriptive, the less a countertrait scenario was judged as self-congruent. For example, the more optimistic one generally evaluated oneself, the less likely one was to judge a pessimistic behavior (e.g., having pessimistic thoughts after listening to the news) as reflective of one's real self. To examine whether the strength of these negative correlations differed as a function of temporal distance, we $z$ transformed the correlations and compared their magnitude in the near-future and distant-future conditions. Consistent with our hypothesis, correlations were higher when the countertrait scenarios were imagined in the distant future than when the same scenarios were imagined in the near future ($r = -.68$ vs. $r = -.53$, respectively), $t(42) = 2.13$, $p < .05$, $d = 0.66$.

Furthermore, to examine whether these results reflected a simple positivity bias in which the distant-future self was portrayed in a more positive manner than was the near-future self, we had nine judges assess the valence of the 12 traits used in the analysis. The judges, who were students from the same population as the respondents, were asked to classify each trait into one of three groups: (a) positive traits, (b) neutral traits, and (c) negative traits. The final classification was based on agreement among at least five judges. Five traits were classified as positive (optimistic, responsible, punctual, idealist, open), and six were classified as negative (shy, spendthrift, messy, unconfident, naïve, having a poor sense of direction). One trait, perfectionism, did not meet the criterion of agreement among five or more judges (it was classified as neutral by 4 of the judges, as negative by 3, and as positive by 2) and was thus omitted from further analyses. To examine whether the effect of time varied as a function of trait valence, we computed separate trait-behavior within-subjects correlations for positive and negative traits. A 2 (time) $\times$ 2 (trait valence) ANOVA on these $z$ transformed correlations yielded a marginal effect of time, $F(1, 42) = 3.19$, $p = .08$, $\eta_p^2 = .07$, indicating that correlations were higher in the distant future condition than in the near future condition. It is important to note that the effect of time was independent of the traits' valence, as indicated by the nonsignificant Time $\times$ Valence interaction ($F < 1$). Finally, valence did not have a significant effect on the trait-behavior correlations ($F < 1$). Thus, temporal distance increased the negative relations between traits and their opposite behavioral manifestations for both positive and negative traits. As in Study 6, then, individuals seemed to expect their distant-future behavior, more than their near-future behavior, to match up with their self characteristics; consequently, they more strongly rejected situations in which their behavior would be inconsistent with their general traits.

## General Discussion

In the current article, we argue that individuals' representations of their near- and distant-future selves are systematically different from one another, with distant-future self-representations increasingly reflecting a higher level construal of the self. We also argue that standard measures of the self that assess general and decontextualized self-aspects should be reflected in predictions for the distant future more than in predictions for the near future. A series of seven studies supported these basic propositions, highlighting a range of ways that differences in construal are manifest in relation to the self concept.

In Study 1, we focused on social categorizations, finding that the distant self is increasingly identified in terms of broad, inclusive social categories versus narrow, specific social categories. Next, in Study 2, we allowed individuals to use a set of descriptors to idiosyncratically generate self-aspects with which to describe themselves. Results using this self-complexity sorting task (Linville, 1985) again showed that there was a preference for greater breadth of categorization regarding a distant-future self, resulting in a simpler structure for distant self-representations versus near self-representations. In Study 3, we built on this finding with a different measure of self-structure, SCD (Donahue et al., 1993), examining the degree to which the near-

and distant-future self is thought of in a consistent, decontextualized manner. As expected, individuals saw themselves as having more similar personalities across various social roles (e.g., a friend, a son or a daughter) when they considered a distant-future self versus a near-future self. The idea that distant self-representations are more general and schematic in nature than are near-future self-representations received further support in Study 4, which showed that individuals were faster to decide whether a general trait was self-descriptive when thinking about a distant-future self than when thinking about a near-future self. In Studies 5–7, we examined the implications of the present analysis for predictions and inferences people make about their future behavior. We predicted that the general self, as commonly assessed in the self literature (i.e., with time unspecified), would be more closely related to predictions of distant-future behavior than near-future behavior. Consistent with this prediction, the results of Study 5 showed that individuals expect distant-future behaviors to more closely match general self trait ratings and to be more consistent across situations than are near-future behaviors. In Studies 6 and 7, we investigated the reverse association, namely, the degree to which behavior is seen as expressing something about the general self. Study 6 indicated that in general, distant-future behaviors are seen as stronger reflections of the self. Study 7, however, showed that this effect can be quite specific; when a behavior went against a perceived self-characteristic, this behavior was more greatly rejected as a reflection of the self in the distant future than as a reflection of the self in the near future. Findings from each of these studies thus converge to support the claim that one's distant-future self is construed at a higher level than is the near-future self. In addition to this common point, they also illustrate the range of ways in which this shift in construal influences the self-concept.

### *Alternative Explanations*

*Changes in valence.* In the current studies, we argue that distant-future self-representations increasingly reflect the gist of a person's self-concept and are therefore more schematic, decontextualized, and self-definitive. An alternative possibility is that distant-future self-representations are more positive than near-future self-representations and that this bias is responsible for our findings. To examine this alternative across a number of our studies (e.g., Studies 2, 3, and 4), we examined potential shifts in the content of near-future and distant-future self-representations. In contrast to a future positivity bias account, we failed to find differences in the valence of near- and distant-future self-representations or behaviors. Furthermore, when possible (e.g., Studies 4, 6, and 7) we examined whether the effects of temporal distance differed as a function of the valence of the trait or behavior under consideration. The results showed similar effects of time regardless of the trait or behavior's valence, again suggesting that our findings cannot be attributed to differences in the content of near-future and distant-future self-representations.

*Simplicity as vagueness.* Another consideration is whether individuals have a more vague sense of their distant-future self; that is, it is possible that what we claim is breadth or simplicity of structure is simply a less precise sense of self. We believe that findings from a number of our studies make this explanation implausible. For example, in Study 4, we find that people are faster at deciding whether traits are self-descriptive when people think of a distant-future self than when they think of a near-future self. Considering that participants reported putting equal amounts of effort into the task across conditions, if people had a more vague sense of their distant-future self, they should make more hesitating judgments about themselves in the distant future and, correspondingly, reaction times should be slower when considering a distant-future self. Furthermore, in a number of studies we show that the distant-future self is increasingly related to individuals' general trait judgments. For example, in Study 5, we find that predictions about distant-future behavior are more strongly correlated with general trait descriptions; similarly, in Study 6 we find that individuals consider distant-future behavior to be more self-expressive. It is unclear how these results fit with notions of vagueness. Finally, in Study 7 we see evidence that although reflective of general self-tendencies, individuals' distant-future self-representations are not wishy-washy; when distant-future behaviors under consideration are inconsistent with self-characteristics, they are rejected as nonexpressive of the self more so than corresponding near-future behaviors. In combination, then, these results suggest that distant-future self-representations indeed reflect a higher level construal of the self, in contrast to being simply a vague, imprecise self-representation.

### *Implications and Future Directions*

The current research points to the use of high-level construals as one way by which individuals can maintain a unified sense of self. This is achieved by using broader categories, emphasizing traits, believing in the essence of behaviors, and imposing structure on the self-concept. Furthermore, when considering a distant-future self, people seem to naturally adopt this high-level construal approach to the self; in contrast, when considering a near-future self, people adopt a lower level approach to the self. Thus, according to the current account, individuals can maintain both a contextualized and a schematic sense of themselves, sometimes activating one representation and sometimes the other. Given the debates in the literature about the psychological costs and benefits of maintaining an integrated self-representation versus a contextualized self-representation (see Campbell, Assanand, & Di Paula, 2003, for a recent review), it is interesting to consider the potential functionality of being able to maintain both forms of self-representation. We do, after all, live in the present moment in which the situation influences our personality and behavior. Having the flexibility to adapt to these situations is likely to be more beneficial than always maintaining a rigid definition of the self. At the same time, it is likely adaptive to be able to unify these disparate selves from a distance, so as to see the connecting thread that links the self through situations and time points.

Indeed, our present approach to examining self-representation (and, in particular, to studying self-structure variables) is a departure from the more typical conceptualization of these constructs as individual difference variables. However, we believe that evidence of the fluid nature of these variables is especially important given the impact of self-representation on

self-relevant cognitions and motivations. That is, by showing the way in which the temporal distance of the self under consideration affects the nature of self-representation, our findings imply that downstream cognitions and motivations will be similarly influenced by temporal perspective. For example, Higgins (1996) suggests that the self is a "digest" that acts to guide one's interaction with the world. According to the current approach, the self that is called into question for interacting with the world in the distant future would consist of more abstract and general self-conceptions, acting more as a general self-guide, than the self that comes to mind when planning for the near future. As another example, research on self-complexity suggests that individuals with a high degree of self-complexity are buffered from the effects of negative feedback (Linville, 1985). That is, because there is less overlap within the self-aspects of these individuals, negative feedback directed at one self-aspect does not spillover to influence the individual's evaluations of his or her other self-aspects. On the basis of our finding in Study 2 that self-complexity is greater in the near future than in the distant future, one might therefore expect negative feedback to lead to more spillover when feedback is about something related to the near future rather than about something related to a distant-future time point.

Moreover, whereas we currently focus on differences in representations of the near-future and distant-future self, recent research suggests that variation in any one of a number of distance dimensions leads to a similar pattern of results (for a recent review see Trope, Liberman, & Wakslak, 2007). That is, dimensions as diverse as spatial distance (Fujita, Henderson, Eng, Trope, & Liberman, 2006), social distance (Liviatan, Trope, and Liberman, 2007; Stephan, Liberman, & Trope, 2007), and hypotheticality (Wakslak, Trope, Liberman, & Alony, 2006) have a similar influence on mental construal as does temporal distance, implying that variations in any of these dimensions should lead to corresponding shifts in self-representation. In addition, recent findings (e.g., Freitas, Gollwitzer, & Trope, 2004; Fujita, Trope, Liberman, & Levin-Sagi, 2006; see also Bar-Anan, Liberman, & Trope, 2006) have suggested that a high- or low-level construal orientation can be procedurally activated and can influence unrelated subsequent cognitions. It is interesting to note that this suggests that it may be possible to design interventions that would allow individuals to form a more or less coherent self-representation. In this way, individuals could potentially use the present findings to influence their cognitive and motivational reactions. Returning to our previous examples, individuals could influence the choices and decisions they make by calling into service more concrete and specific or abstract and general self-guides (cf. Higgins, 1996). Similarly, individuals might be able to use construal manipulations to achieve a greater sense of psychological well-being within a given situation (e.g., activate a low-level construal in order to increase self-complexity before receiving negative feedback but activate a high-level construal before receiving positive feedback, cf. Linville, 1985, 1987).

In addition to highlighting the situational variability of self-representation, our central thesis that the distant-future self is represented at a higher construal level than is the near-future self has a number of intriguing implications. For instance, the current studies indicate that behaviors in the distant future are expected to more closely align with general self-characteristics. One interesting implication of this involves the role of personal values in guiding choice. Values are abstract, schematic mental constructs that should be invoked as part of an individual's general self-concept. According to the current account, then, values should be more readily applied to psychologically distal situations than to proximal situations. For example, one's general achievement values might better predict signing up for a challenging course to be offered in the distant future than signing up for one in the near future. Indeed, recent research by Sagristano and colleagues (Sagristan, Eyal, Trope, Liberman, & Chaiken, 2007) provides initial support for this suggestion.

Furthermore, it is possible to distinguish between values that are superordinate and central to an individual and those that are more subordinate and less central. If the distant-future self is represented in a more abstract, schematic fashion, then a distant-future self-representation should emphasize superordinate over subordinate values, and distant-future decisions should increasingly be based on these more central concerns. Correspondingly, when a distant-future situation involves a conflict between multiple values, we would expect primary values to dominate secondary values, leading the conflict to be resolved according to the primary value. In contrast, because secondary values should exert increasing influence on near-future decisions, near-future value conflicts should not be afforded this clear resolution (Eyal, Liberman, Sagristano, and Trope, 2007).

In a somewhat similar vein, the current results have interesting implications for the very nature of near- and distant-future attitudes. If the distant-future self is represented in a more schematic, decontextualized, and general manner, then distant-future attitudes should similarly be more schematic, less contextualized, and increasingly related to an individual's general attitudes. In contrast, near-future attitudes should be more contextualized and more open to influence by the social context in which they are formed and expressed. In fact, a recent study by Ledgerwood (2008) provides initial support for this prediction, finding that individuals' attitudes are less influenced by the social context (e.g., by the reported attitude of an anticipated interaction partner) and more related to their own general attitudes when the attitude object is connected to the distant as opposed to the near future (e.g., attitudes regarding a bill to go into effect at a distant–future time point vs. a near-future time point). Furthermore, it is possible that the entire structure of individuals' attitudes and values will be more coherent in the distant future than in the near future. That is, we would expect that a single attitude's intra-attitudinal structure will be more consistent (e.g., greater cognitive-affective consistency; see Chaiken, Pomerantz, & Giner-Sorolla, 1995; Huskinson & Haddock, 2006) when the attitude object relates to the distant future than the near future; similarly, the inter-attitudinal structure of one's entire set of attitudes should be more consistent (i.e., greater consistency of various attitudes or values with each other; see Fabrigar, MacDonald, & Wegener, 2005 for a recent review) when considering one's distant-future attitudes versus near-future attitudes.

Another interesting implication of the current findings is for self-perception phenomena (Bem, 1972). According to the current results, individuals judge distant-future behavior to be more self-expressive than near-future behavior. If this is indeed the case, it is possible that inducing a behavior related to the distant future (vs. the near future) will lead individuals to more strongly draw conclusions about their general attitudes from that behavior. In line with this idea, recent evidence suggests that leading individuals to make a risky choice regarding a distant-future event leads them to perceive themselves as general risk takers; in contrast, inducing the

identical risky choice regarding a near-future event does not have this same effect (Wakslak, 2007). This same pattern might reasonably characterize a range of self-perception phenomena, including foot in the door phenomena (Beaman, Cole, Preston, Klentz, & Steblay, 1983; DeJong, 1979) and judgments of emotional reactions (Laird, 1984; Olson, 1992).

### *Conclusions*

In a series of seven studies, we provide evidence that the distant-future self is represented in a more structured, schematic manner than is the near-future self and that distant-future behavior is expected to more fully match up with general self-characteristics. These findings highlight that it is not only the content of one's self-representation that can situationally vary within individuals, but the structure of that representation as well. Further, insofar as self-representation is an important mediator of self-relevant cognitions, motivations, and choices, we believe that the current findings have far-reaching and important implications. It is therefore our hope that the current set of studies will be useful both in enriching our understanding of self-representation and in spurring further research on the way that a range of self-related processes vary as a function of psychological distance.

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## Appendix A

### Materials Used in Study 1 (Levels of Social Categories)

Actual materials were presented in Hebrew and reflect a number of social categories unique to the Israeli context. The numbers in parentheses refer to the category level. For some hierarchies, multiple options represent the same level of inclusiveness.

1. I am: an Israeli (1); a Jewish Israeli (2); a Zionistic Israeli (2); an Israeli from a Sephardic/Ashkenazi origin (2)

2. I am: Jewish (1); a secular Jew/a religious Jew/a traditional Jew (2)

3. I am: leftist/rightist (1); leftist/rightist with an established political agenda (2); an activist leftist/rightist (2)

4. I am: a student (1); a student at _____ University (2); a student of _____ (2); a student of _____, _____ year (3)

5. I am: a person (1); a man/woman (2); a young man/woman (3); a man/woman in his/her early/late twenties (4); a man/woman aged _____ (5)

6. I am: a part of a family (1); a part of a big/small family (2); a part of a family consisting of _____ members (3); a part of a family consisting of _____ (4)

7. I am: a brother/sister (1); a brother/sister of _____ siblings (2); a brother/sister of _____ (3)

8. I am: a partner in a romantic relationship (1); a partner in a romantic relationship already _____ years (2); a partner in a romantic relationship with _____ (3)

9. I am: a future professional (1); a future professional in the field of _____ (2); a future professional, expert in _____ (3)

10. I am: a high-school graduate (1); a high-school graduate from _____ (2); a high-school graduate from _____ who majored at _____ (3)

11. In the past: I served in the army (1); I was an officer/non-officer (2); I was an officer/non-officer, with a rank of _____ (3); I was a soldier in a fighting/auxiliary unit (2); I was a soldier in unit _____ (3)

12. I grew up in: the north/center/south of the country (1); _____ [fill in the name of the city/town/Moshav/Kibbutz] (2); the city _____ neighborhood _____ (3)

13. Regarding my physical appearance: I look good/above the average/around the average/below the average (1); my body looks good/above the average/around the average/below the average (2); my face looks good/above the average/around the average/below the average (2)

14. I'm one of these people who want: to lose/gain weight (1); to lose/gain some/a lot of weight (2); to lose/gain _____ kg (3)

## Appendix B

*Materials Used in Study 7: Countertrait Behaviors*

| Trait | Countertrait behavior |
|---|---|
| Optimistic | You will have pessimistic thoughts after listening to the news on the radio. |
| Shy | You will start a conversation with an unfamiliar person during a social event. |
| Spendthrift | You will decide not to buy expensive clothes you'll see in the shop window. |
| Messy | You will discover that your school notes are complimented for being orderly and structured. |
| Responsible | You will forget to show up to a study session you'd plan with another student. |
| Perfectionist | You will decide to hand in an average paper, due to time pressure. |
| Unconfident | You will make a comment during a lecture, in front of the professor and all the other students. |
| Punctual | You will make a wrong time estimation and show up half an hour late to a job interview. |
| Idealistic | You will compromise on an ideal or a value you believe in, because of reality's constraints. |
| Naïve | You will succeed in finding out that a salesperson is trying to deceive you and is asking for a higher price than usual. |
| Open | You will choose not to share an embarrassing fact about yourself, not even with a good friend. |
| Having a poor sense of direction | You will succeed in getting to an unfamiliar place without getting lost on the way and with no need of help from other passengers. |

*Note.* Actual materials were presented in Hebrew. For clarity, traits are presented in Table B1 with their corresponding countertrait behaviors. In the experimental sessions, traits and behaviors were presented in different orders.

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