Reports

What will I be? The role of temporal perspective in predictions of affect, traits, and self-narratives

Daniel Heller a,⁎, Elena Stephan a, Yona Kifer a, Constantine Sedikides b

a Tel Aviv University, Israel
b University of Southampton, United Kingdom

A R T I C L E   I N F O

Article history:
Received 13 July 2010
Revised 6 December 2010
Available online 31 January 2011

Keywords:
Self-enhancement
Construal Level Theory
Self
Emotion
Personality traits

A B S T R A C T

This article examined the effect of temporal perspective on the multifaceted future self (i.e., affect, traits, and self-narratives). Participants imagined themselves in the near versus distant future, and subsequently predicted their affect (Experiment 1), traits (Experiment 2), and naturalistic self-concepts (Experiment 3). Drawing from the Construal Level Theory and self-enhancement literatures, we hypothesized and found across three experiments that predictions of one's self in the distant future are more positive than predictions of one's self in the near future. Furthermore, building upon literature on the existence of normative and culturally sanctioned implicit theories of positive growth throughout the life span, we hypothesized and found that increased temporal distance yielded less variable predictions of affect, traits, and self-narratives (all three experiments) and that higher-level attributions mediated the effect of temporal perspective on the positivity of self-narratives (Experiment 3) and that time distance leads to more positive and less variable future selves.

Mental travel is a unique human capacity. People are able to create autobiographies in their minds, reconstructing their past and imagining their future (Higgins, 1987; Markus & Nurius, 1986; Sedikides, Wildschut, Arndt, & Routledge, 2008). Focusing on future mental travel, or the imagined self in the future, we propose in this article that the valence and variability of the future self are systematically influenced by temporal perspective (i.e., near vs. distant).

Future selves are typically viewed favorably and optimistically (for reviews of the self-enhancement literature see: Alicke & Sedikides, 2009, 2011; Sedikides & Gregg, 2003). For example, people expect higher levels of well-being in the future relative to the present (Busseri, Choma, & Sadava, 2009; Robinson & Ryff, 1999; Ryff, 1991), and overestimate their future life satisfaction levels relative to actual levels (Busseri et al., 2009). Also, people believe that (a) they are more likely than their peers to experience positive life events such as accumulating wealth or having an intellectually gifted child, and (b) they are less likely than their peers to experience negative life events such as a mugging or contracting contagious diseases (Helweg-Larson & Shepperd, 2001; Regan, Snyder, & Kassin, 1995; Weinstein, 1980). Moreover, people expect long-term increases in their desirable attributes, and long-term decreases in their undesirable ones, until late in their life span (Heckhausen & Krueger, 1993; Sedikides & Hepper, 2009). Adding to these latter findings, imagining future (positive) selves is further associated with increased optimism, psychological well-being, and gratitude (Gonzales, Burgess, & Mobilio, 2001; Sheldon & Lyubomirsky, 2006).

Previous research, then, shows that people view the future self in a favorable manner. Yet, how do variations in future temporal perspective influence predictions of the valence and variability of multiple facets (i.e., affect, traits, and narratives) of future selves, and what is the mechanism underlying the effects of time perspective on self-views? Building on Construal Level Theory (CLT; Liberman, Trope, & Stephan, 2007), we argue that views of future selves differ systematically as a function of temporal distance. In particular, guided by the principle of mental construal over psychological distance, we suggest that the mere imagining of the self in near versus distant time produces differences in self-related predictions.

According to CLT, psychological proximity (e.g., in time distance) is associated with a lower-level mental construal of stimuli, which constitutes a detailed and concrete representation. However, given that people typically possess relatively limited information about more distant entities, psychological distance is associated with a higher-level construal, which is a schematic and abstract representation (Liberman et al., 2007). Indeed, research confirms that representations of the self in the distant (versus near) future are more abstract and structured (Nussbaum, Trope, & Liberman, 2003; Nussbaum, Liberman, & Trope, 2006). For example, distant (compared to near) future self-representations incorporate broader and more superordinate identities, while
Drawing on CLT, we examine the effect of temporal perspective on predictions of important facets of the future self such as affect (Experiment 1), traits (Experiment 2), and narratives (e.g., self-attributes and anticipated outcomes; Experiment 3). We propose that imagining the self in the near future (e.g., next month) is associated with a lower-level construal, characterized by detailed consideration of the ebb and flow of daily life’s events and by the wide range of associated positive and negative internal subjective experiences as well as of one’s specific and diverse attributes. Thus, the near future perspective will evoke relatively complex representations of the self including mixed affect (positive and negative), traits (positive and negative), and self-narratives (positive and negative attributes and life outcomes). In contrast, the representation of the self in the distant future (e.g., in three years) is relatively removed from direct life experiences and, therefore, is less grounded in concrete events or in one’s complex, frequently multivalent, and specific self-conceptions. Hence, as the distant future entails a higher-level construal, its representation is likely to be more schematic and theory-based. Given the prevalent human tendency to construe the self in a favorable light whenever possible (Alicke & Govorun, 2005; Dunning, 2005; Kunda, 1990; Sedikides, 2009; Sedikides & Luke, 2008), individuals will be especially prone to base their construal of distant future selves on their rose-colored theories regarding experiencing positive events and feelings, possessing positive attributes, and continuous improvement over time (Heckhausen & Krueger, 1993; Regan et al., 1995; Sedikides & Hepper, 2009). Thus, the distant future perspective will evoke predictions of more positive (and less negative) affect, more positive (and less negative) traits, and more positive (and less negative) self-narratives, compared to the near future perspective.

The proposed link between higher-level construal and favorability of future selves is consistent with recent findings regarding the influence of abstract thinking on enhanced life satisfaction (Updegraff & Suh, 2007). Furthermore, several lines of research support the existence of normative and culturally sanctioned implicit theories of positive growth and self-improvement throughout much of the life span of younger adults (Bussers et al., 2009; Heckhausen & Krueger, 1993; Sedikides & Hepper, 2009; Wilson & Ross, 2001). We reasoned, therefore, that, due to these shared theories, predictions of future selves would be more uniform across individuals in the distant (relative to near) future. In particular, we hypothesized that the variability across individuals in the ratings of predicted affect, traits, and self-narratives would each be smaller in the distant, compared to the near, future.

We test these hypotheses in three experiments. We used standardized questionnaires to examine whether increased time distance engenders more positive and less variable predictions of affect (Experiment 1) and traits (Experiment 2). In addition, we asked participants (Experiment 3) to write narratives portraying their future selves, and tested whether an increase in temporal distance resulted in more favorable self views—both in terms of self-rated positivity and rater-coded attributes and outcomes. Finally, we investigate the mechanism underlying time effects on self-narratives by examining whether higher-level attributions (i.e., personal goals and life outlook) that participants invoked for their narratives mediated these effects. That is, we propose that increased reliance on higher-level construals would mediate the effect of greater temporal distance on the positivity of self narratives.

**Experiment 1: Temporal distance and prospective affect**

In Experiment 1, we tested whether predictions of one’s affect in the near and distant future differ systematically. We hypothesized that participants would predict experiencing higher levels of Positive Affect (PA) and lower levels of Negative Affect (NA) in the distant (i.e., three years) than near (i.e., next month) future. Employing a comprehensive assessment of affect based on its integrative and hierarchical structure (Watson, 2000), we expected this pattern to hold both for the general dimensions of affect (PA and NA) and for specific affects (e.g., fear and joviality). Given that predictions of one’s affect in the distant (versus near) future are more detached from situational complexities, and are more influenced by culturally shared and normatively self-favoring theories, we further hypothesized that variability across individuals on each of the affective scales would be smaller in the distant than near future.

**Method**

**Participants**

Ninety-three undergraduate students (56% women, 44% men) from Tel Aviv University participated for $9. Their average age was 23 years (SD = 1.56).

**Procedure and materials**

Participants were randomly assigned to the near (i.e., a month’s time) or distant (i.e., three years’ time) future conditions. In both conditions, they were instructed to imagine themselves and their lives in a certain week. Next, they predicted their affect during that week (1 = extremely or not at all, 5 = extremely) on a subset of 45 items drawn from the PANAS-X (Watson & Clark, 1994). We used these items to derive eight scales: two general PA and NA scales, two specific PA scales (joviality and self-assurance), and four specific NA scales (fear, hostility, guilt, and sadness). For example, the specific scale “fear” included the following items: afraid, scared, frightened, nervous, jittery, and shaky. Internal reliabilities of all scales across conditions ranged from .81 to .94.

**Results and discussion**

First, we hypothesized that participants would predict experiencing higher levels of PA and lower levels of NA in the distant, compared to the near, future. We display, in Table 1, the means and standard deviations for predicted affect in the near and distant future, as well as effect sizes and significance tests for mean-level differences. Results were consistent with the hypothesis. In particular, participants predicted significantly higher levels of general PA, and the positive specific affects joviality and self-assurance, and predicted lower levels of general NA, and the negative specific affects fear, hostility, guilt, and sadness in the distant, compared to the near, future.

Second, we hypothesized that variability in predicted affect would be smaller in the distant than near future. The results were largely consistent with the hypothesis (Fig. 1). In particular, variability in fear, hostility, guilt, joviality, and PA was significantly smaller in the distant than near future condition, as Levene’s test for equality of variances revealed (all ps < .05).

**Experiment 2: Temporal distance and prospective traits**

In Experiment 2, we assessed the impact of variations in future temporal perspective on predictions of one’s traits (i.e., Big-5 and self-esteem). In particular, we tested whether participants would predict increases in socially desirable traits (e.g., agreeableness and self-esteem).
expected desirable and undesirable attributes to change during the undergraduate students retrospectively report their belief that over (Sedikides & Hepper, 2009; Wilson & Ross, 2001). For example, most able, extraverted, conscientious, open to experience, and higher in (i.e., three years) relative to near (i.e., next month) future. We see alsoRobins, Noftle, Trzesniewski, & Roberts, 2005) in the distant esteem) and decreases in socially undesirable traits (e.g., neuroticism; see alsoRobins, Noftle, Trzesniewski, & Roberts, 2005) in the distant (i.e., three years) relative to near (i.e., next month) future. We hypothesized that participants would predict becoming more agreeable, extraverted, conscientious, open to experience, and higher in self-esteem, but becoming less neurotic in the distant compared to near future.

Implicit theories of positive personality change are largely shared (Heckhausen & Krueger, 1993; McAdams, 2006; Robins et al., 2005; Sedikides & Hepper, 2009; Wilson & Ross, 2001). For example, most undergraduate students retrospectively report their belief that over the course of college they became more mature and well-adjusted (Robins et al., 2005). In a similar vein, Heckhausen and Krueger (1993) requested participants to indicate the extent to which they expect desirable and undesirable attributes to change during the seven decades of adulthood (20s–80s), and found that in one's 20s and 30s (but also until later in life), expected gains over decades outnumber expected losses in a set of diverse traits. Our experiment advances prior findings in two ways. First, we refine understanding of the effects of temporal perspective by focusing on short-term temporal variations within the future perspective. Second, building on CLT, we also hypothesized that distant (compared to near) future trait predictions are more schematic and increasingly based on these normative theories, and thus would show less variability across individuals.

Method

Participants

One-hundred-and-thirty-six undergraduate students (53% women, 47% men) from Tel Aviv University participated for $6. Their average age was 24 years ($SD = 1.81).

Procedure and materials

As in Experiment 1, participants were randomly assigned to imagine themselves and their lives in a certain week in the near (a month’ time) or distant (three years’ time) future. Next, they predicted their traits in that time using a 45-item adjective-based Big-5 measure (9 items per factor) drawn from a large list of factor markers (Heller, Komar, & Lee, 2007). Participants indicated how accurately each trait would describe them (1 = very inaccurately, 5 = very accurately). Internal reliabilities for measures of extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience ranged from .62 to .82. In addition, participants predicted their self-esteem level at the same future time (either in one month or in three years) using Rosenberg’s (1965) 10-item self-esteem scale (1 = strongly disagree, 4 = strongly agree; alpha = .81).

Results and discussion

We hypothesized that participants would predict possessing higher levels of positive traits and lower levels of negative traits in the distant, compared to the near, future. With one exception (extraversion2), the results were consistent with the hypothesis. As detailed in Table 2, participants predicted higher levels of agreeableness, conscientiousness, and openness to experience, while predicting lower levels of neuroticism, in the distant than near future. Furthermore, participants tended to predict higher self-esteem in the distant than near future.

We also hypothesized that trait variability (calculated across individuals) would be smaller in the distant, compared to the near, future. The results were largely consistent with the hypothesis (Fig. 2). In particular, variability in agreeableness, conscientiousness, neuroticism, and self-esteem was significantly smaller in the distant, relative to the near, future, as Levene’s test indicated (all ps < .05).

Experiment 3: Temporal distance and prospective self-narratives

Adding to the demonstrated effects of temporal distance on predictions of affect (Experiment 1) and traits (Experiment 2) via standardized questionnaires, the present experiment examined the effects of future perspective on open-ended self-narratives. Participants used their own words to describe idiosyncratic future attributes and experiences that they deem to be personally important, thereby providing for more ecologically valid responses. Moreover, in order to examine whether high-level construals mediate the effects of time on the positivity of narratives, we measured the level of attributions that participants selected to account for their future self-narratives.

2 We did not obtain the predicted temporal difference for one ostensibly positive trait, extraversion. This may be so because extraversion is less desirable than the other four positive traits (i.e., agreeableness, conscientiousness, openness, and self-esteem) and thus is not augmented as a function of temporal distance. Support for this notion is found in the lower self-reported mean ratings for extraversion relative to the other positive traits. Moreover, recent research on the related trait interpersonal assertiveness (Ames, 2008) suggests that mid-level (rather than low or high level) assertiveness is viewed as most appropriate and desirable.
We instructed participants to imagine and write narrative descriptions of themselves either in the near future (i.e., one month from now) or in the distant future (i.e., three years from now). Then, we asked participants to reflect on their narratives, rate their positivity, and make attributions for them. Finally, we recruited independent judges to code these narratives for positive versus negative personal attributes and for positive versus negative life outcomes.

Consistent with the notion of a rosy outlook on one’s increasingly remote prospects, we hypothesized that both participants and coders would rate the narratives (in terms of content and number of personal attributes/outcomes, respectively) more positively in the distant relative to the near future. Moreover, drawing from CLT’s fundamental tenet on the link between level of construal and temporal distance, we expected attributional levels to play an important role in future self-narratives. First, we hypothesized that participants would provide higher-level (i.e., personal goals and general outlook on life) rather than lower-level (i.e., concrete events and behaviors) accounts for their distant than near future narratives. Second, we reasoned that views of the distant future are guided by higher-level construals that are largely based on culturally shared or normatively positive theories, whereas views of the near future are guided by lower-level construals that are more equivocally valenced (i.e., contain a mixture of positive and negative elements). Therefore, we hypothesized that: (a) higher-level accounts would mediate the relation between temporal distance and the positivity of self-narratives, and (b) the positivity ratings of the narratives would manifest smaller variability in the distant than near future.

**Results and discussion**

**Future self-narrative positivity**

As hypothesized, participants rated the distant future self-narratives more positively ($M=6.37, SD=1.01$) than the near future self-narratives ($M=5.53, SD=1.46$), $t(76)=2.99, p<.01$, Cohen’s $d=.67$. Likewise, codings of the self-narratives revealed that participants used positively-toned attributes more frequently to describe distant ($M=2.91, SD=2.39$) than near ($M=1.37, SD=1.64$) future selves, $t(76)=3.31, p<.05$, Cohen’s $d=.75$. In turn, participants used negatively-toned attributes less frequently to describe distant ($M=0.49, SD=.18$) than near ($M=0.51, SD=.95$) future selves, $t(76)=3.12, p<.05$, Cohen’s $d=-.68$. Moreover, coders’ ratings revealed that the distant future self-narratives included a greater number of positive personal outcomes ($M=4.73, SD=1.79$) compared to the near future self-narratives ($M=2.09, SD=1.31$), $t(76)=7.37, p<.05$, Cohen’s $d=1.68$. Similarly, the distant future self-narratives included a lower number of negative personal outcomes ($M=1.2, SD=3.6$) compared to the near future self-narratives ($M=8.1, SD=8.7$), $t(76)=4.69, p<.05$, Cohen’s $d=-1.03$. Thus, converging with findings from the previous two experiments, the analysis of freely generated self-narratives indicated that participants perceived their distant future selves more favorably than their near future selves.

**Attributional accounts**

As hypothesized, participants linked their distant future self-narratives ($M=5.26, SD=.13$) more than their near future self-narratives ($M=4.50, SD=1.40$) to personal goals and life outlook (i.e., higher-level accounts), $t(76)=2.66, p<.01$, Cohen’s $d=.60$. In turn, participants linked their near future self-narratives ($M=4.62, SD=1.04$) more strongly than their distant future self-narratives ($M=3.58, SD=1.31$) to specific behaviors and concrete events (i.e., lower-level accounts), $t(76)=3.82, p<.01$, Cohen’s $d=-.88$. We reasoned that increased reliance on higher-level (frequently positively-toned) construals in making more distant predictions would underlie the effect of time perspective on positivity of self-views. Thus, we tested whether higher level accounts mediated the effect of temporal perspective on the positivity ratings. Using hierarchical regression procedures (MacKinnon, Fairchild, & Fritz, 2007), we found that, although still significant, the effect of temporal perspective was considerably reduced (dropped from .85 to .64) when higher-level accounts were included in the equation, and that reliance on higher-level accounts substantially reduced (dropped from .85 to .64) when higher-level accounts were included in the equation, and that reliance on higher-level accounts substantially reduced (dropped from .85 to .64) when higher-level accounts were included in the equation, and that reliance on higher-level accounts substantially reduced (dropped from .85 to .64) when higher-level accounts were included in the equation.
level accounts was a significant predictor of positivity ratings. We proceeded to examine the significance of the indirect effect through higher-level accounts. Specifically, we used bootstrap procedures to construct bias-corrected confidence intervals based on 5,000 random samples with replacement. Mediation is present when the size of an indirect effect differs significantly from zero (Mackinnon et al., 2007; Preacher & Hayes, 2008; Shrout & Bolger, 2002). This was the case for our indirect effect, given that the 95% confidence interval excluded zero (.02, .60). Thus, the present findings shed light on the mechanism underlying the effect of time perspective on the positivity of future self-narratives, establishing a partial mediating role for higher-level construals.

**Variability in positivity ratings**

The hypothesis that the variability in narrative positivity ratings would be smaller in the distant (SD = 1.01) than near (SD = 1.46) future was also supported in a Levene's test, F(1,76) = 6.38, p < .05.

**General discussion**

The present research examined how variations in future temporal perspective influence predictions of the future self. Drawing from the literatures on CLT (Liberman et al., 2007; Nussbaum, et al., 2006) and self-enhancement (Sedikides & Gregg, 2008; Sedikides & Strube, 1997), we reasoned that higher-level construals (e.g., culturally-shared rosy theories about the future) would guide the more distant future predictions. In particular, we hypothesized that future selves would become more uniformly favorable over an increased temporal perspective.

Across three experiments, examining various facets of the self (i.e., affect, traits, and narratives) and irrespective of method, we obtained converging evidence that time—distance engenders more positive and less variable future selves. In Experiment 1, participants reported higher levels of positive affect and lower levels of negative affect in the distant, relative to the near, future. In Experiment 2, participants expected to possess higher levels of positive traits, but lower levels of a negative trait, in the distant than near future. While the standardized methods that we used in Experiments 1 and 2 provided the advantage of known construct validity and psychometric properties, they may have constrained or restricted participants' responses. Thus, in Experiment 3, participants wrote freely generated narratives portraying their future selves. Using this more ecologically valid approach, subjected to both self- and rater-codings, the same pattern emerged: distant (compared to near) future selves were rated as more positive and included more positive (and less negative) personal attributes and outcomes.

We posited that a construal mechanism underlies the effect of temporal distance on the increased positivity of the prospective self. In support of this proposition, in Experiment 3, participants used more higher-level accounts (and fewer lower-level accounts) in the distant, relative to the near, future; importantly, higher-level accounts mediated the effect of temporal perspective on positivity of self-narratives. Furthermore, variability in ratings of predicted affect, traits and positivity of self-narratives was larger in the near, compared to the distant, future. Taken together, these results bolster the notion that shared optimistic theories (i.e., higher-level construals) are applied more in predictions of the distant rather than near future.

To advance current understanding of the effect of time perspective on positivity of self-views, future research should directly examine the nature and influence of implicit theories. We expect implicit theories to exert a greater influence than situational considerations in more distant predictions of the self. Moreover, the examination of individual differences in positivity of implicit theories may uncover moderators or boundary conditions for the effects. For example, individuals characterized by negative theories of the self (e.g., pessimists) may predict increasingly unfavorable prospects in the more distant future.

Past literature has recorded effects of temporal perspective upon valence, abstractness, and focus on internal subjective experience (Pleeon & Heckhausen, 1997; Liberman et al., 2007). The current findings extend previous research in several important ways. First, the findings contribute to the optimism and self literatures by documenting that optimistic predictions permeate diverse aspects of the self including affect, traits, and narratives. Second, the findings advance previously reported differences between past, present, and future time perspective (Busseri et al., 2009; Heckhausen & Krueger, 1993) by establishing that optimistic predictions are systematically influenced by short-term temporal variations within the future perspective (i.e., near vs. distant). Finally, the findings document the construal level mechanism (i.e., higher-level attributions) underlying the link between variation in temporal perspective and positivity of self-views.

Although the present investigation addressed the effects of time perspective on changes in self-prediction, it does not address the related question of prediction accuracy, that is, the extent to which near versus distant predictions come true. We speculate, based on CLT, that the construal level of the primary factors influencing personal outcomes would determine the relative accuracy of distant compared to near predictions. That is, assuming the same amount of information about near and distant situations, when the outcome is determined by lower-level factors, near future prediction are likely to be more accurate, whereas when the outcome is determined by higher-level factors, distant future prediction are likely to be more accurate. Prospective longitudinal research assessing over time both the predicted future self, as well as the actual near or distant self, would be well-positioned to test the empirical viability of this prediction.

Time perspective, being one of the dimensions of psychological distance (Liberman et al., 2007), begs the question pertaining to effects that other dimensions of psychological distance may exert on predicted future selves. For example, does spatial distance have similar effects on the positivity of the future-self? We expect that imagining the self in more distant places may be also associated with a more positive self. It is likely, then, that positive self-views are functional, not only in terms of moving forward into the future, but also in terms of moving farther away spatially.

Predictions of future selves pervade many life domains such as risk-taking, health care, occupational choice, consumption, and investment. The current findings indicate that even subtle variations in temporal perspective produce systematic changes in future selves, magnifying predictions of positive aspects, attenuating predictions of negative ones, and reducing the variability of distant aspects. The answer to the frequently asked (especially earlier in life) question “what will I be?” would depend on the time to which the future self is projected, such that asking the question well in advance would render the imagined self “happier and more creative.”

---

5 To test for the possibility that the significant differences in variability resulted from a ceiling effect, we conducted a series of simulations by adding the mean difference between the conditions on each dependent variable to the actual observations in the near future condition. When the resulting rating was beyond the endpoint of the scale, we coded it as the endpoint that yielded a simulated distant future distribution which we then compared to the original distant future distribution. Results for each of the 10 dependent measures indicated that the simulated distributions had lower variability than the original near future condition distribution (consistent with a ceiling effect), but had greater variability than the corresponding original distant future distributions. Thus, while acknowledging that a ceiling effect may have influenced the findings, we think that it does not account for the robust and systematic between-condition differences in variability across the dependent measures.

6 We are grateful to the editor and two anonymous reviewers for these helpful suggestions.
Acknowledgments

This research was supported by grants from the Israel Science Foundation and the Henry Crown Institute of Business Research in Israel.

References


