



## Pleasure now, meaning later: Temporal dynamics between pleasure and meaning<sup>☆</sup>



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### HIGHLIGHTS

- We examine whether values of pleasure and meaning vary with temporal distance.
- We suggest a hierarchical level of construal between pleasure and meaning as an underlying mechanism.
- Subordination test reveals that meaning constitutes a higher level of construal than pleasure.
- Following studies show that pleasure is favored as temporal distance decreases, whereas meaning is favored as temporal distance increases.

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### ABSTRACT

The present research investigated temporal dynamics between pleasure and meaning such that pleasure is favored in the near future, whereas meaning is favored in the distant future. As an underlying mechanism for this temporal effect, Study 1 demonstrated that pleasure was subordinate to meaning, suggesting that meaning constitutes a higher-level construal than pleasure. Consistent with construal level theory, Studies 2 and 3 found time-dependent changes in the relative weight of pleasure and meaning. Participants evaluated a meaningful life more positively than a pleasurable life as temporal distance increased (Study 2). They were also more likely to choose meaningful options in making distant- versus near-future decisions, compared to pleasurable options (Study 3). Implications and future research were discussed.

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Yet he continued to live, think, and feel, had even at that very time got married, experienced many joys, and been happy whenever he was not thinking of the meaning of his life.

[Leo Tolstoy, *Anna Karenina*]

Both pleasure and meaning have been treated as critical factors in understanding human life. Freud (1920/1952), for example, claimed that all psychological activities that operate unconsciously are dominated by the motivation to approach pleasure and avoid pain. Contrary to the pleasure principle, Frankl (1959) asserted that the search for meaning

in life is a fundamental motive beyond the need for pleasure. More recently, with a growing interest in positive psychology, the importance of both pleasure and meaning has been well recognized. Pleasure and meaning are both essential ingredients for a good life (King & Napa, 1998), core components of authentic happiness (Seligman, 2002), and important psychological needs for experiencing life events as highly satisfying (Sheldon, Elliot, Kim, & Kasser, 2001).

Evidence suggests that pleasure and meaning are not entirely independent of each other. Rather, they are deeply intertwined (Kashdan, Biswas-Diener, & King, 2008; Keyes, Shmotkin, & Ryff, 2002). For example, most pleasurable events can evoke feelings of both pleasure and meaning because experiencing a positive affect often enhances the experience of meaning itself (King, Hicks, Krull, & Del Gaiso, 2006). Even for an action whose ultimate goal is to experience pure pleasure, it is possible for humans, who are natural meaning makers, to discover meaning from it (King & Hicks, 2009).

Nonetheless, pleasure and meaning are often distinct and *compensatory*, creating a trade-off in which the need for pleasure or meaning should be sacrificed at the cost of the other need. Hence, one can live a

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highly meaningful but unpleasant life or a highly pleasant but meaningless life (Baumeister, Vohs, Aaker, & Garbinsky, 2013). Baumeister et al. (2013) depicted the meaningful but unpleasant life as “seriously involved in difficult undertakings, marked by ample worry, stress, argument, and anxiety” (e.g., religious missionary). In contrast, the pleasant but meaningless life was depicted as “a relatively shallow, self-absorbed, or even selfish life, lacking in worries and anxieties.” In fact, it is not rare in everyday life for an individual to face a trade-off between pleasure and meaning. For instance, one sometimes has to choose between going to a party and volunteering at an orphanage for weekend or between a comedy show and a documentary about global warming when selecting a TV channel.

Then, what determines one's choice between pleasure and meaning? Past research has demonstrated that one's own ideas about the nature of true well-being are critical: Lay hedonists, believing pleasure to be the key to happiness, engage in pleasant activities more than lay eudaimonists, believing meaning to be the hallmark of happiness, and vice versa for meaningful activities (Kang, Kim, Lim, & Choi, unpublished manuscript; McMahan & Estes, 2011). It is somewhat intuitive that there are meaning-people and pleasure-people. The present research, then, shifts research focus from individual differences to a contextual factor that may influence the differential weighting of pleasure and meaning: *time*. Specifically, we suggest the importance of temporal dynamics between pleasure and meaning, in which meaning is increasingly valued as temporal distance increases, while pleasure is increasingly favored as temporal distance decreases. For example, “donating one-year of savings to orphans” might be perceived as more appealing when the donation will occur in the next year compared to the next day. On the other hand, “eating a rich chocolate pudding as a dessert tonight” may seem more appealing than “eating a rich chocolate pudding as a dessert a year later.”

This temporal dynamics hypothesis is derived from construal level theory (CLT), which assumes that abstract, high-level construals are more salient in the distant future than in the near future, while concrete, low-level construals are more salient in the near future than in the distant future (Trope & Liberman, 2003). Based on CLT, we will argue and demonstrate that the tendency to seek pleasure versus meaning varies with temporal distance and that meaning is valued more in the distant future, whereas pleasure is valued more in the near future.

### Construal level theory

CLT (Trope & Liberman, 2003) posits that information can be construed at either a high or low level, depending on its abstractness. High-level construals are abstract mental representations that contain essential qualities of given information. These construals consist of primary, superordinate, goal-relevant, and decontextualized features. In contrast, low-level construals are relatively concrete mental representations and include more details that consist of secondary, subordinate, goal-irrelevant, and contextualized features of given information. According to CLT, distinctions between levels of construal are mainly determined by temporal distance, in which distant-future events are construed at a higher level than near-future events. For instance, Liberman and Trope (1998, Study 1) revealed that a daily activity (e.g., watching TV) was more likely to be described in superordinate terms (e.g., being entertained) rather than in subordinate terms (e.g., sitting on the sofa, flipping channels) when it was expected to occur in the distant future (e.g., the next year) compared to the near future (e.g., tomorrow).

Turning to the issue of temporal changes in preference, CLT further proposes that options positively associated with high-level construals receive greater preference in distant-future decisions than in near-future decisions, whereas options positively associated with low-level construals receive greater preference in near-future decisions than in distant-future decisions (Trope & Liberman, 2000). For example, in a series of studies that pinpointed desirability as a high-level construal and feasibility as a low-level construal (Liberman & Trope,

1998; Sagristano, Trope, & Liberman, 2002), it was shown that an activity high in desirability (e.g., an interesting guest lecture) but low in feasibility (e.g., inconvenient time to attend) was more preferred when it was believed to occur next year than on the next day, while an activity high in feasibility (e.g., convenient time to attend) but low in desirability (e.g., a tedious guest lecture) was more favored when it was believed to occur on the next day than next year.

### Levels of construal between pleasure and meaning

Our temporal dynamics hypothesis posits that there is a hierarchy in levels of construal between pleasure and meaning. We specifically assume that meaning constitutes a high-level construal, while pleasure constitutes a low-level construal. We offer three possible reasons why this might be so: pleasure-as-affect and meaning-as-cognition, the *why* aspect of meaning, and context-dependent desirability of pleasure.

#### *Pleasure-as-affect and meaning-as-cognition*

The first reason for the different levels of construal between pleasure and meaning underscores their fundamental characteristics: Pleasure is a desirable affective state (Rozin, 1999), but meaning is a unified cognitive system (Janoff-Bulman, 1992) whose primary function is relating concepts (Baumeister, 1991). According to past research (e.g., Mischel, Shoda, & Rodriguez, 1989), affect is more closely related to low-level construals and cognition is more strongly associated with high-level construals. Metcalfe and Mischel (1999) proposed, in their hot/cool system framework, that the affective (hot) system has concrete properties and the cognitive (cool) system has abstract properties. For example, when reading a comic book, its affective value is featured more concretely (e.g., funny illustrations), while its cognitive value is more pronounced with abstract features (e.g., relieving stress). Thus, it seems that pleasure is construed at a low level because of its affective nature, whereas meaning is construed at a high level because of its cognitive nature.<sup>1</sup>

#### *The why aspect of meaning*

Another feature that distinguishes levels of construal in CLT is goal-relevance. Specifically, goal-relevant features (i.e., *why* aspect) constitute a high-level construal, while goal-irrelevant features (i.e., *how* aspect) constitute a low-level construal (Vallacher & Wegner, 1987). This goal-relevance distinction can be used to explain why meaning constitutes a high-level construal and pleasure constitutes a low-level construal. Among its diverse facets, meaning has the *why* aspect, which is associated with purpose (Ryff, 1989), the goal of action (Leontiev, 2005), and finding meaning in life events (King & Hicks, 2009). Meaning in life is defined as a subjective sense of one's life being purposeful and having attained valuable life goals (King et al., 2006). In contrast, pleasure is relatively weakly associated with ultimate goals and *why* questions. Hence, compared to meaning, pleasure is more likely to constitute a low-level construal because of its limited relevance to the *why* aspect.

#### *Context-dependent desirability of pleasure*

Although both pleasure and meaning are positive states, the desirability of pleasure depends more on context than the desirability of meaning does. Pursuing pleasure can sometimes be considered

<sup>1</sup> Note that pleasure has a cognitive function and meaning has an affective aspect as well. According to research and theory on the role of mood in cognitive processing (Schwarz & Clore, 1996), positive affect signals that all is well and it is safe to use heuristics (Clore et al., 2001; Schwarz, 2001). In addition, meaning is not only a cognitive product but also a subjective sense of feeling (Hicks, Cicero, Trent, Burton, & King, 2010). Nevertheless, even if pleasure can be used as information and meaning has an affective value, informative usage of pleasure is concrete rather than abstract (Slooman, 1996), and the feeling of meaning remains abstract because of its intuitive information processing (Hicks et al., 2010).

negative, depending on timing, source, and culture. For example, immediate pleasure-seeking behavior at the cost of long-term benefits is often considered a vice (Werthenbroch, 1998) and a failure of self-control (Shoda, Mischel, & Peake, 1990). Moreover, the positivity of pleasure can be contaminated when its source is from the body rather than from the mind (Kubovy, 1999). This is consistent with the view of Epicurus, who regarded mental pleasure as superior to physical pleasure (Bergsma, Poot, & Liefbroer, 2011). In addition, pleasure through overly consuming luxurious and hedonic goods often leads to feelings of guilt (Kivetz & Simonson, 2002; Lascu, 1991). Finally, the ideal value of pleasure is likely to vary across culture. According to research on ideal affect, high-arousal pleasurable emotions (e.g., excitement) are less valued than low-arousal pleasurable emotions (e.g., calmness) in collectivistic cultures (Tsai, Knutson, & Fung, 2006). This cross-cultural discrepancy suggests that pleasure may be culture-specific (Leu, Wang, & Koo, 2011). Taken together, these findings indicate that pleasure is context-dependent. Since low-level construals are generally more contextualized than high-level construals (Trope & Liberman, 2003), it stands to reason that pleasure is a low-level construal and meaning is a high-level construal.

However, it is critical to empirically test whether pleasure is a low-level construal and meaning is a high-level construal. CLT offers a very useful empirical test to distinguish levels of construals, which we will describe below.

### Subordination of pleasure to meaning and time-dependent changes in the weight of pleasure and meaning

In CLT, *subordination* is a valid criterion that can test a hierarchy in levels of construal between two constructs (Trope & Liberman, 2010). Subordination exists when there is an asymmetry in conditional importance between high- and low-level construals, in which the importance of low-level construals depends on the value of high-level construals more than vice versa (Eyal, Liberman, Trope, & Walther, 2008). For example, Sagristano et al. (2002, Preliminary Studies 1 & 2) showed that the importance of feasibility was much lower when desirability was low than when it was high, whereas the importance of desirability remained high regardless of whether feasibility was high or low. This asymmetry justifies the subordination of feasibility to desirability, indicating that feasibility is a low-level construal and desirability is a high-level construal.

If pleasure is a low-level and meaning is a high-level construal as we posited, then an equivalent asymmetry should underlie the relationship between pleasure and meaning. That is, the importance of pleasure should depend on the level of meaning more than the importance of meaning should depend on the level of pleasure. In other words, the meaningfulness of an option should always be important to the decision no matter how pleasurable it is, but whether an option is pleasurable or not should be of little importance to the decision if it is not meaningful. We examined this hypothesis in Study 1.

One consequence of this hierarchy that CLT would predict is that the higher construal (meaning) should be valued more in the distant future than in the near future, whereas the lower construal (pleasure) should be valued more in the near future than in the distant future. Studies 2 and 3 tested this temporal effect on the weight of pleasure and meaning in various situations. We expected a meaningful life (Study 2) and meaningful decision options (Study 3) to be evaluated more positively in the distant future than in the near future. Conversely, a pleasurable life and pleasurable decision options would be evaluated more positively in the near future than in the distant future.

Before we delineate our studies, it would be worth mentioning how we operationally defined pleasure and meaning throughout the studies. Basically, we allowed people to define pleasure and meaning on their own (Studies 1 & 2). For Study 3, however, we relied on the traditional conceptualizations of eudaimonic well-being in guiding how people should construe meaning. According to the previous research, meaning

or meaningfulness is a cognitive and emotional evaluation of whether one's life event or life in general has higher purpose and value (Baumeister et al., 2013; Ryan & Deci, 2001). Based on this conceptualization, in Study 3, meaning was defined through its relation to specific purposes to help people make sense of given contexts.

### Study 1: subordination of pleasure to meaning

Before testing the main hypothesis of the present research, we first aimed to examine whether pleasure is indeed subordinate to meaning. Following the standard procedure of CLT (Liberman & Trope, 1998), participants were presented with decision-making situations in which information regarding the level of either pleasure or meaning was provided. They were then asked to rate the subjective importance of the unprovided aspect (importance of pleasure was rated when meaning was provided and importance of meaning was rated when pleasure was provided). We predicted that participants would express consistent interest in meaning regardless of the level of pleasure, while their interest in pleasure would vary greatly depending on the level of meaning.

#### Method

##### Participants

Participants were 120 Seoul National University undergraduate students (61 women), and their mean age was 21.92 years ( $SD = 3.09$ ). They received 5000 Korean won (approximately equal to \$5) in exchange for their participation. Gender was included in the analysis, and no significant effect was found in all experiments. Thus, we do not report the results of gender hereafter.

##### Materials and procedure

Participants were given a questionnaire containing three hypothetical decision scenarios (doing an internship, purchasing a book, and registering for a course). Each of the scenarios varied in its provided aspect (pleasure vs. meaning) and its level of the provided aspect (high vs. low). An "internship" example of the high-level pleasure condition is presented below (see Appendix A for the other two scenarios). The low-level condition appears in parentheses, and the meaning condition appears in square brackets.

Imagine that you have read an internship advertisement for one company at a job fair. As you scan the advertisement, it seems apparent that working at the company as an intern would be very pleasurable to you (not so pleasurable to you). Then, how important would it be for you to find out how meaningful or meaningless the work is in deciding whether to do the internship? [As you scan the advertisement, it seems apparent that working at the company as an intern would be very meaningful to you (not so meaningful to you). Then, how important would it be for you to find out how pleasurable or unpleasurable the work is in deciding whether to do the internship?]

Each scenario was followed by a rating of subjective importance of the unprovided aspect in making the decision on a 9-point scale ranging from 1 (*not at all important*) to 9 (*very important*). In other words, participants rated the subjective importance of pleasure (or meaning) when provided with information on the meaning (or pleasure) aspect. Each participant was randomly assigned to one of the four conditions (high/low pleasure vs. high/low meaning). The order in which the three scenarios were presented was counterbalanced across participants, and no order effect of the scenario was found.

#### Results and discussion

We conducted a 2 (the provided aspect: pleasure vs. meaning)  $\times$  2 (level: high vs. low)  $\times$  3 (the type of scenario: internship vs. book vs. course) mixed-model analysis of variance (ANOVA) on the subjective

importance of the unprovided aspect, with the third variable as a within-subject factor and the others as between-subject factors. The ANOVA yielded a main effect of the provided aspect,  $F(1, 116) = 12.03$ ,  $p = .001$ ,  $\eta^2 = .10$ , indicating that information about the extent of meaning ( $M = 6.59$ ,  $SD = 1.49$ ) was considered to be more important than information about the extent of pleasure ( $M = 5.57$ ,  $SD = 1.80$ ). A main effect of the level was also revealed,  $F(1, 116) = 4.59$ ,  $p = .03$ ,  $\eta^2 = .04$ , in which the subjective importance of the unprovided aspect was greater when the level of the provided aspect was high ( $M = 6.39$ ,  $SD = 1.63$ ) than low ( $M = 5.77$ ,  $SD = 1.77$ ). No effect of the type of scenario was found,  $F < 1$ .

Most importantly, consistent with the assumption of that pleasure is subordinate to meaning, the interaction effect between the provided aspect and the level was significant,  $F(1, 116) = 4.92$ ,  $p = .03$ ,  $\eta^2 = .04$ . As shown in Fig. 1, this interaction effect indicated that interest in pleasure depended on the level of meaning more than interest in meaning depended on the level of pleasure. Specifically, the interest in the extent to which an activity was pleasurable was significantly greater when it was very meaningful ( $M = 6.21$ ,  $SD = 1.67$ ) than when it was not meaningful ( $M = 4.93$ ,  $SD = 1.72$ ),  $F(1, 116) = 9.50$ ,  $p = .003$ ,  $\eta^2 = .08$ . However, the interest in the extent to which an activity was meaningful was equally strong regardless of whether it was very pleasurable ( $M = 6.58$ ,  $SD = 1.60$ ) or not pleasurable ( $M = 6.60$ ,  $SD = 1.41$ ),  $F < 1$ . Notably, this interaction effect was not affected by the type of scenario,  $F < 1$ .

Study 1 demonstrated that interest in the extent to which an option could provide pleasure fluctuated greatly depending on the level of its meaning. On the contrary, interest in the extent to which an option would be meaningful remained strong regardless of how pleasurable it was. This pattern of data that pleasure is dependent on the level of meaning, while meaning is less dependent on the level of pleasure, supports the hypothesis that pleasure is subordinate to meaning.

By establishing that meaning constitutes a high-level construal and pleasure constitutes a low-level construal, Study 1 allows us to test our main hypothesis that meaning becomes more influential as temporal distance increases, while pleasure becomes more influential as temporal distance decreases. The following two studies explored this time-dependent change in the weight of pleasure and meaning.

### Study 2: time-dependent attitude toward a pleasurable life versus a meaningful life

As an initial attempt to test our temporal dynamics hypothesis, Study 2 examined time-dependent changes in attitude toward a pleasurable life and a meaningful life. Participants chose between a pleasurable life without meaning and a meaningful life without pleasure for a certain period of time ranging from an hour to a year. We expected that a meaningful life without pleasure would be preferred to a pleasurable life without meaning in the long-term future compared to the short-term future.

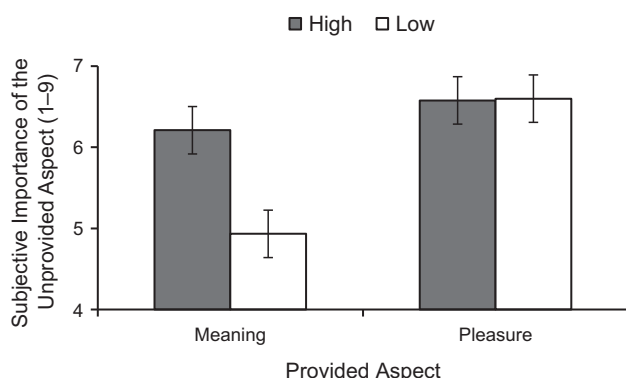


Fig. 1. Interest in the unprovided aspect as a function of the provided aspect and its level.

### Method

#### Participants

Fifty-eight Seoul National University undergraduate students (38 women) participated in Study 2 (mean age = 21.02,  $SD = 1.92$ ). They received partial course credit for their participation.

#### Materials and procedure

As a part of multiple experiments, participants were given a short questionnaire concerning their attitude toward a pleasurable but meaningless life versus a meaningful but unpleasurable life. The questionnaire included the following question: "For an hour (a day/a week/a month/a year), if you must go through either a pleasurable life without meaning or a meaningful life without pleasure, what form of life would you like to choose?" Participants were asked to answer all five questions in an ascending order of the length of time by rating their preference on a scale ranging from 1 (a pleasurable life without meaning) to 8 (a meaningful life without pleasure).<sup>2</sup> They first completed this questionnaire and then participated in the other remaining experiments which were not relevant to the current study's hypothesis.

#### Results and discussion

Consistent with our prediction, the result of a repeated-measures ANOVA polynomial contrast revealed a significant linear increase of preference toward a meaningful life without pleasure over time,  $F(1, 57) = 7.23$ ,  $p = .009$ ,  $\eta^2 = .13$ . As shown in Fig. 2, there was an escalating trend in choosing a meaningful life without pleasure over a pleasurable life without meaning as the unit length of time increased. A closer look at the pattern reveals a significant increase in preference for a meaningful life over a pleasurable life from a day to a year ( $M_{\text{day}} = 4.43$  vs.  $M_{\text{year}} = 5.31$ ),  $t(57) = 2.32$ ,  $p = .02$ ,  $d = .43$ , and marginally significant increases from an hour to a year ( $M_{\text{hour}} = 4.33$  vs.  $M_{\text{year}} = 5.31$ ),  $t(57) = 1.71$ ,  $p = .09$ ,  $d = .41$ , and from a week to a year ( $M_{\text{week}} = 4.71$  vs.  $M_{\text{year}} = 5.31$ ),  $t(57) = 1.78$ ,  $p = .08$ ,  $d = .36$ .

The results of Study 2 demonstrate that a life full of meaning but lacking pleasure becomes more desirable than a life full of pleasure but lacking meaning as the unit length of time increased. For example, participants preferred a meaningful life without pleasure to a pleasurable life without meaning for a year of life more than they did for only a day of life. The linearly increasing trend in preference toward a meaningful but unpleasurable life over time implies that meaning is more weighted in the distant future than in the near future, while pleasure is more weighted in the near future than in the distant future, which is consistent with our temporal dynamics hypothesis. It is also notable that the mean score at every time unit was greater than 4 (i.e., the lowest rating score for preference toward a pleasurable life without meaning), indicating that our participants had a strong proclivity toward a meaningful life overall.

Although Study 2 supports the proposed temporal dynamics between pleasure and meaning, two limitations should be noted. First, what we manipulated might have been temporal duration, not temporal distance. Despite their general similarity, temporal duration and temporal distance are fundamentally different in terms of conceptual definition. If participants considered the time units as temporal duration rather than temporal distance, the time-dependent changes in the weight of pleasure and meaning found in this study could be explained by reasons other than CLT. For instance, compared to experiencing only meaning without pleasure, having only pleasure without meaning for a

<sup>2</sup> On a bipolar scale, we contrasted between a pleasurable life without meaning and a meaningful life without pleasure instead of simply contrasting between a pleasurable life and a meaningful life. This specific distinction seemed to be required in order to distinguish between a pleasurable life and a meaningful life more sharply because they are often correlated (a pleasurable life can be very meaningful and vice versa, see King et al., 2006).

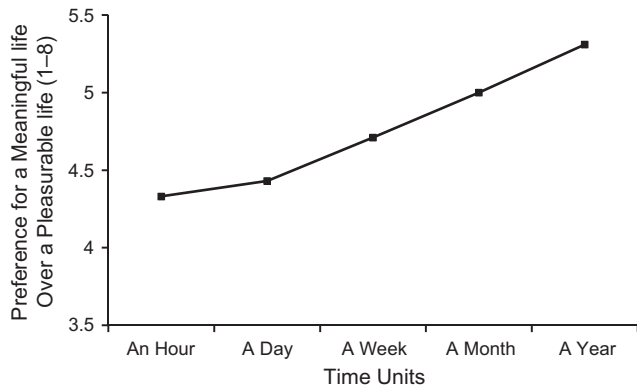


Fig. 2. A linear trend in preference for meaningful life over pleasurable life with the increase of time units.

long time may evoke a feeling of guilt (Kivetz & Simonson, 2002; Lascu, 1991) or satiation (Waterman, 2007), which would result in declined interest in pleasure over time. Study 2 did not tease apart temporal distance from temporal duration. Second, the question of choosing between a pleasurable life without any meaning and a meaningful life without any pleasure is plausible but unrealistic in real life. In fact, past research has shown that they are moderately related to each other (King & Napa, 1998).

To replicate the temporal dynamics while addressing these issues, Study 3 manipulated temporal distance more explicitly and used more realistic and familiar situations for college students.

### Study 3: time-dependent preference for pleasurable versus meaningful choice options

In Study 3, participants were provided with three realistic and familiar choice-making situations in campus life, and options were created as complementary (high pleasure/low meaning and high meaning/low pleasure). This choice contrasts the more extreme situations used in Study 2 (a pleasurable life without any meaning vs. a meaningful life without any pleasure) with more moderate and realistic options. The time context of decisions differed in temporal distance (near future and distant future). The two types of complementary feature and two conditions of temporal distance were orthogonally varied across participants. We predicted that the effect of pleasure on decisions would be greater in the near future than in the distant future, but the effect of meaning on decisions would be more pronounced in the distant future than in the near future.

#### Method

##### Participants

Participants were 94 Seoul National University undergraduate students (47 women; mean age = 21.60,  $SD = 3.07$ ) and were given 5000 Korean won for their participation.

##### Materials and procedure

Participants were provided with a questionnaire including three everyday-choice situations (attending a guest lecture, purchasing a book, and taking a part-time job). There were four versions of the questionnaire that differed in terms of pleasure, meaning, and temporal distance. Specifically, three scenarios were manipulated such that either high pleasure/low meaning or high meaning/low pleasure options would occur in the near future (tomorrow) for some participants and in the distant future (the next year) for others. A “guest lecture” example presented below is the high pleasure/low meaning in the near-future condition (see Appendix B for the other scenarios). The

high meaning/low pleasure condition appears in square brackets, and the distant-future condition appears in parentheses.

Imagine that a guest lecture offered by your department will be given tomorrow (next year). Because the speaker of the lecture is famous for humorous speech skills, you think that attending this lecture will be very pleasurable. As you think it over, however, you realize that this lecture is not highly meaningful for making your future-career decisions. [As you think it over, you realize that this lecture is highly meaningful for making your future-career decision. However, because the speaker of the lecture is notorious for giving a boring speech, you think that attending this lecture will not be so pleasurable.] In this situation, how likely are you to attend this lecture tomorrow (next year)?

In each scenario, the meaningfulness of an activity was specified rather than simply described as “it is meaningful or meaningless.” In other words, it was described that attending the lecture was (less) meaningful in making a decision about one’s future career; the content of the book was (less) meaningful in strengthening the knowledge in one’s major; and working the part-time job was (less) meaningful to one’s career. The pleasurable nature of the activity was also described with details rather than simply described as “it is pleasurable or unpleasurable,” except for the part-time job scenario: The guest lecture was (less) pleasurable because of the lecturer’s speech skills, and the book was (less) pleasurable because of its contents.

For each scenario, participants rated the likelihood of making a choice on a 9-point scale ranging from 1 (*not at all likely*) to 9 (*very likely*). Two types of order effects were considered: The order in which information about pleasure and meaning was presented in each scenario, and the order in which the three scenarios were presented. Both types of order were counterbalanced across participants, and neither of them had a significant effect on the results.

#### Results and discussion

A 2 (the complementary feature: high pleasure/low meaning vs. high meaning/low pleasure)  $\times$  2 (temporal distance: distant vs. near future)  $\times$  3 (type of scenario: guest lecture vs. book vs. part-time job) mixed-model ANOVA on the subjective likelihood of choice was performed, with the third variable as a within-subject factor and the others as between-subject factors. No significant main effect was found except for the type of scenario,  $F(2, 180) = 5.57, p = .005, \eta^2 = .06$  ( $M_{\text{guest lecture}} = 6.47$  vs.  $M_{\text{book}} = 5.63$  vs.  $M_{\text{part-time job}} = 6.40$ ), which is of no interest for our purpose. More importantly, the interaction effect between the complementary feature and temporal distance was significant,  $F(1, 90) = 5.10, p = .03, \eta^2 = .06$  (see Fig. 3).

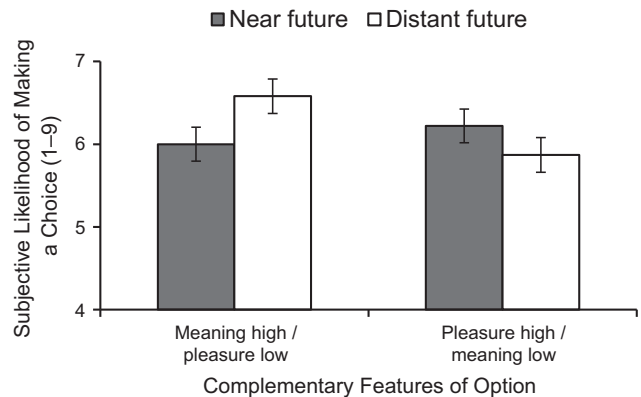


Fig. 3. Subjective likelihood of making a choice as a function of complementary features and temporal distance.

To better understand this interaction effect, we conducted simple effect analyses on the difference of subjective likelihood of choice between the temporal distance conditions. For high meaning/low pleasure options, participants were more likely to choose those options for the distant-future decisions ( $M = 6.58, SD = .88$ ) than the near-future decisions ( $M = 6.00, SD = .94$ ),  $F(1, 90) = 3.94, p = .05, \eta^2 = .04$ . In contrast, high pleasure/low meaning options were preferred more in the near future ( $M = 6.22, SD = 1.11$ ) than in the distant future ( $M = 5.87, SD = 1.06$ ), though the difference was not statistically significant,  $F(1, 90) = 1.46, p = .23, \eta^2 = .02$ . Put differently, for the distant future, people had a very strong preference for meaningful options over pleasurable options (6.58 vs. 5.87),  $F(1, 90) = 5.79, p = .02, \eta^2 = .06$ , whereas for the near future, they did not have such a preference (6.00 vs. 6.22),  $F(1, 90) = .59, p = .44, \eta^2 = .01$ . This suggests that meaning looms larger in the distant future, while pleasure looms larger in the near future. Notably, this “pleasure now, meaning later” tendency did not differ across scenarios,  $F < 1$ .

We predicted that an option having high meaning/low pleasure would be more attractive in the distant future than in the near future, while an option having high pleasure/low meaning would be favored in the near future compared to the distant future. The results of Study 3 confirm our prediction. When an activity (e.g., reading an interesting book) seemed to be meaningful (e.g., broadening their knowledge base in their major) but less pleasurable (e.g., having difficulty with jargon), engaging in it in the distant future was more attractive than in the near future. Conversely, when an activity (e.g., attending a guest lecture) was pleasurable (e.g., enjoying the lecturer’s humor) but less meaningful (e.g., irrelevant to future career), it appeared to be more appealing in the near future than in the distant future. Unexpectedly, however, it was found that the time-dependent change in the relative weight of pleasure was not as big as in the relative weight of meaning. Even though pleasurable but less meaningful options were more favored in the near future than in the distant future, the difference failed to reach a statistical significance. We will address this issue in the [General discussion](#) section.

The findings of Study 3 address the weakness noted for Study 2. First, Study 3 manipulated temporal distance, not temporal duration. Recall that Study 2 could be explained away by potential guilt or boredom out of experiencing only pleasure for a long period of time. By specifying temporal distance, not duration, Study 3 ruled out this possibility. Second, Study 3 used more mundane and realistic situations familiar to college students (e.g., buying a book, attending a lecture) to increase ecological validity, which was lacking in Study 2.

## General discussion

### Summary

Assuming a hierarchical nature in levels of construal between pleasure and meaning, we proposed that pleasure is subordinate to meaning. Following the characterization of *subordination* in CLT, we predicted that the consideration of pleasure would depend on the level of meaning more than the consideration of meaning would depend on the level of pleasure. Consistent with this prediction, Study 1 showed that interest in pleasure varied substantially depending on the level of meaning, but interest in meaning remained high regardless of the level of pleasure. This asymmetry in conditional importance supports the notion that pleasure is subordinate to meaning, which indicates that meaning constitutes a high-level construal and pleasure constitutes a low-level construal (Trope & Liberman, 2010).

Since CLT assumes that higher-level construals become more salient as temporal distance increases, we hypothesized that meaning would be more valued in the distant future, whereas pleasure would be more valued in the near future. Studies 2 and 3 examined this time-dependent change in the relative weight of pleasure versus meaning in a variety of domains. In Study 2, participants were asked to report

their attitude toward a pleasurable life without meaning versus a meaningful life without pleasure for given periods of time. Consistent with the temporal dynamics hypothesis, Study 2 found that a meaningful life was preferred over a pleasurable life as time shifted from the near to the distant future. Study 3 further demonstrated that high meaning/low pleasure options were preferred in the distant future compared to the near future, while high pleasure/low meaning options were favored in the near future compared to the distant future although to a less substantial degree. In sum, Studies 2 and 3 show converging evidence for the temporal dynamics between pleasure and meaning, such that an increase in temporal distance augments the value of meaning but attenuates the value of pleasure.

The “pleasure now, meaning later” phenomenon is generally consistent with the previous research on choice over time (Ainslie & Haslam, 1992; Elster & Loewenstein, 1992), self-control (Fujita, Trope, Liberman, & Levin-Sagi, 2006; Hoch & Loewenstein, 1991), self-evaluation (Freitas, Salovey, & Liberman, 2001), and happiness (Steger, Kashdan, & Oishi, 2008). For instance, Ritov (2006) showed that immediate pleasure with products diminished in the long term. In contrast, meaning is considered more desirable when it is pursued through long-term efforts (Scollon & King, 2004). Several studies also imply that the value of pleasure is more closely associated with shorter amounts of time (Oishi, Schimmack, & Diener, 2001; Sackett, Meyvis, Nelson, Converse, & Sackett, 2010), whereas the value of meaning is more strongly associated with longer amounts of time. However, unlike the previous studies in which *actual* experience of pleasure and meaning was examined in temporal context, we examined how people construe pleasure and meaning in temporal contexts.

### The meaning bias

Throughout the three studies, we found that meaning was more important than pleasure. In Study 1, participants expressed a higher level of interest in meaning than in pleasure. In Study 2, participants preferred a meaningful life to a happy life, even for a day. In Study 3, the weight of pleasure was less affected by time than was the weight of meaning. Namely, the effect of time was much more reliable on the weight of meaning. Why might this be the case?

Although the temporal pattern of meaning and pleasure is generally supportive of our hypothesis, there are at least two issues that deserve further inquiry. One issue is culture. Korean culture is known for its strong emphasis on meaning and eudaimonic well-being. Korea scored the highest out of 27 nations in the orientation to meaning in Park, Peterson, & Ruch (2009), although Korea stood very low in the world ranking of positive feelings, 58th out of 132 nations (Diener, Ng, Harter, & Arora, 2010). Therefore, the meaning bias we found in the present research may be unique to Korean culture. Future research should address the possibility of cross-cultural differences.

The other issue is related to goal relevance. One might argue that the goals of the scenarios in the present research were more relevant to meaning than pleasure. To give an illustration, recall the “guest lecture” scenario in Study 3. People usually attend a guest lecture primarily to learn useful lessons and maintain up-to-date knowledge, not to have fun. Therefore, whether the lecturer is humorous or boring would not be as central to the decision as whether the lecturer delivers meaningful lessons or not. Thus, what becomes more valuable in the distant future is not meaning per se, but the goal. That is, the time-dependent change in the weight of pleasure and meaning would be determined by whether the goal of a given situation is pursuit of pleasure or pursuit of meaning, rather than by the inherent hierarchy in their levels of construal. If this were the case, it is conceivable that when experiencing sheer pleasure is a superior goal, the value of pleasure may be accentuated, not attenuated, as temporal distance increases. For example, hedonic activities such as getting a massage to feel good would be more attractive in the distant future than in the near future because experiencing pure pleasure is a core purpose of these actions

(Trope & Liberman, 2000; but see also Laran, 2010). Indeed, Trope and Liberman (2000, in Study 5) found support for this argument and showed that when participants watched a film to exchange information and have a discussion (cognitive goal condition), an informative film was favored over a funny one as temporal distance increased, and the reverse was true when they watched it to experience a positive feeling (affective goal condition).

Similarly, the subordination of pleasure to meaning can be reversed in the contexts where learning about pleasure is more central than meaning. Some of the scenarios in Study 1 (e.g., internship) may have been more relevant to long-term goals such as career and education. In these contexts, meaning should be superordinate to pleasure because information about meaningfulness is directly related to attaining the goal. Thus, it is possible that this subordination of pleasure to meaning is reversed if a superior goal is to gain mere pleasure. For instance, when deciding to go to the amusement park, people would want to know more about its pleasantness rather than its meaningfulness.<sup>3</sup> In such pleasure-biased situations, pleasure would be superordinate to meaning and thereby constituting a higher construal level than meaning. This possibility suggests that our findings of the temporal dynamics between pleasure and meaning might be limited to the long-term goal context.

Although future research should address this issue systematically, the scenarios in the present research were not entirely biased toward meaning. For example, in Study 3, if choice problems were solely meaning-oriented, participants should have shown a general preference for the high meaning/low pleasure options over the high pleasure/low meaning options. However, the overall preferences for the two types of options were not different (6.29 vs. 6.05),  $F(1, 90) = 1.40, ns$ . In addition, we did not provide any specific activity in Study 2 and instead asked participants to choose between a meaningful life and a pleasurable life. Nonetheless, participants displayed a pattern of preference consistent with the temporal dynamics hypothesis. Therefore, despite the potential confounding between the level of construal and the goal in the temporal dynamics between meaning and pleasure, we do not believe that the present findings can be entirely explained away by the goal relevance. However, it is still an open question and future research should examine how goal relevance and goal context affect the temporal changes in the weight of pleasure and meaning.

## Implications

### CLT and positive psychology

Past research on CLT contrasted pairs of important constructs which differed in the level of construal and discovered temporal dynamics between them: desirability versus feasibility (Liberman & Trope, 1998; Sagristano et al., 2002), consistency versus flexibility (Ledgerwood, Trope, & Chaiken, 2010; Wakslak, Nussbaum, Liberman, & Trope, 2008), and pros versus cons in argument (Eyal et al., 2008). By discovering such temporal dynamics, CLT deepens our understanding of planning and self-control. For example, CLT research discovered that people consider pros more than cons of an option as temporal distance increases, suggesting that one's persuasion efforts should be made earlier, not later (Eyal et al., 2008). A similar line of reasoning is also valid regarding desirability and feasibility. Since people tend to consider desirability for the distant future but feasibility for the near future, a desirable but less feasible plan should be made earlier rather than later. The present research adds the dimension of meaning versus pleasure to this list and suggests that to make people engage in a meaningful activity (e.g., volunteering), one needs to ask them far ahead of time.

As discussed at the outset, pleasure and meaning are important factors in human behavior, motivation, and well-being. Obviously, people pursue both pleasure and meaning. It is not a matter of choice. As

Baumeister mentioned, people “want to be happy, but they also want life to be meaningful” (1991, p. 396). Yet, past research tended to describe these two pursuits as different kinds of happiness (Keyes & Annas, 2009; Ryan & Deci, 2001; Waterman, 1993) and examined whether some individuals value one over the other (Huta & Ryan, 2010; Kang et al., unpublished manuscript; McMahan & Estes, 2011). This *either/or* approach cannot describe the complex and dynamic relationship between pleasure and meaning. The present research adopts a *both/and* approach by proposing the temporal dynamics between the two: People pursue both pleasure and meaning, but the relative emphasis people put on varies with time. Thus, our research makes contributions both to CLT by adding the pleasure versus meaning dimension to the list of pairs of constructs with different levels of construal and to positive psychology by offering a new way of integrating pursuit of pleasure and pursuit of meaning.

### Self-control

The present research provides a clue to why people often fail in self-control. Self-control is defined as an effort to act in accordance with long-term rather than short-term outcomes (Mischel et al., 1989; Wertenbroch, 1998). As demonstrated by Study 3, when a choice is a matter of either pleasure or meaning, people prefer meaning to pleasure for a distant- compared to a near-future decision. However, ironically, they might feel regret about their early decision as the time of implementation draws near because meaning no longer seems as attractive while pleasure looms large. This time-dependent change in value from meaning to pleasure is likely to make people alter their initial plans and goals and succumb to instant pleasure. That might be one of the reasons why people retract their promise to visit a senior center over the weekend and instead spend time with friends. The present research seems to make such self-control failures appear inevitable. Yet, it also offers a remedy to self-control failure: maintaining a long-term perspective. The proposed temporal dynamics between pleasure and meaning implies that having a long-term perspective enables one to resist, or at least delay, temporary pleasure because it induces people to focus on meaning. As Study 2 illustrates, participants prefer to sacrifice immediate pleasure for a meaningful life as time moves from the near to the distant future. Study 3 also demonstrates that people favor an instructive but boring lecture, a useful but tedious book, and a career-developing but insipid job more in the distant future than in the near future. These findings collectively suggest that a long-term perspective is critical in self-control because it makes people give more weight to meaning than pleasure. Hence, when faced with a temptation of chocolate at a dinner table, asking “would you eat chocolate today from a year?” would help one resist the temptation. In fact, the importance of time perspective in controlling oneself has been repeatedly demonstrated (Ainslie & Haslam, 1992; Fujita et al., 2006; Read, Loewenstein, & Kalyanaraman, 1999; Trope & Fishbach, 2000; Winterich & Haws, 2011).

### Future research

The current research raises a couple of interesting future research questions. First, terror management theory (TMT, Solomon, Greenberg, & Pyszczynski, 1991) posits that fear of death or mortality salience makes people attempt to overcome the provoked anxiety by bolstering their meaning systems (e.g., cultural worldviews). This compensatory effort basically has a function of meaning maintenance because mortality threatens one's meaning in life (Heine, Proulx, & Vohs, 2006). Then, it stands to reason that the relative emphasis of pleasure versus meaning would be heavily biased toward meaning under mortality salience. It seems likely then that one's bucket list may be full of meaningful activities.

Second, as we noted, it is also important to examine the role of culture in the pursuit of pleasure versus meaning. In terms of arousal level of affect, individualistic cultures consider high-arousal positive affect more ideal than do collectivistic cultures (Tsai et al., 2006). People in

<sup>3</sup> We thank Antonio Freitas for suggesting this example.

individualistic cultures prefer to experience enthusiastic, excited, or elated feelings. In contrast, people in collectivistic cultures pursue low-arousal positive affect such as calm, relaxed, or peaceful as ideal. This cultural divergence in affect valuation implies that pleasure could hold a special position in individualistic cultures (Leu et al., 2011), suggesting that the relative weight of pleasure versus meaning would be biased toward pleasure in individualistic cultures. It would be fascinating to find that the temporal pattern of pleasure versus meaning is even reversed in individualistic cultures.

In a related vein, it would be interesting to explore whether there are possible individual differences in the temporal dynamics between pleasure and meaning. Particularly, how people differently value pleasure and meaning could be one factor that affects the temporal changes in the weight of pleasure and meaning (Kang et al., unpublished manuscript; McMahan & Estes, 2011). For instance, individuals with strong hedonic values might put more weights on the dimension of pleasure as temporal distance increases because experiencing pleasure is their most important goal and thus pleasure constitutes a higher level of construal than meaning for them. This is an important avenue for future research because examining the moderating effect of individual values would reveal generalizability and applicability of the temporal dynamics between pleasure and meaning.

Lastly, the present research did not examine pleasure and meaning separately but rather in a confounding manner. That is, we did not include every possible conditions for the combination between pleasure and meaning (e.g., high pleasure/high meaning) but only had the conditions that incorporated a tradeoff between pleasure and meaning (e.g., high pleasure/low meaning).<sup>4</sup> This limitation prevents us from drawing a conclusion about how the absolute values of pleasure and meaning are affected by temporal distance. Although we primarily focused on the temporal changes in the *relative* weights of pleasure versus meaning, examining the temporal changes in the *absolute* weights of pleasure and meaning would have very important implications for future research. Specifically, it may reveal that the actual slopes in which pleasure and meaning change as a function of temporal distance depend on the characteristics of the context. For example, it may be the case that the actual slope of pleasure is less steep than that of meaning for pleasurable activities though the absolute importance of pleasure is higher than that of meaning, and vice versa for meaningful activities. This possibility would broaden our understanding of how pleasure and meaning are valued as temporal distance changes and therefore waits for future research.

### Appendix A. Choice scenarios used in Study 1

#### Book

Imagine that you pick up one book in a bookstore. Judging by its cover and reviews, the content of the book seems very pleasurable to you (does not seem so pleasurable to you). Then, how important would it be for you to determine how meaningful or meaningless the content of the book is in choosing whether to buy the book? [Judging by its cover and reviews, the content of the book seems very meaningful to you (does not seem so meaningful to you). Then, how important would it be for you to determine how pleasurable or unpleasurable the content of the book is in choosing whether to buy the book?]

#### Course

Imagine that you have read an advertisement about a new course beginning in the next semester on the bulletin board of the department. According to the ad, the course content seems very pleasurable to you (does not seem so pleasurable to you). Then, how important would it

be for you to determine how meaningful or meaningless the course content is in choosing whether to take the course? [According to the ad, the course content seems very meaningful to you (does not seem so meaningful to you). Then, how important would it be for you to determine how pleasurable or unpleasurable the course content is in choosing whether to take the course?]

### Appendix B. Choice scenarios used in Study 3

#### Book

Imagine that you are selecting a book in a bookstore tomorrow (next year). As you scan through one book, the content of the book looks so pleasurable because it contains recent episodes of the author and a lot of cartoons. However, the content of the book does not seem so meaningful in strengthening your knowledge in your major. [As you scan through one book, the content of the book seems very meaningful in strengthening your knowledge in your major. However, the content of the book does not look so pleasurable because it contains only words and a lot of difficult jargon.] In this situation, how likely are you to buy this book tomorrow (next year)?

#### Part-time job

Imagine that tomorrow (next year) you read an advertisement for a part-time job during vacation. As you read the ad, it seems that doing this job will be very pleasurable. However, it does not seem so meaningful to your career. [As you read the ad, it seems that doing this job will be very meaningful to your career. However, it does not seem so pleasurable.] In this situation, how likely are you to decide to take this part-time job tomorrow (next year)?

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<sup>4</sup> We thank an anonymous reviewer for addressing this issue.



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