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Reports

Consuming experience: Why affective forecasters overestimate comparative value

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ABSTRACT

The hedonic value of an outcome can be influenced by the alternatives to which it is compared, which is why people expect to be happier with outcomes that maximize comparative value (e.g., the best of several mediocre alternatives) than with outcomes that maximize absolute value (e.g., the worst of several excellent alternatives). The results of five experiments suggest that affective forecasters overestimate the importance of comparative value because forecasters do not realize that comparison requires cognitive resources, and that experiences consume more cognitive resources than do forecasts. In other words, because forecasters overestimate the extent to which they will be able to think about what they did not get while experiencing what they got.

Psychologists and economists have long believed that a person's satisfaction with an outcome can be influenced by the alternatives to which that outcome is compared. "Our wants and pleasures… are of a relative nature" wrote Karl Marx (1849/2004), who noted that a homeowner will enjoy his little house until his neighbor builds a larger one, at which time "the little house shrinks to a hut… (and) the occupant of the relatively little house will always find himself more uncomfortable, more dissatisfied, more cramped within his four walls." Extensive literatures on judgmental contrast (Biernat, 2005; Brown, 1953; Helson, 1964; Parducci, 1995), counterfactual thinking (Epstude & Roese, 2008; Kahneman & Miller, 1986), and social comparison (Festinger, 1954; Frank, 1985a, b; Suls & Wheeler, 2000) support the notion that an outcome's hedonic value can be influenced by the alternatives to which it is compared. Ordinary people seem to share this intuition, which is why they often trade absolute value for relative value (Bazerman, Loewenstein, & Blount-White, 1992; Hsee, 1998; Smith, Diener, & Wedell, 1989): When people are given a choice between an outcome that is comparatively superior but absolutely inferior (e.g., a job that pays them $45,000 and pays everyone else $40,000) and an outcome that is absolutely superior but comparatively inferior (e.g., a job that pays them $50,000 and pays everyone else $55,000), a sizeable number choose the former (Solnick & Hemenway, 1998), and those who do not typically predict that they would be happier if they did (Tversky & Griffin, 1991). Because people expect to compare their salary to its alternatives, they willingly trade the pleasure they would derive from extra income for the presumably greater pleasure they will derive from out-earning someone else.

Are such tradeoffs wise? Although people sometimes compare their outcomes to their alternatives (Buunk, Collins, Taylor, VanYperen, & Dakof, 1990; Lyubomirsky & Ross, 1997; Medvec, Madey, & Gilovich, 1995; Mellers, Schwartz & Ritov, 1999; Roese, 2004; Smith et al., 1989, Zeelenberg et al., 1998), this does not mean that they make precisely the comparisons they expect to make under the circumstances in which they expect to make them (Girotto, Ferrante, Pighin, & Gonzalez, 2007; Gilbert, Morewedge, Risen, & Wilson, 2004; Hsee & Zhang, 2004; Novemsky & Ratner, 2003; Schkade & Kahneman, 1999; Sedvalis & Harvey, 2007). We suggest that, in fact, people tend to overestimate the extent to which hedonic experiences will be influenced by the comparative value of its alternatives.

Why should this be the case? First, many experiences consume cognitive resources, limiting people's ability to think of alternatives (Addis, Wong, & Schacter, 2007; Csikszentmihalyi, 1991; Eccleston & Crombez, 1999; Fernandes & Moscovitch, 2002; Kahneman, 1973; Moscovitch, 1994). A person in the heat of battle or midst of a speech has limited cognitive ability to imagine alternative battles or speeches. This is also true of sensory experiences such as eating, which crowd out the ability to think about abstract and absent experiences (Najmi, Wegner & Nock, 2007). Binge eating, for example, restricts one's attentional capacity and ability to engage in self-evaluation (Heatherton & Baumeister, 1991).

Second, the act of comparing a target stimulus to an alternative (i.e., a standard) requires cognitive resources. One must simultaneously attend to both the target and the standard, and one must establish dimensions on which they are similar before one can notice how they differ (Gentner & Markman, 1997; Mussweiler, 2003;

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Strack, Schwarz, Bless, Kübler, & Wänke, 1993). Judgments of a target generally assimilate towards a standard, for example, and exhibit contrast only when the judge is both aware of the influence of the standard on her judgment of the target and she has sufficient cognitive resources to correct for its influence (Martin, Seta, & Crelia, 1990; Wilson, Lisle, Kraft, & Wetzel, 1989).

In contrast, when people consider an experience in advance and imagine how they will feel, that act consumes fewer of their cognitive resources. Affective forecasters bring to mind a mental representation of the event, such as eating a cookie, but are not constrained by the sensory experience that accompanies its consumption. Consequently, they have more cognitive resources available to imagine alternatives ("I could have ice cream instead") and make comparisons ("The cookie wouldn't be as good as a bowl of ice cream"). We suggest, however, that affective forecasters fail to account for this difference between their representation of an event and the experience. And because they fail to account for the greater degree to which experience consumes attention and inhibits their ability to compare a target experience to a standard, they overestimate the degree to which comparative value will influence hedonic experiences.

We tested this hypothesis in five experiments that required people to predict the hedonic value of a simple and familiar experience—the consumption of food. We expected people to underestimate how engaging this familiar experience would be and thus to overestimate the extent to which their enjoyment of the experience would be influenced by the comparative value of its alternatives. More specifically, we expected comparative value to influence affective forecasts for an experience more than affective reports of that experience.

Experiments 1, 2, and 3: overestimating comparative value

Experiments 1-3 sought to demonstrate in a single paradigm that affective forecasts overestimate comparative value—that is, they overestimate the extent to which a target experience will be compared to a past, future, or concurrent *standard*. Some participants (forecasters) predicted how much they would enjoy a target experience (i.e., eating potato chips), and other participants (experiencers) had the experience and reported how much they enjoyed it. All participants were also presented with a standard whose value was either superior (e.g. chocolate) or inferior (e.g., sardines) to the target experience. In Experiment 1, participants first imagined eating or ate the standard (i.e., chocolate or sardines) and then imagined eating or ate the target (i.e., potato chips). In Experiment 2 this order was reversed; participants first imagined eating or ate the target and then imagined or ate the standard. In Experiment 3 the standard was presented concurrently with the target; participants imagined eating or ate potato chips while in the presence of a selection of superior or inferior foods. In all three experiments, we expected that affective forecasts for the target experience would be influenced by their comparative value, but that hedonic experiences of the target would not be influenced by their comparative value.

Experiment 1: standards past

Method

Participants

Forty-five students at Harvard University (36 women, M_{age} = 21.3 years, SD = 4.6 years) received $3 for participating in the experiment.

Pretest

In a pre-test, 23 volunteers at Harvard University (11 women, M_{age} = 20.26, SD = 1.3) ranked how much they would enjoy eating thirty-two foods by ranking the foods in order from their *favorite* (1) to their *least favorite* (32). Participants reported that they would enjoy eating the superior standard (Godiva Raspberry Dark Chocolate Bars; M = 7.48, SD = 8.0) more than eating the target experience (Lay's Classic Potato Chips; M = 15.43, SD = 8.0), $t(22) = 3.31$, $p = .003$, and that they would enjoy eating the target more than the inferior standard (Beach Cliff Sardines; M = 25.04, SD = 7.69), $t(22) = 5.05$, $p < .001$.

Procedure

Participants were seated at a table on which there were two foods: potato chips (the target) and another food (the standard). Participants evaluated the standard first and the target second. All foods were provided in snack-size quantities.

Participants were then assigned to one of two roles: *Forecasters* predicted how much they would enjoy the standard and then predicted how much they would enjoy the target. *Experiencers* ate the standard and reported how much they enjoyed it, and then ate the target and reported how much they enjoyed it. All predictions and reports of enjoyment were made by marking a 143 mm continuous line that was anchored at the endpoints with the phrases *not at all* (0) and *very much* (143). Assignment to condition was random in this and all subsequent experiments.

Results

Participants' ratings of their enjoyment of the target were submitted to a 2 (Role: forecaster, experiencer) × 2 (Standard: inferior, superior) between subjects ANOVA, which revealed only the predicted Role × Standard interaction, $F(1, 41) = 5.17$, $p = .028$, $\eta_p^2 = .11$. Planned comparisons revealed that forecasters expected to enjoy the chips more when they were eaten after the inferior than after the superior standard, $F(1, 41) = 8.96$, $p = .005$, but experiencers enjoyed the chips equally in both conditions, $F < 1$ (see Table 1).

Discussion

Affective forecasters predicted that eating superior chocolate or inferior sardines would influence their subsequent enjoyment of potato chips, but they were wrong. Experiencers reported similar enjoyment of the potato chips whether they were preceded by superior chocolate or by inferior sardines. These results are consistent with the results of similar experiments by Novemsky and Ratner (2003), who found that affective forecasters overestimated how much the order in which jellybeans were consumed (i.e., "good then neutral then bad" as opposed to "bad then neutral then good") would influence their enjoyment of the neutral jellybean. Both Experiment 1 and Novemsky and Ratner's (2003) experiments suggest that affective forecasters overestimate the extent to which comparative value will influence hedonic experience.

However, it is possible that in both our Experiment 1 and in Novemsky and Ratner's (2003) experiments, affective forecasters did

Table 1
Enjoyment of target by role and standard in Experiments 1, 2, and 3.

Role	Standard	
	Superior	Inferior
Experiment 1		
Forecasters	74.6 (33.4)$_a$	115.4 (26.8)$_b$
Experiencers	96.92 (32.3)$_a$	94.4 (34.5)$_a$
Experiment 2		
Forecasters	48.8 (29.0)$_a$	101.8 (29.9)$_b$
Experiencers	102.3 (15.6)$_a$	114.0 (18.6)$_a$
Experiment 3		
Forecasters	56.2 (44.3)$_a$	90.2 (32.6)$_b$
Experiencers	82.2 (31.4)$_a$	72.2 (38.2)$_a$

Note: Standard deviations are in parentheses. Means within rows that do not share a common subscript differ significantly at $p < .05$. Scale range is from 1 to 143 mm.