Better Living Through Chemistry: Preferences For Pharmacological Self-Improvement

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Four studies examined young healthy individuals’ willingness to take drugs intended to enhance various social, emotional, and cognitive abilities. We found that people were much more reluctant to enhance traits believed to be highly fundamental to the self (e.g., mood, social comfort) than traits considered less fundamental (e.g., concentration ability). Moral acceptability of a trait enhancement strongly predicted people’s desire to legalize those enhancements, but not their willingness to take those enhancements. Ad taglines that framed enhancements as enabling rather than enhancing the fundamental self increased people’s interest in a fundamental enhancement, and eliminated the preference for non-fundamental over fundamental enhancements.

[to cite]:

[url]:
http://www.acrwebsite.org/volumes/13606/volumes/v35/NA-35

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SESSION OVERVIEW
Economic theory and common lay intuition both tell us that as consumers get more of the things that they want, their quality of life and subjective well-being will improve. But this straightforward assumption is not consistently supported by empirical research. For example, people in developing countries are much wealthier today than they were 60 years ago, but there is little evidence that they are happier (Easterlin 2003). And several studies have suggested that the impact of health on happiness is surprisingly small (Riis et al 2005). One highly cited study of identical twins concluded that life circumstances account for just 10% of the variance in happiness between people, but that genetically determined personality accounts for 50% or more (Lykken and Tellegen 1996). If that is really the case, then the prospects of achieving happiness through consumption are extremely limited. As biotechnology continues to advance rapidly, many scientists expect that pharmacological options for directly improving well-being will become safer and much more effective (Hughes 2003, NeuroInsights 2006). If genetic disposition, and not consumption and health, is what drives happiness, then such pharmaceuticals may be very appealing to broad consumer segments.

The papers in this symposium will examine these issues. Both Hsee and Irwin and colleagues look at specific kinds of wealth and consumption and their differential effects on well-being. Loewenstein and colleagues examine the effects of poor health on happiness and demonstrate an important limitation to adaptation. Riis and colleagues examine consumer demand for the psychological improvement of well-being.

In the first paper, Hsee proposes that certain kinds of consumption experiences are more valuable than others. Experiences that are inherently valuable have the same influence on happiness whether experienced on their own, or when experienced in the presence of others who have slightly better or worse experiences. Such experiences directly influence one’s visceral and psychological system, so one’s reaction to them is largely independent of social comparison. Experiences that do not directly influence the visceral and psychological system are much more susceptible to social comparison. He demonstrates this in a lab study and in a large field study in China.

Irwin and colleagues also examine the effects of different kinds of consumption on happiness. They show two important moderators of previous findings that people get more lasting happiness following purchases of experiences than following purchases of durable goods. First, the effect is only found for purchases that turn out well. For disappointing purchases, the lingering bad feelings were at least as strong for experiences as for durables. Second, materialistic people tend to get just as much lasting happiness from durables as from experiences. The recommendation that consumers could improve their happiness by purchasing more experiences may thus only be true to the extent that experiences are successful, and to the extent that consumers are not materialistic.

Loewenstein and colleagues conducted a field study to investigate the mechanisms of adaptation to health conditions. They find that people adapt better to colostomies if they know that the procedure is permanent than if they know it to be temporary. The location of the patient’s intestinal blockage, and not the severity of their condition is what determines the permanence of the procedure, so differences in adaptation between permanent and temporary patients are not likely due to selection effects or bias. The results thus strongly suggest that adaptation is not merely a function of continued exposure to a negative stimulus or circumstance. Rather, adaptation is very much dependent on the beliefs that a person has about the circumstance, and on the degree to which a person accepts the circumstance.

These three studies all suggest specific limitations of the effects of consumption and circumstance on people’s happiness. In the final paper, Riis and colleagues consider how people view the possibility of directly improving their happiness through pharmaceuticals. In a series of studies they show that most people do indeed wish to be happier, more relaxed, and more outgoing. And they wish to be better at concentrating and at remembering information. But controlling for the desire to be better on these various traits, people are more reluctant to enhance their happiness (and other emotional and personality characteristics) than they are to enhance cognitive abilities like concentration and memory. Concerns about jeopardizing personal identity are the source of this increased reluctance. Furthermore, advertisements that frame a drug’s effects as enabling happiness, rather than enhancing it, greatly diminish people’s reluctance to take it.

Together the papers bring new knowledge to the very old concept of happiness. And with evidence from experiments, surveys, and field studies, they suggest very concrete implications for consumers, practitioners, managers, and policy makers interested in increasing happiness. The session will be of interest to researchers studying consumption, hedonic experience, materialism, well-being, consumer welfare, health, and pharmaceuticals.

EXTENDED ABSTRACTS
“Warmth, Wealth, and Wellbeing”
Christopher Hsee, University of Chicago

A fundamental question in happiness research is whether increasing every citizen’s wealth in a given society increases the overall happiness of that society. Much research suggests that it does not (e.g., Easterlin 2003). In this project we sought to distinguish two types of outcomes: Inherently valuable outcomes are those that directly influence one’s visceral and psychological system, such as temperature, sweetness, amount of sleep, etc. Inherently invaluable outcomes are those that do not directly influence one’s visceral or psychological system, such as the size of a diamond, the brand of a purse. Many outcomes lie between the two; examples include the size of a home, the power of a car, the speed of a computer, etc. Our main hypothesis is that inherently valuable variables can affect one’s happiness regardless of whether one engages in social comparison (joint evaluation) or not (single evaluation), and inherently invaluable variables can affect one’s happiness only if one engages in social comparison (joint evaluation). This is tested in a lab experiment and a field study.

The lab experiment consisted of 4 groups of participants: A, B, C and D. Each participant went through 2 stages (in counterbalanced order). In stage 1, each participant in each group was presented with a container of water and indicated how happy they would feel if they took a shower using water of that temperature (an
evaluable variable). In stage II, each participant in each group was presented with a diamond and indicated how happy they would feel if they wore a diamond ring of that size (an inevaluable variable). Across Groups A, B, C, and D, the temperatures of the water increased linearly from 15°C to 45°C, and the size of the diamond also increased linearly from about 0.1 karat to about 1 karat. Critically, Groups A and B were run in the same room so they could easily compare each other’s water temperature and compare each other’s diamond size. Likewise, Groups C and D were also run in the same room. However, Groups A/B and Groups C/D were run separately. Thus, Groups A/B resembled a poor society (with smaller diamonds and colder temperatures), in which Group A were poor citizens and Group B were rich citizens. Group C/D resembled a rich society (with larger diamonds and warmer temperatures), in which Group C were poor citizens and Group D were rich citizens. The rich society and the poor society do not know each other, but citizens within each society can compare with each other.

What we predicted and found is as follows: Water has both a within-society effect and a between-society effect on happiness, namely, Group B (rich people in a poor society) were happier than Group A (poor people in a poor society), Group D (rich people in a rich society) were happier than Group C (poor people in a rich society), and on average, Groups C/D (people in a rich society) were happier than Groups A/B (people in a poor society). On the other hand, the diamond has only a within-society effect and has no between-society effect, namely, Group B (rich people in a poor society) were happier than Group A (poor people in a poor society), Group D (rich people in a rich society) were happier than Group C (poor people in a rich society), but on average, Groups C/D (people in a rich society) were not any happier than Groups A/B (people in a poor society). An implication of these findings is that whether the wealth is spent. If it is spent on inherently evaluable variables, it may indeed increase happiness (contrary to much of previous research); if it is spent on inherently inevaluable variables, it will not.

A field study replicated the finding in the lab study. The field study involved nearly 7000 respondents across 31 largest cities in China. Among others, we asked respondents about their room temperature in their homes and their feeling about it (the survey was conducted in the winter and many homes in China do not have sufficient heating), and also asked about the estimated value of their jewelry and their feeling toward it. What we found is as follows: For temperature, the between-city effect on happiness was just as big as the within-city effect. But for jewelry value, between-city effect on happiness was much smaller than the within-city effect on happiness.

In sum, improving an inherently evaluable outcome, such as temperature, can make some individuals in a society happier than other individuals and can also make the whole society happier; improving an inherently inevaluable outcome, such as jewelry, can make some individuals in a society happier than other individuals, but cannot make the whole society happier.

“Happiness for Sale: Do Experiential or Material Purchases Lead to More Consumer Happiness?”

Julie Irwin, University of Texas, Austin
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Scitovsky (1976) suggested that income does not increase life satisfaction because consumers are spending their money in the wrong way. As they acquire more money, consumers often buy “joyless” material possessions such as houses and cars that do not substantially increase pleasure. More recent writers have echoed Scitovsky’s sentiments. Easterlin (2003) suggests that investment in “pecuniary” market objects has no effect on life satisfaction, and Pine and Gilmore (1999) warn that consumers have become bored with the acquisition of objects. In “How Not to Buy Happiness” Frank (2004) explains, “beyond some point, across-the-board increases in spending on many types of material do not produce any lasting increment in subjective well-being.” If the extent work on happiness is correct, then purchases of material goods (e.g., cars, houses, furniture) should, overall, lead to less happiness compared to purchases of experiential goods (e.g., vacations, concerts, sporting events). We call this the “experience recommendation”. In this paper, we suggest that this experience recommendation may be premature, or at least too broad in scope.

In our first experiment, we tested whether material and experiential purchases are differentially affected by a purchase’s outcome valence by extending the methodology used by van Boven and Gilovich (2003). In a 2x2 between subjects design, we asked respondents to recall a positive or negative purchase (outcome valence) that was either material or experiential in nature. After the recall stage, respondents indicated their happiness with the purchase across three measures and answered control questions. We find that the effect of purchase type was significantly moderated by the outcome valence of the purchase. For positive purchases, experiential purchases induced more reported happiness than did material purchases. However, if the purchase turned out negatively, experiential purchases did not lead to more happiness than material purchases. These results held above and beyond any effects of time since the purchase, the amount of the purchase, and the residual value of the purchase. A second experiment has shown that consumers can indeed distinguish between experiential and material purchases, validating our purchase type manipulation, and that they predict the same interaction found in the first experiment.

In a third experiment we asked if there segments of consumers who might glean different amounts of happiness from purchase types in our two valence conditions. We expected materialism to have a moderating effect on the valence by purchase type interaction. The underlying rationale is that, as materialism increases, the adaptation rates for material purchases (of either valence) should decrease; material purchases should resonate longer for materialistic consumers, impacting happiness more. Indeed, we find a three-way interaction between materialism, valence, and purchase type, such that the valence by purchase type interaction grows stronger as materialism decreases.

In a fourth study, we avoided concerns about possible accessibility differences between material and experiential purchases by simply asking participants to freely recall three different purchases that turned out positively (or negatively, depending on the condition) and then allowed the participant to rate each purchase on a material–experiential scale. In a hierarchical regression model, we regressed a composite happiness measure onto the three purchase classification ratings for each participant individually, and then regressed the purchase classification slopes derived from the first model onto the valence of the outcome condition, as well as the moderators. Our results support the interactions found in the previous studies. When the purchase turned out positively, more experiential purchases were associated with more happiness compared to material purchase, but when the purchase turned out negatively there was no difference. Consistent with experiment three, this was moderated by materialism.

These studies addressed the extent to which experiential purchases actually increase the happiness of consumers. Results across four studies affirm that experiential purchases have more...
variance than material purchases: when they are good, they are very good; but when they are bad, they are awful. The simplest form of the “experience recommendation” is thus not supported.

“The Dark Side of Hope: It’s Harder to Adapt When the Adversity is Temporary”
George Loewenstein, Carnegie Mellon University
Dylan Smith, University of Michigan
Aleksandra Jankovich, University of Michigan
Peter Ubel, University of Michigan

After the onset of a negative life event, such as a disability, overall well-being typically declines, but then recovers over time (though not always fully). But relatively little is understood about the mechanism by which adaptation occurs. In addition, there is considerable individual variability in how well people adapt to challenging circumstances. We explored whether knowing that a disability may be temporary, rather than permanent, would influence adaptation. We studied colostomy patients, approximately half of whom eventually have their colostomies reversed, and normal bowel function restored. Whether someone gets a reversible colostomy depends mostly on anatomy (where the surgery was and how much intestine is lost).

Given that temporary colostomies are strongly preferred—virtually all patients who can get a colostomy reversed choose to do so, one might think that people with temporary colostomies would be happier and adapt more rapidly to their condition than those with permanent colostomies. Contrary to this prediction, however, we reasoned that, because patients with a temporary colostomy know their disability is of limited duration, this would interfere with their motivation and ability to emotionally adapt to their condition. We predicted that patients whose colostomies were permanent would adapt, increasing their subjective well-being (quality of life, life satisfaction) from the time of their surgery to the 6 month follow-up. In contrast, we predicted that the patients who expected to have their colostomies reversed would show less evidence of adaptation.

We conducted a longitudinal study of 75 new colostomy patients, recruited while still in the hospital after their surgery (82% response rate). Consenting participants were mailed written surveys at one week, 1 month, and 6 months after their surgery. About half of the patients had “reversible” colostomies; six to nine months after receiving a colostomy, they typically go back into surgery and have normal bowel function restored. The surveys focused mostly on measures of psychological well-being, and included measures of life satisfaction (1-7), and overall quality of life (0-10).

We observed strikingly different patterns between the temporary and permanent colostomy groups. In the permanent group, perceived life satisfaction and quality of life increased between the one-week and 6 month time points (p<.05). For example, scores on the 0-10 quality of life scale increased from 5.4 to 7.1 over this time period. In contrast, these variables actually decreased—though not significantly—in the temporary group (on the 0-10 scale, scores dropped form 5.5 to 5.3). A between-within subjects ANOVA confirmed a significant interaction between temporary versus permanent status and time (p<.05).

Patients who expected their colostomy to be temporary did not show evidence of adapting to their condition over the first 6 month period after their surgery. In contrast, patients who knew their new disability to be permanent showed substantial increases in well-being over time. These results are consistent with our hypothesis that knowing that a “cure” for a disability is on the horizon would interfere with adaptation.

These findings are not consistent with some models of adaptation—those that suggest that negative reactions fade with time merely because of continued exposure to the negative stimulus. Both groups in our study had the same disability for the same period of time, yet the temporary group failed to adapt. We can speculate that this occurred because the knowledge of the pending surgical reversal would represent a salient counterfactual set of circumstances. That is, these patients would be reminded of what life is like with normal bowel function, and these reminders would make it more difficult to adapt (and perhaps reduce the motivation to try to accept the disability).

Previous studies have found that people with an optimistic outlook—those who expect their illness to improve with time—are happier than those who are less optimistic. But these results could be due to dispositional differences; people who adopt optimistic attitudes about their illness may be naturally happier and more resilient. In our study, patients do not choose to expect their colostomy to be reversed—this is determined exogenously. Our findings have implications for other health conditions, such as spinal cord injury, where patients may believe that medical science will cure their condition. Our results suggest that these beliefs could actually interfere with emotional adaptation.

“Better Living Through Chemistry: Preferences for Pharmacological Self-Improvement”
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Advances in medical technology are providing people with increasingly powerful ways to improve themselves. These technologies are not just used to restore health and youth, as increasing numbers of healthy young people are using them as well. Many healthy young people take stimulants such as Ritalin and Adderall to improve cognitive performance and anti-depressants to lift mood and reduce anxiety, even in the absence of any disorder or deficit.

The biotechnology boom has many scientists and clinicians optimistic that dramatic improvements in the effectiveness and safety of such pharmaceuticals are imminent. Such improvements will presumably lead to increased demand for these drugs among non-clinical populations. Concern about these developments has sparked considerable public debate, including the publication of a report by the President’s Council on Bioethics (2003). But there is little research bearing directly on the psychology of consumer demand for such pharmaceuticals.

We suggest that people’s willingness to take psychological enhancements will largely depend on beliefs about whether these enhancements will alter characteristics considered fundamental to the self. In Western cultures, the belief in a fundamental, essential self is widespread. People believe that certain core traits can explain much of a person’s behavior and that these traits form a person’s essential self or soul (Chen, Bourcher, and Tappis 2006; Dweck 1999; Haslam, Bastian, and Bissett 2004). Moreover, people are highly motivated to express beliefs about their fundamental selves (Vazire and Gosling 2004), and to reject information that challenges these beliefs (Swann 1987; Swann, Stein-Seroussi, and Giesler 1992). In this light, we propose that people will be especially reluctant to artificially enhance themselves in ways that are believed to alter their fundamental selves.

In three studies, we show that this is indeed the case. People are much less willing to enhance traits representing a fundamental aspect of their personal identity (including well-being traits like mood) than traits that are not seen as core to the self (e.g., ability to concentrate). This is the case even though people have strong desires to improve fundamental traits like mood. Further support for our fundamentalness hypothesis comes from a study in which
we explicitly asked people why they were reluctant to enhance each of a series of 19 traits. Concern about changing the fundamental self was the most frequently cited reason for not wanting to take a hypothetical enhancing medication. Concerns about morality or risk seem to play only a minor role in determining people’s willingness to artificially enhance themselves.

We also address the implications of our findings for advertising and regulation. Direct-to-consumer (DTC) advertising of psychoactive pharmaceuticals has been controversial, with some authors suggesting that the pharmaceutical companies are actually reaching out to non-clinical populations with their advertisements (Healy, 2004). This is of particular concern in light of studies showing that non-clinical individuals can easily get prescriptions for drugs like anti-depressants (Kravitz et al., 2005). We aim to inform this debate by examining factors that influence people’s responses to such advertisements.

In a fourth study, we presented participants with advertisements for a hypothetical pharmaceutical, Zeltor, which was said to affect either a high-fundamentalness trait (social comfort) or low-fundamentalness trait (ability to concentrate). The tag-line of the advertisement was also manipulated to frame the nature of the self-improvement in one of two ways. One framing emphasized that taking the drug would change people’s core selves (i.e., Zeltor: Become More Than Who You Are). The other framing emphasized that taking the drug would enable people to realize their core selves (i.e., Zeltor: Become Who You Are). For high-fundamentalness traits, we found that the advertisements that used this “Become who you are” framing were more effective than advertisements that use the framing that emphasized a change to the self. Interestingly, this framing effect was not observed for low-fundamentalness traits.

This result suggests that advertisers can successfully disarm the fundamentalness concerns that would otherwise prevent non-clinical individuals from seeking an enhancement pharmaceutical. Paxil, an anti-depressant sold by Glaxo Smith Kline, has used the tagline, “Paxil gets you back to being you” on its website. This phenomenon.

References


President’s Council on Bioethics (2003), Beyond Therapy: Biototechnology and the Pursuit of Happiness, Washington, DC: PCB.