Hedonomics: On Subtle Yet Significant Determinants of Happiness

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Abstract:

One way to pursue happiness is to improve the objective levels of external outcomes such as wealth; that is an economic approach. Another way to pursue happiness is to improve the arrangement of and choices among external outcomes without substantively altering their objective levels; that is a *hedonomic* approach. This chapter reviews research adopting the latter approach. Specifically, we present a list of subtle yet significant determinants of happiness from four perspectives: (1) pattern of consumption, (2) procedure of consumption, (3) (mis)match between the choice phase and the consumption phase, and (4) type of consumption. Although far from comprehensive, these factors offer implications for "choice architects"—government, companies, and individual consumers—on improving happiness.

Keywords: hedonomics, happiness architecture, judgment and decision making, consumption

It is almost truism to say that happiness is the ultimate pursuit—or, at least, one of the ultimate pursuits—of life. Hence, "formulas" for improving happiness have always been of interest not only to academics (Diener & Seligman, 2004; Gilbert, 2006; Huppert, Baylis, & Keverne, 2005; Seligman, 2002; Seligman & Csikszentmihalyi, 2000), but also to policy makers and individuals. Intuitively, happiness correlates with wealth—people in affluent countries are happier than those in poor countries, and people with higher annual incomes are happier than those with lower annual incomes, presumably because wealthier individuals have access to more and better material goods (e.g., more and tastier food, larger and better houses, appliances and technologies that liberate them from labor). Indeed, research generally finds a reliable positive link between wealth and happiness (Diener & Oishi, 2000; Lucas & Schimmack, 2009). Yet, the impact of wealth on happiness has its boundaries—their relationship follows a concave curve, such that an increase in wealth ceases to increase experienced happiness in daily life once wealth reaches a certain point (Diener & Biswas-Diener, 2002; Kahneman & Deaton, 2010).

Then, are there *non*-economic approaches to increase daily affective well-being? In this chapter, we review research on hedonomics (Hsee, Hastie, & Chen, 2008), which studies how to increase happiness (and minimize unhappiness) by improving the arrangement of and choices among external outcomes without substantively increasing the objective levels of the external resources. Hedonomics involves many factors. In this chapter, we focus on four perspectives: (1) the pattern of consumption, (2) the procedure of consumption, (3) the (mis)match between the choice phase and the consumption phase, and (4) the type of consumption. We also explain the corresponding psychological underpinnings. These factors may seem subtle, but can produce significant impacts on happiness.

We should note that "happiness" has different meanings, and this chapter focuses on only one type of happiness: valenced (positive or negative) hedonic experiences with external stimuli. We do not study specific emotions such as anger and excitement, nor do we study overall life satisfaction or meaning in life.

Pattern of Consumption

A fixed amount of consumption resources can be divided into several chunks and consumed

sequentially on separate occasions. The characteristics of these chunks, including the number of chunks, the size of each chunk in the sequence, and the change in the sizes of chunks, can influence happiness.

Segregating Gains

Prospect Theory's value function (Kahneman & Tversky, 1979) posits that gains confer a subjective utility along a concave curve, with diminishing marginal utility. Therefore, a large quantity of consumption resources can be divided into a few chunks and treated as distinct consumption units, increasing happiness by taking advantage of the steep utility gain from "zero consumption" to "some consumption" (i.e., the region close to the reference point). Indeed, segregating gains is one of the four hedonic editing rules formally proposed by Thaler (1985). It suggests that, for example, a person who plans to eat in a fancy restaurant and get a relaxing massage should arrange these two activities on separate days, rather than on the same day, to derive greater overall happiness from these two activities. Similarly, a person who receives a notification that a new season of her favorite sitcom is available on Netflix should spread her viewing experience over two weeks, rather than binge-watching all the episodes in two days, to maximize the overall pleasure obtained from watching the entire season. (For other hedonic editing principles, see Thaler, 1985.)

Note that usually segregation inevitably means introducing non-consumption periods into the consumption sequence and lengthening the overall consumption duration. This way, people have more time to recover from satiation or hedonic adaption (see " Adding Delays" and " Adding Interruptions and Slowing Down" in this chapter for more information), in addition to taking advantage of the high marginal utility of a small portion of consumption resources. Then, will the segregation principle be effective above and beyond the satiation account when the total length of consumption is held constant? Redden (2007) offers supporting evidence by merely having participants mentally segregate their consumption (i.e., a manipulation of perceived segregation). In one study, participants ate several jelly beans of different flavors. They either sorted these jelly beans into one broad category (e.g., jelly beans) and treated their eating experience as one unit, or sorted the same amount of jelly beans into several specific categories (e.g., orange jelly beans, banana jelly beans) and treated their experience as a combination of several distinct units. Redden (2007) found that participants reported greater happiness over the course of eating jelly beans in the latter condition, even though their eating experience was only mentally segregated and the total duration of consumption was fixed.

Improving Sequence

Without a doubt, people desire a happy ending, but do they prefer that happy ending at the cost of inferior experiences early in the sequence? Loewenstein and Prelec (1993) find that, for a constant objective amount or value of consumption resources, people prefer a course with progressively increasing quality of experience, compared with a course with stable or declining quality of experience. In one study, when scheduling a dinner at a fancy French restaurant and a dinner at a local Greek restaurant, people preferred the "Greek first, French second" sequence over the "French first, Greek second" sequence. In a similar vein, Prelec and Loewenstein (1998) show that people preferred the decoupling of payment and consumption, and were willing to incur losses (i.e., payment) before gains (i.e., consumption experience). Outside the lab, panel data on British employees' wage change and well-being supports this principle (Clark, 1999)—employees who experienced a positive wage change were happier and more satisfied with their job, regardless of the absolute amount of salary. To illustrate this in a stylized way, the annual income stream "$50k, $60k, and $70k" generated greater overall happiness than the stream "$60k, $60k, and $60k" or the stream "$70k, $60k, and $50k," despite all income streams achieving the same average of $60k annually.

Noticeably, this preference contradicts the economically rational solution that calculates the present value of a flow of future values via discounting. Specifically, because both future gains and future losses "deflate" in value when evaluated at the present, expediting future gains (to increase their present utility) and postponing future losses (to decrease their present disutility) can maximize the present value of the consumption flow. Nevertheless, this economically optimal arrangement is sub-optimal for happiness.

In addition, not only are people sensitive to the change of the sizes of the consumption chunks, as reviewed in "Improving Sequence," but also they are sensitive to the velocity of the change (i.e., acceleration; Hsee & Abelson, 1991). Specifically, a sequence of consumption resources that increase in quantity or value faster and faster will generate greater happiness than does a sequence of consumption resources that increase in quantity or value at a constant rate (Hsee, Salovey, & Abelson, 1994). For example, a video game player will be happier and more motivated to continue playing if the game score increases in an accelerating pattern (e.g., 10, 20, 40, 80, 160, 320,….) than if it increases in a uniform pattern (e.g., 100, 200, 300, 400, …), even if the score does not correspond to any external rewards and is spurious (Shen & Hsee, 2017).

Procedure of Consumption

The same amount of consumption resources can be consumed in different ways. The characteristics of the procedure—delays, interruptions, speed, and curiosity towards the experience—influence overall happiness.

Adding Delays

Obviously, people get pleasure from their moment-to-moment experiences with the consumption stimuli, but can they get pleasure outside the consumption phase? Research shows that, by imagining positive experiences prior to the actual occurrence, people can get anticipated utility or savoring value, too (Kahneman, 1999). It follows that delaying consumption can generate additional "free" happiness. Indeed, in one study, participants either waited 30 minutes before eating two chocolate candies or ate them immediately, and those who waited reported greater overall enjoyment of the chocolate candies (Nowlis, Mandel, & McCabe, 2004). This principle suggests that, for example, families should book vacations in advance, and online shoppers should not select expedited shipping (especially when it costs extra) to get higher overall enjoyment. (Relatedly, the opposite is true for negative experiences, such as waiting to get a surgery. In these situations, one should expedite the experience to reduce unhappiness from anticipation.)

Despite evidence that an externally imposed delay can produce a hedonic boost, do people choose to delay consumption? It is possible that, because waiting requires self-control and people tend to act on impulsive desires immediately (Frederick, Loewenstein, & O'Donoghue, 2002; Mischel, Shoda, & Rodriguez, 1989), people may not opt for it when given the choice. However, a few studies document that, at least in some contexts, people can choose optimally. For example, Loewenstein (1987) finds that when people could choose to enjoy a fancy dinner or get a kiss from their favorite movie star either now or later, they preferred later. Similarly, Lovallo and Kahneman (2000) show that gamblers were more inclined to delay learning about their outcomes when the potential reward was larger, thereby deriving greater savoring value from imagining winning the reward.

However, the delaying principle should be applied with caution because it runs against a few other accounts. First, the waiting period is usually unpleasant, which may result in anxiety and stress (Houston, Bettencourt, & Wenger, 1998; Osuna, 1985). Second, the negative experience during waiting is likely to be transferred to the target consumption, and hence may reduce overall satisfaction (e.g., Dellaert & Kahn, 1999). Third, from an economic perspective, waiting decreases the present value of the consumption experience. Fourth, because imagined experience sometimes can substitute for real experience (Morewedge, Huh, & Vosgerau, 2010), the anticipation period may lead to adaptation and thus decrease pleasure from the actual consumption.

Interrupting and Slowing Down

Whereas the previous section ("Adding Delays") deals with the procedure of consuming a single unit, this section is about improving overall happiness in consuming a single stimulus repeatedly (e.g., listening to one's favorite song 10 times) or a series of similar stimuli (e.g., watching 10 episodes of a TV show), a process in which people generally experience hedonic adaption, get satiated, and enjoy the stimuli less and less (Frederick & Loewenstein, 1999; Kahneman & Snell, 1992). In these situations, adding interruptions (i.e., introducing "breaks" into the course of consumption) can boost happiness by giving people time to recover naturally from satiation. Indeed, Nelson and Meyvis (2008) find that adding a short break to a massage or a pleasant song elevated the participants' overall enjoyment of the period, as compared with no interruption. Moreover, adding an interruption can help even when the interruption itself is somewhat negative. For example, Nelson, Meyvis, and Galak (2009) show that TV commercials (i.e., not-so-pleasant distractors) can help "reset" a person's feelings toward the TV program, restore the intensity of the positive experience, and increase overall enjoyment. However, people usually do not foresee the benefit of adding interruptions, and do not choose to break up positive experiences (Nelson & Meyvis, 2008; Nelson, Meyvis, & Galak, 2009).

Relatedly, these findings suggest that people will benefit from slower consumption when experiencing repeated, similar stimuli, since a slower pace means more and longer intervals between consumption periods. Indeed, Galak, Kruger, and Loewenstein (2012) provide empirical support for this proposition. In one study, they had participants eat six Hershey's Kisses while watching a 20-minute video. In the forced-slow-rate condition, participants were instructed to eat each of the chocolates when prompted by the computer, once every 200 seconds. In the self-paced condition, participants were instructed to eat at a rate that they thought would maximize their overall enjoyment of the Hershey's Kisses. All of the participants then ate the chocolates and rated their enjoyment of each piece after consumption. At the end of the study, they also rated their overall happiness retrospectively. Participants in the self-paced condition ate faster than those in the forced-slow-rate condition. More importantly, enjoyment of each chocolate

declined much faster and enjoyment of the entire eating experience was lower in the self-paced condition than in the forced-slow-rate condition. These results confirm the hedonic benefit of slowing down, and also suggest that people do not seem to anticipate how quickly they may get satiated from repeated consumption. As a result, people consume too rapidly when they have control over the consumption pace.

Inducing Curiosity

Curiosity is conceptualized by Loewenstein (1994) as the desire to "close an information gap," and is a form of "cognitively induced deprivation." Just as deprivations of sleep, sex, and food lead people to seek restoration, the deprivation of a cognitive state can also result in a natural resolution—in this case, the desire to resolve curiosity can be a goal in and of itself, beyond the practical benefits such as information (Litman, 2005) and entertainment (e.g., gossip; McNamara, 2011). For example, in one study (Hsee & Ruan, 2016), participants saw ten pens and learned that five were regular pens, while the other five were prank electric-shock pens that would deliver a painful (yet harmless) shock. In one condition, the prank electric-shock pens were labeled to avoid evoking curiosity, whereas in the other condition, the prank electric-shock pens were unlabeled and therefore curiosity-inducing. Participants then entered into a waiting period (purportedly for another study) during which they could click these pens if desired. Hsee and Ruan (2016) find that participants clicked more of the pens (and as a result, received more unpleasant electric-shocks) in the curiosity-inducing condition. Coined the Pandora Effect—that curiosity leads people to opt for expectedly negative outcome—this counterintuitive phenomenon provides evidence that people can get positive hedonic value through curiosity resolution.

It follows that one can increase overall happiness by adding a curiosity-induction stage prior to the target consumption period, in which the curiosity will resolve. Ruan, Hsee, and Lu (in press) provide empirical support for this possibility. In one study, participants learned that they would read a biography of Einstein. Prior to the reading period, those in the curiosity-inducing condition read ten questions about the life of Einstein and were prompted to think about the answers, whereas those in the control condition viewed 10 pictures of Einstein and were not prompted to think about anything related to the biography. Participants then rated their experiences in the prior-to-reading period, read the biography, and rated their experiences in the reading period. The authors find that participants in the curiosity-inducing condition were happier than those in the control condition during the experiment as a whole (i.e., considering happiness ratings from the prior-to-reading phase and the reading phase together). Importantly, the greater overall happiness in the curiosity-inducing condition was driven mainly by a boost in happiness during the reading period. In other words, participants who thought about the questions obtained greater satisfaction from reading the Einstein biography, but thinking about those questions *per se* did not decrease their happiness in the first stage. Importantly people do not seem to be aware of the hedonic benefit of inducing curiosity and do not choose optimally—when given a choice between viewing questions about Einstein or pictures of Einstein before reading the biography, participants did not prefer the curiosity-induction method.

(Mis)Match Between Choice Consumption

Because people possess malleable (i.e., context-dependent and time-dependent) preferences, they are prone to choosing sub-optimally if the circumstance under which they choose a consumption option mismatches with the circumstance under which they ultimately consume the option. Therefore, happiness can be improved by matching the choice phase with the consumption phase, in terms of visceral state (hot or cold), evaluation mode (joint or separate), and focus (wide or narrow).

Matching Visceral States

Loewenstein (1996) made the distinction between two visceral states: a "cold" state, in which people are rested, satiated, sexually unaroused, or intellectually satisfied, and a "hot" state, in which people are tired, hungry, sexually aroused, or intellectually curious. Individuals in one state usually cannot accurately anticipate or predict their preferences and experiences in the opposite state—there is an empathy gap. For example, a person who just had dinner will have difficulty imagining how hungry she will feel the next morning.

People's visceral states change over time. Therefore, people who make decisions about future consumption too far in advance may experience a mismatch in visceral states between the choice phase and the consumption phase. People tend to make predictions about their future state by projecting their current state (Loewenstein, O'Donoghue, & Rabin, 2003; see also Loewenstein, 1996; Van Boven, Dunning, & Loewenstein, 2000; Van Boven & Loewenstein, 2003); this projection bias leads to sub-optimal decisions. For example, a grocery shopper who just had dinner may not buy enough for her upcoming breakfast, impairing her satisfaction the next morning; a grocery shopper who just finished work at 5pm, feeling

hungry and thirsty, may add an unplanned dessert item (e.g., a big carton of ice cream) to her shopping cart, only to find herself too full to eat anything after dinner (Nisbett & Kanouse, 1969; Gilbert, Gill, & Wilson, 2002; Read & Van Leeuwen, 1998). Similarly, right after visiting an art museum, one may be particularly curious (i.e., intellectually aroused) about the stories behind the artwork, so she purchases related books or DVDs. However, she later finds the books and DVDs gathering dust on her bookshelves, as her curiosity about the artwork faded quickly after the visit. To optimize choice and increase consumption happiness, one should either engage in more deliberative projection of future states or reduce the temporal interval between the choice phase and consumption phase.

Matching Evaluation Modes

All decisions and judgments are made in the joint evaluation mode (JE), the single evaluation mode (SE), or some combination of the two (Hsee, 1996). In the joint evaluation mode, two or more options are juxtaposed and evaluated comparatively; in the single evaluation mode, each option is presented in isolation and evaluated in an absolute sense, without comparison to alternatives. These two modes can systematically shift people's attention to different attributes of the options and influence their evaluations. Specifically, when attributes differ in terms of "evaluability"—that is, the extent to which people can judge the value of the attribute when it is presented alone—easy-to-evaluate attributes receive more attention and more decision weight in the single evaluation mode, while difficult-to-evaluate attributes receive more attention and more decision weight in the joint evaluation mode (Hsee, 1996; Hsee, Loewenstein, Blount, & Bazerman, 1999; Hsee & Zhang, 2004). Take 4K TVs: the size of the screens is more difficult to evaluate (since they are all very big) than the aesthetic design. Thus, people who evaluate different 4K TV models one by one (in the single evaluation mode) will give more weight to aesthetic design than size, whereas people who evaluate these models together (in the joint evaluation mode) give more weight to the size dimension. It is therefore possible that a consumer prefers the TV model with a larger size in the store (joint evaluation) but the TV model with a better aesthetic design at home (single evaluation). (Note that the evaluability of an attribute differs across individuals. In general, expertise or familiarity with the attribute will improve its evaluability. For example, although the size of a 4K TV might be a difficult-to-evaluate attribute for most consumers, it might be an easy-to-evaluate attribute for Best Buy personnel.)

Importantly, people often make choices in the joint evaluation mode, as they compare various options, yet they often consume in the single evaluation mode, experiencing only the option they purchased. Because people value difficult-to-evaluate attributes more in the joint evaluation mode and easy-to-evaluate attributes more in the separate evaluation mode, they may make suboptimal choices for consumption. For example, one may spend a large sum of money to obtain the bigger 4K TV, only to find that day-to-day, she does not enjoy looking at the TV in the living room. To alleviate the impact of such a mismatch, one should try to adopt the single evaluation mode in the choice phase, evaluating options one by one and forming holistic impressions of each of them.

Widening Focus

When predicting future experiences, people tend to focus narrowly on the target stimuli and ignore the impact of contextual factors, such as ambient environment, mood fluctuations, and other life events. Consequently, this focalism bias leads people to overestimate both the intensity and the duration of the focal stimuli's impact (i.e., the impact bias; Gilbert, Pinel, Wilson, Blumberg, & Wheatley, 1998; Wilson & Gilbert, 2003; Wilson, Wheatley, Meyers, Gilbert, & Axsom, 2000;). For example, college football fans thought the victory of their favorite team would make them happier in the moment and cause them to remain happy for a longer time than it actually did.

In the context of making choices for future consumption, the mismatch of attention span between the choice phase and the consumption phase may lead people to overvalue the focal option in the choice phase, resulting in regret and dissatisfaction in the consumption phase. For example, when a new iPhone comes out, a consumer may be drawn to the new or better features it offers (e.g., a faster chip, a more sensitive 3D touch system, a brighter and more clear screen with retina display). She may overestimate its hedonic impact in her daily life and willingly pay a high price to purchase the new iPhone. However, once she owns the new iPhone, it will gradually lose its attentional prominence because it has become one of many things—such as mundane activities (e.g., laundry), work duties, and environmental factors (e.g., good or bad weather)—that influence her overall happiness. As a result, this consumer may feel unsatisfied and regret the purchase. To alleviate the impact of a mismatch, one may deliberatively widen the span of focus in the choice phase, perhaps by actively considering other factors that may contribute to future happiness, to estimate the hedonic impact of the target option more accurately.

Type of Consumption

Different types of consumption produce happiness with different intensity and durability. Experiential consumption generates greater happiness and more durable happiness than material consumption; consumption that satisfies an inherent preference (i.e., a preference formed early in evolution) generates greater happiness and more durable happiness than consumption that satisfies a learned preference (i.e., a preference that was formed recently).

Distinguishing between Experiential and Material Consumption

In their seminal research, Van Boven and Gilovich (2003) defined material consumption as "spending money with the primary intention of acquiring a material possession—a tangible object that you obtain and keep in your possession," and experiential consumption as "spending money with the primary intention of acquiring a life experience—an event or series of events that you personally encounter or live through." Research generally finds that compared with material consumption, experiential consumption generates more intensive happiness and more durable happiness. For example, in terms of the intensity of happiness, one study (Van Boven & Gilovich, 2003) asked participants to recall either a recent material purchase or a recent experiential purchase of similar price, and to rate the enjoyment they got from the purchase. Results show that experiential purchases generated greater enjoyment than material purchases. In terms of the durability of happiness, one study (Nicolao, Irwin, & Goodman, 2009) asked participants to make a purchase from either a set of experiential options (e.g., watching videos, listening to songs, playing video games) or a set of material options (e.g., a ruler, a keychain, a picture frame), all of which were priced the same in the lab. Researchers tracked participants' happiness with their purchases for an extended period of time. Happiness decayed more slowly in the experiential purchase condition than in the material purchase condition, suggesting that happiness engendered by experiential purchase is more resistant to hedonic adaptation.

The different hedonic impacts of experiential and material consumption have three major psychological underpinnings. First, experiential consumption is more important than material consumption to one's identity; specifically, experiences constitute a larger proportion of, and are more central to, one's identity. As the saying goes, we are what we do, not what we have. Carter and Gilovich (2012) offered a straightforward test of this notion by asking participants to first list five most significant experiential purchases and five most significant material purchases they had made in their lives, and then write a summary of their "life story" in which they could incorporate their significant purchases. Participants weaved their experiential purchases into their life stories more often than their material purchases, suggesting that experiential consumption contributes more than material consumption to one's identity. Besides, when asked to draw a large circle to represent the self, and a few small circles to represent their material and experiential consumptions, participants drew the circles representing experiential consumption closer than the material consumption circles to the "self" circle, suggesting that people view their experiential consumption as more central to their personal identity. Second, people are less likely to engage in potentially invidious, alternative-wise and social comparisons after making experiential purchases than material purchases (Carter & Gilovich, 2010; Howell & Hill, 2009). This is because experiences (a) are more inherently evaluable, making comparison unnecessary (Carter & Gilovich, 2010), and (b) have a lot more variation among experiencers than material possessions have among owners, making comparison difficult (Van Boven, 2005). Third, experiential consumption is more satisfying than material consumption because the former enhances social relationships. Specifically, people more often share experiences than material possessions (Caprariello & Reis, 2013), making experiential consumptions inherently more social. Besides, experiential consumptions are better conversation topics, and people prefer a conversation partner who talks about experiences over material goods (Van Boven, Campbell, & Gilovich, 2010).

Distinguishing between Inherent Preference and Learned Preference

Preferences can be categorized by the timing of their formation in human evolution—a million years ago, a millennium ago, or a year ago (Tu & Hsee, 2016). Preferences that formed earlier in evolution are "inherent". Examples include our preference for a warm ambient temperature (e.g., 70 °F) over a cold ambient temperature (e.g., 40 °F), for high-calorie food (e.g., French fries) over low-calorie food (e.g., kale salad), for a good night's sleep over sleep deprivation, and for being socially accepted over being socially excluded. These preferences are hard-wired, derived from our basic biological and psychological needs, and persist regardless of time and contexts. Preferences that formed later in evolution are "learned." Examples include our preference for genuine diamonds over synthetic diamonds, for a $3000 Gucci bag over a $300 Coach bag, for French wine over California wine, and for Crocs' hole-filled shoes over normal-looking shoes. These preferences are malleable and vary with time and contexts. There is certainly a continuum of inherent preference (IP) to learned preference (LP), but for ease of exposition, we treat

these as distinct categories here.

Based on this distinction, Tu and Hsee (2016) propose that happiness derived from IP attributes needs no social comparisons and is absolute, whereas happiness derived from LP attributes requires social comparison and is relative. Therefore, an improvement on an IP attribute will always increase happiness, whereas an improvement on an LP attribute does not necessarily increase happiness. A field study supported this proposition by comparing happiness derived from ambient temperature in winter (a representative IP attribute) and happiness derived from the value of one's jewelry (a representative LP attribute) within and across 31 major cities in China (Hsee, Yang, Li, & Shen, 2009). Specifically, researchers interviewed residents in these cities via phone and asked four questions: (1) the participant's present room temperature, (2) how happy they were with their present room temperature, (3) the value of the participant's jewelry, and (4) how happy they were with their jewelry. Because social comparison is more likely to happen among people within the same city than between different cities, the researchers compared the impacts of temperature value and jewelry value on happiness both within cities and across cities. For room temperature, people with higher room temperature were happier both within each city (within-city effects) and between cities (between-cities effect) (see Figure 1). However, jewelry value had only within-city effects (see Figure 2). These results suggest that happiness derived from room temperature —an inherent-preference attribute—increased as the value of this attribute increased, whereas happiness derived from jewelry value—a learned-preference attribute—increased only when the value of this attribute was higher than the values held by other people.

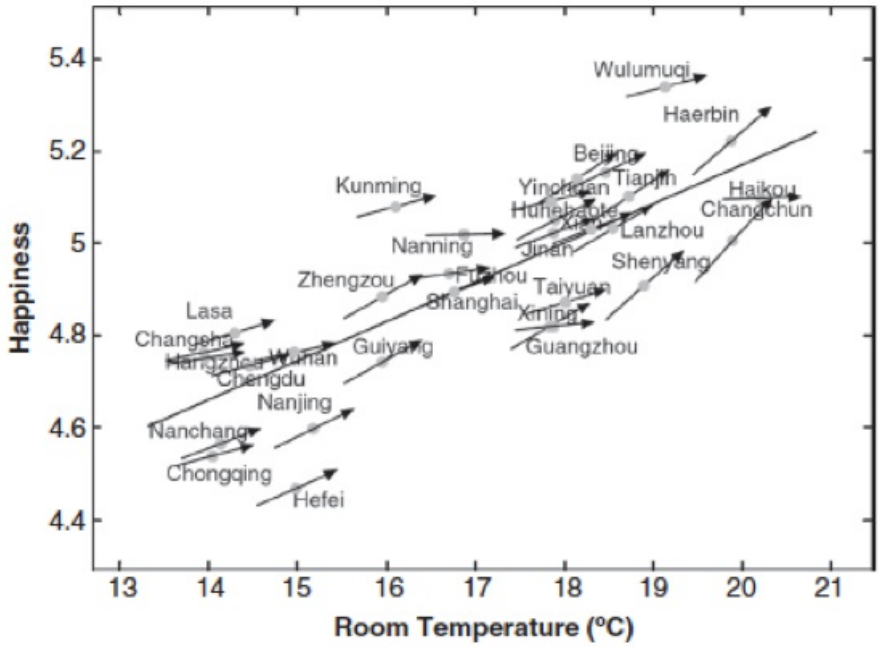

Figure 1. The impact of room temperature on happiness within cities and across cities. The slope of each small line indicates the effect of temperature within a particular city, and the slope of the long (trend) line indicates the effect of temperature across all the cities. The graph shows a positive effect of temperature within most cities (within-city effects), and also a positive effect across cities (between-city effect).

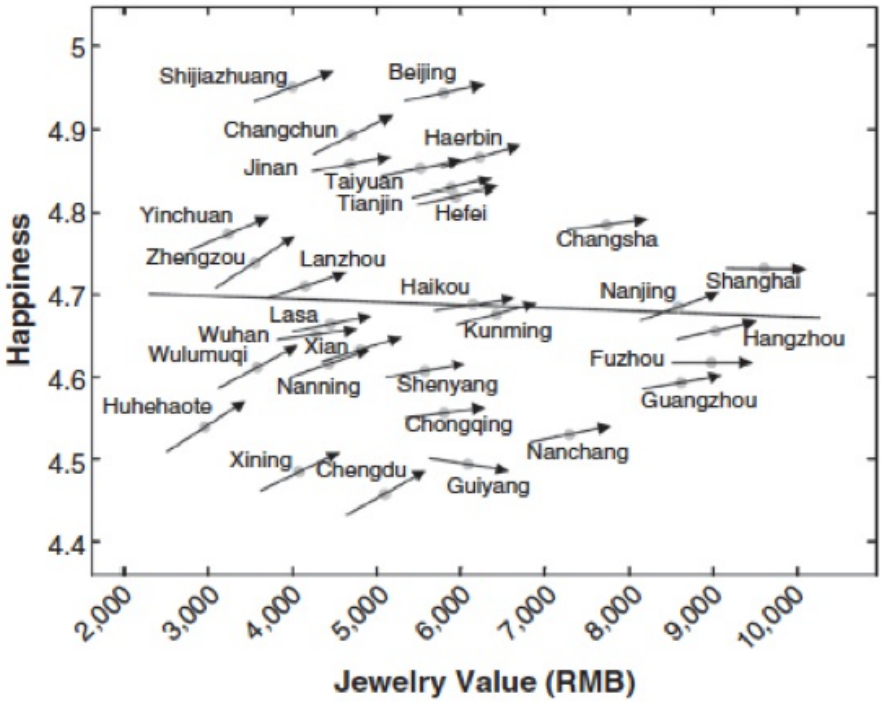

Figure 2. The impact of jewelry value on happiness within cities and across cities. The slope of each small line indicates the effect of jewelry value within a particular city, and the slope of the long (trend) line indicates the effect of jewelry value across all the cities. The graph shows a positive effect of jewelry value within most cities (within-city effects), but not have a positive effect across cities (between-city effect).

The second proposition based on this distinction is that the durability of happiness differs between IP and LP attributes. Because inherent preferences have a stable and hard-wired internal reference scale, an improvement on an IP attribute will likely be permanent and long-lasting. On the contrary, because learned preferences do not have a stable reference scale and instead rely on external reference points (e.g., a prior status or the status of others), an improvement on an LP attribute will likely disappear once the external reference points lose salience or change. For instance, social acceptance (an IP) confers an increase in well-being that will endure regardless of whether other people get socially accepted. Meanwhile, a luxury bag (an LP) confers an increase in well-being that will fade when other people also purchase similar (or better) bags, or when the consumer forgets the experience of not owning a luxury bag in the past.

Two empirical studies by the present authors (Tu, Hsee, & Li, 2017) lend support to this hypothesis. In both studies, participants first learned the definitions and examples of IP and LP and then passed a comprehension test before answering further questions. Noting that IP and LP fall on a continuum, we created comprehension questions in relatively obvious contexts. For example, we asked participants to indicate whether "the preference for a warm ambient temperature to a cold ambient temperature in winter" or "the preference for earning $100,000 a year to earning $80,000 a year" is more inherent. The former is the correct answer. We find that the correction rates are generally high, suggesting that people can intuit and identify the distinction between IP and LP. This approach is similar to what was used in studying material and experiential consumption (Van Boven & Gilovich, 2003). Next, in one study, we asked participants to think about a purchase they had made with the intention of satisfying an inherent or learned preference. We specified the time frame ("more than two years ago"), the cost ("between $50–$500"), and the durability of the purchase ("something you still have and are still using"). Participants recalled such a purchase, described the type of preference they tried to satisfy, and then rated their immediate happiness and current happiness due to the purchase. We find that, although happiness decreased over time with both types of purchases, the decline was greater for LP-oriented purchases than for IP-oriented purchases. In the second study, we replicated this effect in the context of life events while controlling for immediate happiness. Specifically, we asked participants to recall two improvements in their life within the past 5 years—one satisfying an inherent preference, the other satisfying a learned preference—that had similar immediate impacts on their happiness. Participants described two such improvements and rated whether the improvements had a long-lasting effect on happiness. Supporting our

prediction, participants reported longer-lasting effects of happiness from improvements that satisfied an inherent preference than from those that satisfied a learned preference.

Together, we aim to make two related contributions from this program of research (Hsee et al., 2009; Tu & Hsee, 2016; Tu, Hsee, & Li, 2017). First, we draw a distinction between inherent preferences and learned preferences—a distinction that has potentially profound implications for both theory-building and policymaking. Second, we provide empirical evidence suggesting that improvements related to inherent preferences produce more sustainable gains in happiness than do improvements related to learned preferences. This insight is important, in light of the fact that most improvements that have been made over the years are only about learned preferences and not about inherent preferences.

Conclusion

In this chapter, we review research on hedonomics. We present a representative, but not comprehensive, list of determinants of happiness, mainly drawing upon research on judgment and decision making. These factors are subtle but can significantly influence happiness. More importantly, they offer implications for "choice architects"—governments, companies, and individual consumers—who seek to design better consumption patterns and procedures, to offer proper timing of choice and consumption, to produce and stimulate the right type of consumption experiences, and ultimately, to improve daily happiness without significantly increasing the possession or consumption of external materials.

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