

Predisposing the Decision Maker Versus Framing the Decision: A Consumer-Manipulation Approach to

tion and similar papers at core.ac.uk

bro

BRIAN J. GIBBS

Graduate School of Business, Stanford University, Stanford, CA 94305-5015

Abstract

The dominant approach to the study of dynamic preference is to generate preference change by manipulating aspects of decision-problem presentation (problem description, task procedure, contextual options). The *predisposing* approach instead manipulates the decision maker's mental state while holding problem presentation constant. Three illustrative studies are outlined here. The first modified preferences for ambitious consumption by manipulating subjects' *consumption energy*. The second modified preferences for immediate consumption by manipulating subjects' *hedonic resources*. The third modified preferences for consumption itself by manipulating subjects' *desire proneness*. Whereas framing is thought to affect perception, predisposing apparently can affect tastes and so involves a special kind of preference dynamism.

Key words: dynamic preference, consumer manipulation, desire proneness, hedonic resources, consumption energy

As the term *dynamic* suggests, research on dynamic preference investigates preference change and, ideally, the forces or mechanisms underlying it. Although all change involves time, preference change measured across time per se is not the focus of most research. Instead, the focus is on preference change measured across different presentations of the decision problem. That is, preference effects are produced by manipulating aspects of problem presentation while holding constant the critical, canonical preference alternatives that define the preference being measured.

Three aspects of problem presentation can be manipulated to produce preference effects. First, manipulating the *task-procedure* aspect of problem presentation can produce preference-reversal effects. For example, when the subjects' task is to choose between two specially constructed monetary gambles, they tend to prefer one gamble, but when their task is to specify cash equivalents for those gambles, they tend to prefer the other (Lichtenstein and Slovic, 1971; Tversky, Slovic, and Kahneman, 1990). Second, manipulating the *contextual-options* aspect of problem presentation can produce so-called context effects: subjects' tendency to prefer one choice alternative over another is affected by presenting different surrounding options that share attribute dimensions with the preference alternatives. For example, alternative *x* may be preferred to alternative *y* when they are presented alone, but *y* may become preferred to *x* when they are presented along with a third option *z* (Huber, Payne, and Puto, 1982; Simonson and Tversky, 1992; Tversky and Simonson, 1993).

Third, manipulating the *problem-description* aspect of problem presentation can produce *framing effects*, which are the most prototypical and widely explored type of problem-presentation effect. A decision frame is “the decision-maker’s conception of the acts, outcomes, and contingencies associated with a particular choice,” and therefore, it can partly determine preferences (Tversky and Kahneman, 1981, p. 453). For example, in the familiar Asian disease problem, subjects tend to prefer the risky alternative when outcomes are described in terms of lives lost but tend to prefer the riskless alternative when the same outcomes are described in terms of lives saved (Tversky and Kahneman, 1981). Such framing effects are often thought to involve a change in the decision maker’s representation of the decision problem (Dunegan, 1993; Kahneman and Tversky, 1984; Payne, 1980). Indeed, framing effects can be likened to perceptual illusions (Tversky and Kahneman, 1986), and preference changes caused by shifts in decision frame are considered analogous to appearance changes caused by shifts in visual perspective (Tversky and Kahneman, 1981).

Framing has proven to be a powerful and fruitful idea, and it permeates current thinking on decision making and dynamic preference. In addition to risk preference, numerous topics have been addressed in recent years using the framing concept, including: product evaluation (Schul and Ganzach, 1995), consumer response to price (Heath, Chatterjee, and France, 1995), evaluation of retail outlets (Kellaris, Kardes, and DiNovo, 1995), advertising (Keller, 1991), industrial buying decisions (Qualls and Puto, 1989), persuasion (Maheswaran and Meyers-Levy, 1990), perceptions of control and efficacy (Koehler, Gibbs, and Hogarth, 1994), perceptions of distributive justice (Kinsey, Grasmick, and Smith, 1991), utility analysis (Shetzer and Bobko, 1992), performance feedback (Hogarth, Gibbs, McKenzie, and Marquis, 1991), and medical decisions (Politzer, 1989).

Studies of framing and other problem-presentation effects represent a research approach that has helped reveal the constructive nature of preference and meaningfully advanced our understanding of preference dynamism (Payne, Bettman, and Johnson, 1992; Tversky and Kahneman, 1986). This article, however, describes a different, complementary approach to the study of dynamic preference, one that emphasizes the *predisposing* of decision makers rather than the framing of decisions. After explaining the concept of predisposing and its relation to framing, the next section outlines three early-stage consumer research projects that illustrate the predisposing paradigm. The final section of the article elaborates on the relation between predisposing and other sources of preference variation and discusses the significance of the predisposing paradigm.

1. Predisposing the decision maker

Predisposition refers to the mental state already prevailing in the decision maker as that decision maker encounters a particular decision problem. Manipulating this ambient mental state is termed *predisposing the decision maker*. For example, in advance of being presented with a decision problem, decision makers might be treated in various ways so as to influence their mental states: given coffee to make them energetic, prompted to think about positive life events to make them happy, or shown attractive members of the

opposite sex to make them desirous. Given that valuation is a mental response, it is reasonable to expect mental state to affect the valuation of decision outcomes and, therefore, that different predispositions will sometimes lead to different preferences, even while preference alternatives and problem presentation remain constant. The predisposing approach to dynamic preference, then, focuses on altering the state of the decision maker rather than the presentation of the decision problem.

How is predisposing related to framing? The model in Figure 1, which divides the causes of preference variation into two sources of *interpreference difference* and two sources of *intrapreference change*, shows that predisposing and framing are contiguous regions of preference change within the preference variation space. Indeed, decision frames can be considered mental states. Not all mental states are decision frames, however, and predispositions are explicitly defined as mental states not induced by decision problem presentation (see Figure 1). This is where the distinction between predisposing and framing becomes useful as an organizing principle for research: the predisposing approach complements the framing approach by highlighting another area in which to

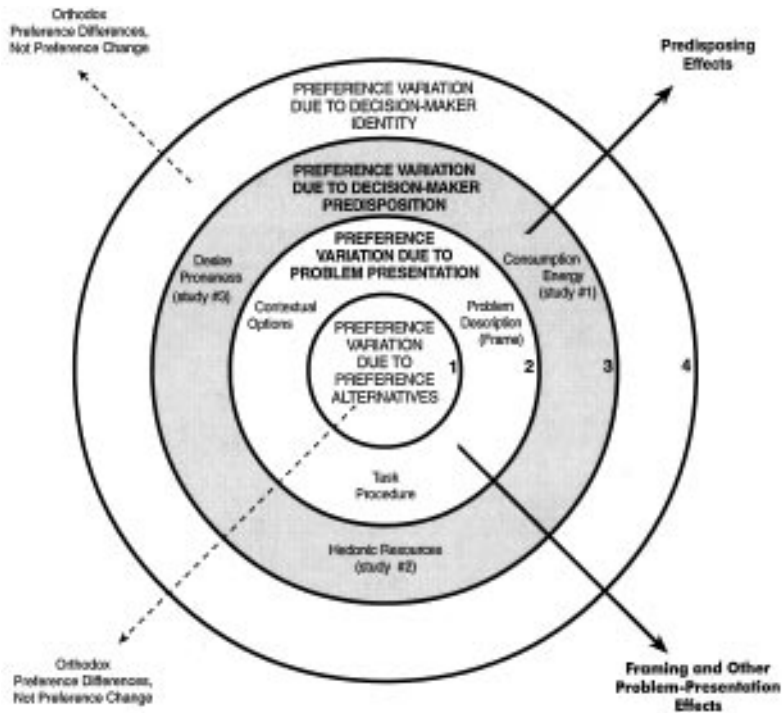


Figure 1. A Model of the Preference Variation Space: Two Sources of Preference Change Among Four Disjoint Sources of Preference Variation. Super Region 1+2: Preference Variation Due to Decision Problem. Super-Region 1+2+3: Preference Variation Due to All Aspects of Decision Maker’s Mental State. Super-Region 1+2+3+4: Preference Variation Due to All Sources (State and Trait).

explore dynamic preference. Whereas the framing paradigm generates preference change by holding constant preference alternatives and manipulating the problem presentation, the predisposing paradigm generates preference change by holding constant both preference alternatives *and* problem presentation, and manipulating the decision maker.

Of course, despite the disjoint conceptual model presented in Figure 1, there are likely to be interesting empirical interrelations between the four sources of preference variation. Different sources of variation might sometimes produce the same ultimate effect on preferences. For example, putting decision makers in a positive mood could result in the same time preferences as those resulting from certain intertemporal framing manipulations (Loewenstein, 1988). Different sources of variation might sometimes interact. For example, decision-maker identity, as captured by trait measures (such as Belk's, 1985, materialism scale) could moderate the effects of decision-maker predisposition (for example, the effects of a desirous mental state), which could in turn moderate the effects of problem presentation (such as the effects of a "gains" problem description). Alternatively, one source of variation might sometimes be mediated by another. For example, putting the decision maker in a de-energized state could influence how the decision problem is construed (Griffin and Ross, 1991) such that the problem is perceived to involve fewer contextual options. Nevertheless, construal does not provide a plausible general account of predisposing effects (see section 1.3).

The value of the predisposing idea per se is primarily as a research facilitator rather than as a generic explanation of preference change. If left in generic form, the notion of mental state has limited explanatory power in accounts of preference change, because only in rare cases (see Zajonc and Markus, 1982) would the null hypothesis be that no mental state of any kind is involved. Rather, the value of the predisposing idea is that it encourages specific investigations of non-problem-dependent mental states by directing attention to them as a special class of preference determinant. In turn, specific predisposing studies—like those exemplified by the three studies presented here—do have the potential to generate explanatory accounts of preference dynamics and to shed light on decision making and consumption in general.

Each of the consumer research projects outlined here employs a predisposing manipulation to modify preferences: preferences for ambitious consumption (study 1), preferences for immediate consumption (study 2), and preferences for consumption itself (study 3). These are not the first examples of research uncovering effects that can be considered instances of predisposing (e.g., Kahn and Isen, 1993, on mood effects on preference, and Loewenstein, 1996, on the role of visceral factors in decision making). The following projects, however, represent the beginnings of a research stream on dynamic preference that is aimed at paradigmatically investigating predisposing phenomena.

1.1. Consumption energy: modifying preferences for ambitious consumption

In considering a market transaction, a consumer must weigh the value of the offered product against the costs of consuming it. The most obvious costs are the product's monetary price and transaction costs (such as time spent shopping). But two analogous

psychological costs can be defined in terms of mental effort. One, the mental-effort analog to transaction cost, is the effort that must be expended in the decision making process (Payne, 1982; Shugan, 1980). The other, the mental-effort analog to product price, is missing from standard analyses of consumer behavior. This cost is the effort that must be expended by the consumer in the process of actually extracting utility from the product experience. Thus, the consumer's level of *consumption energy*, which is *that mental resource expended by the utility-extraction process*, may have systematic effects on preferences, especially in certain product categories. Specifically, placing a consumer in an energized mental state, and thereby increasing available consumption energy, may cause the consumer to have more ambitious preferences (preferences for more difficult and rewarding products).

Consider a consumer in a video store, who recognizes that the subtitled French film would be highly rewarding and yet prefers a less ambitious alternative for an evening on which consumption energy is low (see Hirschman and Holbrook, 1982, p. 97, for a slightly different version of this example and a discussion of imaginal-emotional effort). An experiment conducted with Aimee Drolet (Gibbs and Drolet, 1997) created a parallel choice situation in the lab and manipulated subjects' consumption energy level by varying physiological arousal using caffeine. Seven subtitled foreign films were paired with their American remakes (for example, *La Femme Nikita* with *Point of No Return*). For each of the seven pairs, subjects read a common summary description of the two films and then saw differentiating information such as language of the film, star rating (from a published source), and a critic's quote (from the video cassette package).

As predicted, we found that compared to not-aroused subjects, aroused subjects had a stronger preference for the foreign films. However, arousal did not increase preference intensity independent of film type. It simply increased *relative* preference for foreign versus American films. Hence, these results are consistent with the consumption-energy account but cannot be explained by a simple misattribution-of-arousal account (Allen, Kenrick, Linder, and McCall, 1989) or a generalized-mood account (Gorn, Goldberg, and Basu, 1993), which would predict an arousal benefit for both films.

Furthermore, this result does not fit an experimental-demand or subject-expectations account because it occurred for a group of subjects who were aroused surreptitiously by coffee they falsely believed to be decaffeinated. Indeed, subjects who were aware they had received caffeine showed a significantly *reduced* predisposing effect. These subjects apparently discounted their level of consumption energy and thus, despite their elevated arousal, showed no increase in their preference for the foreign film. That consumption energy is subject to such discounting indicates that these findings cannot be characterized as merely demonstrating that energized consumers are willing to expend more energy;¹ and it indicates that marketing interventions to increase the ambitiousness of consumption choices may have to be subtle to be effective.

We also gave subjects viewing time with a film pair and found that arousal had no effect on subjects' *actual liking* of the films, whether or not subjects were aware of the caffeine. Most notably, arousal did not increase liking of the foreign film relative to the American film. Thus, film preference was a function of consumption energy, but film liking was not. If confirmed, this finding suggests that consumption energy can influence consumer pref-

ferences in ways not related to actual experienced utility (see Kahneman and Snell, 1990; Snell and Gibbs, 1995).

1.2. Hedonic resources in delay of gratification: modifying preferences for immediate consumption

Among marketing forces that could be accused of contributing to unhealthy consumer behavior (see Hirschman, 1991; Pollay, 1986), one of the most basic and ubiquitous is the implicit collective effort by marketers to discourage consumers from exerting self-control and postponing consumption. Although marketers virtually always prefer a sale now to a sale later, consumers, on the other hand, often try to delay gratification in order to achieve important life goals, particularly when it comes to the consumption rate of cigarettes, alcohol, fattening food, and the like but also more generally when it comes to the tradeoff between consuming now and saving money for the future. Thus, an important issue for both marketers and consumers is whether there are ways of changing consumers' preferences for immediate consumption.

One way of approaching this issue is to think of the ability to delay gratification as a limited mental capacity, like "willpower," and then to explore factors that might serve as resource inputs able to expand this capacity. Positive mood, or hedonic tone, is known to have fundamental and sometimes enhancing effects on cognition and behavior (Isen, 1987) and may be one such resource input to willpower (Perry, Perry, and English, 1985; Schwarz and Pollack, 1977); in resource terms, perhaps happier consumers can better "afford" to forego immediate gratifications. Accordingly, positive mood may increase willingness to delay gratification (that is, reduce individuals' temporal discount rates). This speculation was investigated in a predisposing experiment that manipulated the hedonic tone of subjects' mental state by alternately inducing a positive and neutral mood (Gibbs, 1997a). In the positive-mood induction subjects recalled positive life events, and in the neutral-mood induction the same subjects recalled bad movies or books. Immediately following each mood induction, subjects reported how long they would be willing to wait to get a delayed cash reward in place of a smaller immediate one.

A mood effect occurred as predicted: subjects were willing to delay gratification longer when they were in a positive mood than when they were in a neutral mood. Although there are some preliminary indications that this result is sensitive to how the delay question is asked, the basic result is provocative. It suggests, for example, that public-service advertisements aimed at reducing myopic consumption behaviors like smoking may backfire if they emphasize negative consequences in a way that dampens the consumer's mood.² At a sociological level, the finding also relates to the association argued to exist between inability to delay gratification and low socioeconomic status (Strotz, 1955–1956). Although it may be natural to suppose that inability to delay gratification is a factor contributing to poverty, the reverse may be just as true: poverty may impair the ability to delay gratification. That is, because poverty will tend to reduce hedonic tone,³ consumers at the bottom of the socioeconomic distribution will be relatively predisposed to having preferences that favor more immediately gratifying "vice" products over "virtue" products

(Wertenbroch, 1996), or what Thaler (1980) calls negative investment goods (such as cigarettes) over positive investment goods (such as education); in turn, this pattern of consumption preferences likely hampers upward socioeconomic mobility.

1.3. Increasing consumer desire proneness: modifying preferences for consumption itself

Although desire, at least in its mild form as wanting, lies at the heart of decision making (see Elster, 1985), there are few decision-making contexts in which desire often plays such an explicit role as it does in consumption. It is surprising, then, that the field of consumer behavior has not paid more attention to investigating the nature of desire (but see Belk, 1996, and Hoch and Loewenstein, 1991). In an ironic eschewal of the spirit of the marketing concept, there is a general tendency for the field to concentrate on “desirability” as an aspect of the product rather than on desire as a mental state of the consumer (see Kahneman and Varey, 1991). Recognizing desire to be a mental state (specifically, a state of intense wanting) raises issues that have otherwise been obscured by the prevailing emphasis on product-centered desirability. One fundamental issue is whether the consumer’s proneness to entering a state of desire can be systematically influenced. By increasing a consumer’s desire proneness, can desire for a particular product be inflamed, even in the absence of changes in the product and its presentation?

A predisposing experiment conducted with Mark Forehand (Gibbs and Forehand, 1997) investigated the idea that desire could perhaps be “primed.” Holding constant its attributes and presentation, we attempted to inflame subjects’ desire for a product by preceding the product-contact stage with a separate stage involving two procedures suggested by the priming metaphor: prior presentation of a desire-oriented stimulus and prior elicitation of a desire-oriented response. Specifically, stimulus-primed subjects looked at photographs of attractive models of the opposite sex and so saw desire-oriented stimuli, whereas stimulus-unprimed subjects looked at not-attractive line-drawn characters of the opposite sex and so saw non-desire-oriented stimuli. Response-primed subjects judged how “physically desirable” they found the models or line-drawn characters to be and so made desire-oriented responses, whereas response-unprimed subjects judged how “physically comfortable” the models or characters appeared to be and so made non-desire-oriented responses. To mitigate possible misattribution-of-arousal effects, all subjects were informed that looking at such stimuli “can sometimes be stimulating” and were asked to rate their stimulation level. Then subjects went on to an ostensibly separate (see Gorn, 1982) product-evaluation experiment in which they were handed a Black Dog Ale T-shirt and asked to specify their personal cash equivalents for it. The experiment used a truth-revealing elicitation procedure, which was based on subjects knowing that they would actually get to keep either the T-shirt or a randomly determined amount of money, depending on the cash equivalent they specified.

Desire priming had dramatic effects on how intensely subjects wanted the T-shirt. There was a main effect of stimulus priming, such that subjects who had previously looked at line-drawn characters were willing to pay \$3.09 for the T-shirt, but those who had previ-

ously looked at models were willing to pay \$5.21 ($p = .0001$). Remarkably, there was also a main effect of response priming: subjects who had previously made “comfortable” responses were willing to pay \$3.51 for the T-shirt, but those who had previously made “desirable” responses were willing to pay \$4.80 ($p = .01$). Stimulus priming and response priming did not interact. Similar priming effects were observed for self-reported wanting and judged pleasantness of the T-shirt (except that the response-priming effect on self-reported wanting was only directional). However, more objective evaluations of the T-shirt—specifically, judged quality and estimated market price—were not affected by either type of priming, which suggests that the observed priming effects did not occur because of a construal process in which the primed subjects saw the product as superior but, rather, because these subjects experienced greater feelings of desire for the product. The fact that these other measures were not affected also suggests that the findings were not the result of some general positivity bias such as might occur if the priming manipulations had enhanced mood (Isen, 1987) or the result of a simple increase in the intensity of responding due to elevated arousal. Instead, desire priming apparently increased subjects’ desire proneness or general propensity to want.⁴

2. General discussion

The three lines of research described here have begun to generate insights into dynamic preference. Preferences for ambitious consumption can be modified by manipulating the consumer’s level of consumption energy. Preferences for immediate consumption can be modified by manipulating the consumer’s hedonic resources. Preferences for consumption itself can be modified by manipulating the consumer’s desire proneness. Aside from shedding theoretical light on the dynamics of specific kinds of preferences, each of these findings has obvious implications for how marketers or policy designers might attempt to influence consumer behavior. In this article, however, the superordinate goal of these projects is to collectively exemplify the predisposing approach to the study of dynamic preference. In keeping with this goal, these studies all focused on manipulating the decision maker’s mental state while holding constant preference alternatives and presentation of the decision problem.

By pointing to an additional region of the preference variation space in which to explore dynamic preference, the predisposing approach does not supersede the problem-presentation approach but, rather, complements it. In fact, the predisposing concept strengthens the framing concept by helping to more clearly identify preference variations that can be conceptually classified as instances of not-framing. More generally, to better understand predisposing and problem-presentation effects, it is instructive to consider the other two sources of preference variation shown in Figure 1. At the micro extreme, the preference alternatives themselves account, of course, for some preference variation. However, this variation is not preference change but represents the orthodox preference differences central to rational choice theory. That is, preferences are supposed to vary across alternatives. At the macro extreme, the identity of the decision maker also accounts for some preference variation.⁵ However, this variation too represents orthodox preference

differences among different decision makers, who may have different personalities and tastes. Here again, preferences are supposed to vary across decision makers (but see Stigler and Becker, 1977).

By contrast, problem presentation and predisposing, which fall between the preference-alternatives and decision-maker-identity sources of preference variation (see Figure 1), are sources of preference change. Different problem presentations function as *pseudo-alternatives*. In the case of context effects, for example, x and y presented alone are pseudo-alternatives to x and y presented with a third option: rational choice theory and common sense treat the two dyads as equivalent, but consumers' preferences do not. In a similar sense, different predispositions function as *pseudo-identities*. In the case of desire-priming effects, for example, making subjects more desire prone gives them a pseudo-identity characterized by more positive tastes for the test product: random assignment of subjects to conditions ensures subjects' identities do not actually differ systematically between groups, and yet, due to the predisposing manipulation, the groups have preferences that would imply different taste distributions.

Relative to the problem-presentation paradigms such as framing, the predisposing paradigm has two disadvantages. First, operationally, although neither predispositions nor frames are directly observable, the mental-state variables central to the former are more difficult to rigorously specify than are the problem-presentation variables central to the latter. Second, pragmatically, whereas problem-presentation experiments can often be administered to large extant groups using pencil-and-paper tests that involve hypothetical alternatives, predisposing experiments tend to be difficult and time consuming to conduct because of the need to maintain more elaborate control over each subject's situation and to provide actual hedonic experiences and real choices.

These difficulties, however, are more than compensated by the potential importance of exploring predisposing phenomena. The characterization of predisposing effects in terms of pseudo-identities highlights one of the reasons this region of the preference variation space is an especially interesting one. Because they arguably relate as much to tastes as to perceptions, predisposing effects represent preference changes of a rather profound nature. It may be troubling that, in trying to satisfy their tastes, decision makers can be systematically led astray by erroneous perceptions, but it is even more disturbing that tastes themselves can be manipulated. If framing effects can be likened to perceptual illusions, then predisposing effects can be likened to multiple-personality disorder. Albeit perhaps somewhat fanciful in the image it conjures, this point alludes to the serious ethical issues likely to arise if marketers or others develop tactics to deliberately predispose the decision maker. Although framing could be used as a technology of subtle deception because it can influence how consumers see the world, predisposing could be used as a technology of subtle brainwashing because it can influence consumers' tastes for what they see.

An intriguing corollary issue concerns whether decision makers might be able to deliberately predispose themselves. Kahneman and Tversky (1984) recommend that decision makers systematically examine alternative framings of a decision problem and note that framing can be deliberately used as an instrument of self-control (Tversky and Kahneman, 1981). Exerting similar influence over predisposing might be one way that consumers are

able to self-manipulate their tastes (Gibbs, 1997b) (for discussions of less direct preference management via control of the consumption stream, see Kahn, Ratner, and Kahneman, 1997, this issue; March, 1978; and Wertenbroch and Carmon, 1997). The usefulness of self-control of predisposing will be limited, however, by consumers' "intuitive hedonics," their knowledge about the situational influences on liking (Snell, Gibbs, and Varey, 1995) because even if consumers have the ability to induce a particular mental state, they may not adequately apprehend the effects it would have on their tastes and preferences.

Finally, the normative implications of predisposing the decision maker may be considerable, though this issue is intriguingly open. On the one hand, predisposing effects may not violate rational choice theory at all if predisposing manipulations change the actual benefits associated with the decision alternatives (Frisch, 1993; Kahneman and Tversky, 1984). The preliminary evidence suggests this is not true for the consumption-energy case described above (only film preferences, not liking, were affected), but it may be true in other cases. For example, subjects whose desire was inflamed in the desire proneness experiment may have ended up enjoying their T-shirts more. However, it seems just as plausible that—like shoppers who buy too many groceries when they are hungry (Nisbett and Kanouse, 1969)—these consumers simply ended up two dollars poorer.

On the other hand, predisposing effects may constitute a particularly fundamental violation of the invariance requirement of rational choice theory (see Tversky and Kahneman, 1986). In the case of framing there is room for at least some argument that the apparently superficial differences between normatively equivalent versions of a decision problem are in fact substantively relevant (Frisch, 1993). But in the case of predisposing, preference change occurs even though literally all aspects of the decision problem—including the preference alternatives, the problem description, the task procedure, and the contextual options—are held constant. Thus, not only might we have to rule out the global preference order implicit in rational choice theory (Tversky and Simonson, 1993), but we may also have to abandon even the notion of local preference orders that are allowed to depend on particular presentations of the decision problem.

Acknowledgments

The author gratefully acknowledges comments from Ziv Carmon, Klaus Wertenbroch, the associate editor, two anonymous reviewers, and seminar audiences at Stanford University, the University of British Columbia, the University of California at Berkeley, the University of Melbourne, and the University of New South Wales. The Stanford Graduate School of Business funded this research.

Notes

1. Moreover, preliminary data suggest that consumption energy does not simply decrease aversion to effort but increases attraction to quality.

2. A current poster campaign in New Mexico features a yellow happy-face with the message, "Be Happy but don't ... Drink & Drive."
3. This assumption is a good one in terms of the present operationalization of hedonic tone because, regardless of the weak correlation between wealth and self-reported subjective well-being (Lane, 1978), the poor very probably have fewer positive life events to think about.
4. Another experiment, which used a product unrelated to clothing, fashion, or bodies (a travel alarm clock), produced similar results. By demonstrating that desire priming does not require a semantic connection between the desire prime and the target product, this finding bolsters the interpretation of desire priming effects as changes in general propensity to want.
5. Here one may wish to include intra-individual identity changes, such as may occur across long stretches of time or after major life events.

References

- Allen, James B., Douglas T. Kenrick, Darwyn E. Linder, and Michael A. McCall. (1989). "Arousal and Attraction: A Response-Facilitation Alternative to Misattribution and Negative-Reinforcement Models," *Journal of Personality and Social Psychology* 57 (August), 261–270.
- Belk, Russell W. (1985). "Materialism: Trait Aspects of Living in a Material World," *Journal of Consumer Research* 12 (December), 265–280.
- Belk, Russell W. (1996). "Metaphors of Consumer Desire." In Kim P. Corfman and John G. Lynch, Jr. (eds.), *Advances in Consumer Research* (vol. 23, pp. 368–373). Provo, UT: Association for Consumer Research.
- Dunegan, Kenneth J. (1993). "Framing, Cognitive Modes, and Image Theory: Toward an Understanding of a Glass Half Full," *Journal of Applied Psychology* 78 (June), 491–503.
- Elster, Jon. (1985). "Sadder But Wiser? Rationality and the Emotions," *Social Science Information* 24(2), 375–406.
- Frisch, Deborah. (1993). "Reasons for Framing Effects," *Organizational Behavior and Human Decision Processes* 54 (April), 399–429.
- Gibbs, Brian J. (1997a). "Running on Empty: Does Hedonic Poverty Impair Consumer Self-Control?" Work in progress, Graduate School of Business, Stanford University, Stanford, CA 94305-5015.
- Gibbs, Brian J. (1997b). "Direction Theory: Inward Versus Outward Decision Making, Taste Self-Manipulation, and Consumers as Accommodators." Research Paper 1239r, Graduate School of Business, Stanford University, Stanford, CA 94305-5015.
- Gibbs, Brian J., and Aimee L. Drolet. (1997). "The Mental Cost of Extracting Utility: Consumption Energy as a Basis for Preference Among Aesthetic Products." Work in progress, Graduate School of Business, Stanford University, Stanford, CA 94305-5015.
- Gibbs, Brian J., and Mark R. Forehand. (1997). "Inflaming Desire: Priming and Hedonic-Orientation Effects on Consumer Desire Proneness." Work in progress, Graduate School of Business, Stanford University, Stanford, CA 94305-5015.
- Gorn, Gerald J. (1982). "The Effects of Music in Advertising on Choice Behavior: A Classical Conditioning Approach," *Journal of Marketing* 46 (Winter), 94–101.
- Gorn, Gerald J., Marvin E. Goldberg, and Kunal Basu. (1993). "Mood, Awareness, and Product Evaluation," *Journal of Consumer Psychology* 2(3), 237–256.
- Griffin, Dale W., and Lee Ross. (1991). "Subjective Construal, Social Inference, and Human Misunderstanding." In Mark P. Zanna (ed.), *Advances in Experimental Social Psychology* (vol. 24, pp. 319–359). San Diego: Harcourt Brace Jovanovich.
- Heath, Timothy B., Subimal Chatterjee, and Karen Russo France. (1995). "Mental Accounting and Changes in Price: The Frame Dependence of Reference Dependence," *Journal of Consumer Research* 22 (June), 90–97.
- Hirschman, Elizabeth C. (1991). "Secular Mortality and the Dark Side of Consumer Behavior: Or How Semiotics Saved My Life." In *Advances in Consumer Research* (vol. 22, pp. 1–4). Provo, UT: Association for Consumer Research.

- Hirschman, Elizabeth C., and Morris B. Holbrook. (1982). "Hedonic Consumption: Emerging Concepts, Methods and Propositions," *Journal of Marketing* 46 (Summer), 92–101.
- Hoch, Stephen J., and George F. Loewenstein. (1991). "Time-inconsistent Preferences and Consumer Self-Control," *Journal of Consumer Research* 17 (March), 492–507.
- Hogarth, Robin M., Brian J. Gibbs, Craig R. M. McKenzie, and Margaret A. Marquis. (1991). "Learning from Feedback: Exactness and Incentives," *Journal of Experimental Psychology: Learning, Memory, and Cognition* 17 (July), 734–752.
- Huber, Joel, John W. Payne, and Christopher Puto. (1982). "Adding Asymmetrically Dominated Alternatives: Violations of Regularity and the Similarity Hypothesis," *Journal of Consumer Research* 9 (June), 90–98.
- Isen, Alice M. (1987). "Toward Understanding the Role of Affect in Cognition." In R. S. Wyer and T. S. Srull (eds.), *Handbook of Social Cognition* (vol. 3, pp. 179–236). Hillsdale, NJ: Erlbaum.
- Kahn, Barbara E., and Alice M. Isen. (1993). "The Influence of Positive Affect on Variety Seeking Among Safe, Enjoyable Products," *Journal of Consumer Research* 20 (September), 257–270.
- Kahn, Barbara E., Rebecca Ratner, and Daniel Kahneman. (1997). "Patterns of Hedonic Consumption over Time," this issue.
- Kahneman, Daniel, and Jackie Snell. (1990). "Predicting Utility." In Robin M. Hogarth (ed.), *Insights in Decision Making: A Tribute to Hillel J. Einhorn* (pp. 295–310). Chicago: University of Chicago Press.
- Kahneman, Daniel, and Amos Tversky. (1984). "Choices, Values, and Frames," *American Psychologist* 39 (April), 341–350.
- Kahneman, Daniel, and Carol Varey. (1991). "Notes on the Psychology of Utility." In Jon Elster and John E. Roemer (eds.), *Interpersonal Comparisons of Well-Being* (pp. 127–163). Cambridge: Cambridge University Press.
- Kellaris, James J., Frank R. Kardes, and Theresa DiNovo. (1995). "Exploring the Boundaries of the Framing Effect: The Moderating Roles of Disparate Expected Values and Perceived Costs of Judgmental Errors," *Marketing Letters* 6(3), 175–182.
- Keller, Kevin Lane. (1991). "Cue Compatibility and Framing in Advertising," *Journal of Marketing Research* 28 (February), 42–57.
- Kinsey, Karyl A., Harold G. Grasmick, and Kent W. Smith. (1991). "Framing Justice: Taxpayer Evaluations of Personal Tax Burdens," *Law and Society Review* 25(4), 845–873.
- Koehler, Jonathan J., Brian J. Gibbs, and Robin M. Hogarth. (1994). "Shattering the Illusion of Control: Multi-Shot Versus Single-Shot Gambles," *Journal of Behavioral Decision Making* 7 (September), 183–191.
- Lane, Robert E. (1978). "Markets and the Satisfaction of Human Wants," *Journal of Economic Issues* 12 (December), 799–827.
- Lichtenstein, Sarah, and Paul Slovic. (1971). "Reversals of Preference Between Bids and Choices in Gambling Decisions," *Journal of Experimental Psychology* 89 (July), 46–55.
- Loewenstein, George. (1988). "Frames of Mind in Intertemporal Choice," *Management Science* 34 (February), 200–214.
- Loewenstein, George. (1996). "Out of Control: Visceral Influences on Behavior," *Organizational Behavior and Human Decision Processes* 65 (March), 272–292.
- Maheswaran, Durairaj, and Joan Meyers-Levy. (1990). "The Influence of Message Framing and Issue Involvement," *Journal of Marketing Research* 27 (August), 361–367.
- March, James G. (1978). "Bounded Rationality, Ambiguity, and the Engineering of Choice," *Bell Journal of Economics* 9 (Autumn), 587–608.
- Nisbett, Richard E., and David E. Kanouse. (1969). "Obesity, Food Deprivation, and Supermarket Shopping Behavior," *Journal of Personality and Social Psychology* 12 (August), 289–294.
- Payne, John W. (1980). "Information Processing Theory: Some Concepts and Methods Applied to Decision Research." In Thomas S. Wallsten (ed.), *Cognitive Processes in Choice and Decision Behavior* (pp. 95–115). Hillsdale, NJ: Erlbaum.
- Payne, John W. (1982). "Contingent Decision Behavior," *Psychological Bulletin* 92(2), 382–402.
- Payne, John W., James R. Bettman, and Eric J. Johnson. (1992). "Behavioral Decision Research: A Constructive Processing Perspective," *Annual Review of Psychology* 43, 87–131.

- Perry, Louise C., David G. Perry, and David English. (1985). "Happiness: When Does It Lead to Self-indulgence and When Does It Lead to Self-denial?," *Journal of Experimental Child Psychology* 39, 203–211.
- Politsier, Peter E. (1989). "Cognitive Guidelines for Simplifying Medical Information: Data Framing and Perception," *Journal of Behavioral Decision Making* 2 (July–September), 149–165.
- Pollay, Richard W. (1986). "The Distorted Mirror: Reflections on the Unintended Consequences of Advertising," *Journal of Marketing* 50 (April), 18–36.
- Qualls, William J., and Christopher P. Puto. (1989). "Organizational Climate and Decision Framing: An Integrated Approach to Analyzing Industrial Buying Decisions," *Journal of Marketing Research* 26 (May), 179–192.
- Schul, Yaacov, and Yoav Ganzach. (1995). "The Effects of Accessibility of Standards and Decision Framing on Product Evaluations," *Journal of Consumer Psychology* 4(1), 61–83.
- Schwarz, J. C., and P. R. Pollack. (1977). "Affect and Delay of Gratification," *Journal of Research in Personality* 11, 147–164.
- Shetzer, Larry, and Philip Bobko. (1992). "Student Judgements of Overall Worth in Utility Analysis: The Effects of Framing and Presentation Order," *Canadian Journal of Behavioural Science* 24 (January), 103–117.
- Shugan, Steven M. (1980). "The Cost of Thinking," *Journal of Consumer Research* 7 (September), 99–111.
- Simonson, Itamar, and Amos Tversky. (1992). "Choice in Context: Tradeoff Contrast and Extremeness Aversion," *Journal of Marketing Research* 29 (August), 281–295.
- Snell, Jackie, and Brian J. Gibbs. (1995). "Do Consumers Know What They Will Like?" In Frank Kardes and Mita Sujun (eds.), *Advances in Consumer Research* (vol. 22, pp. 277–279). Provo, UT: Association for Consumer Research.
- Snell, Jackie, Brian J. Gibbs, and Carol Varey. (1995). "Intuitive Hedonics: Consumer Beliefs About the Dynamics of Liking," *Journal of Consumer Psychology* 4(1), 33–60.
- Stigler, George J., and Gary S. Becker. (1977). "De Gustibus Non Est Disputandum," *American Economic Review* 67 (March), 76–90.
- Strotz, R. H. (1955–1956). "Myopia and Inconsistency in Dynamic Utility Maximization," *Review of Economic Studies* 23, 165–180.
- Thaler, Richard. (1980). "Toward a Positive Theory of Consumer Choice," *Journal of Economic Behavior and Organization* 1, 39–60.
- Tversky, Amos, and Daniel Kahneman. (1981). "The Framing of Decisions and the Psychology of Choice," *Science* 211 (January), 453–458.
- Tversky, Amos, and Daniel Kahneman. (1986). "Rational Choice and the Framing of Decisions," *Journal of Business* 59 (October), S251–S278.
- Tversky, Amos, and Itamar Simonson. (1993). "Context-Dependent Preferences," *Management Science* 39 (October), 1179–1189.
- Tversky, Amos, Paul Slovic, and Daniel Kahneman. (1990). "The Causes of Preference Reversal," *American Economic Review* 80 (March), 204–217.
- Wertenbroch, Klaus. (1996). "Consumption Self-Control via Purchase Quantity Rationing." Working paper, Fuqua School of Business, Duke University, Durham, NC 27708-0120.
- Wertenbroch, Klaus, and Ziv Carmon. (1997). "Dynamic Preference Maintenance," this issue.
- Zajonc, Robert B., and Hazel Markus. (1982). "Affective and Cognitive Factors in Preferences," *Journal of Consumer Research* 9 (September), 123–131.