Affective and rational consumer choice modes:

The role of intuition, analytical decision-making, and attitudes to money [1]

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Abstract

This paper was motivated by a paucity of research addressing how consumer decision-making is related to beliefs about money and different modes of reasoning. To investigate this issue, data were collected from 142 participants, who filled out questionnaires involving scales aimed to measure affective and rational purchase approaches, intuitive and analytical decision-making styles, as well as money attitudes. One finding was that consumers interchangeably rely on affective and rational approaches when interacting with the marketplace. Another finding was that those approaches were not only related to either intuitive or analytical decision-making styles but also to money attitudes. The findings are argued to provide an impetus to continuous investigation of the role of decision-making styles and money beliefs for consumer choice modes.

Keywords: affect; attitudes to money; consumer choice; decision-making; intuition; shopping orientation; reasoning

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1. INTRODUCTION

On the whole, studies of consumer decision-making have taken two independent paths. First, the perspective of behavioral decision research (BDR) has been applied to acquire insights into how consumers make choices as well as how consumers are affected by cognitive and emotional factors (Simonson, Carmon, Dhar, Drolet & Nowlis, 2001). Many concepts of BDR, which initially were observed in laboratory sessions with student participants, have been found to generalize to consumers. For instance, consumers have been found to engage in various forms of mental accounting (Thaler, 1999) and evaluate risky options in accordance to prospect theory (Camerer, 2000). Furthermore, consumer choice tasks have often been used in BDR to elucidate the role of emotions for judgment and decisions (Isen & Labroo, 2003).

The second path takes another perspective to investigate consumer decision-making. In principle, this perspective has been exploratory and put more focus on empirical investigations than on generating hypotheses and theories. No consideration has been taken to the findings of BDR. By the means of interviews and surveys, consumers have been asked about their orientations to shopping and purchase behavior (e.g., Stone, 1954; Mitchell & Bates, 1998; Walsh, Mitchell & Hennig-Thurau, 2001; Mitchell & Walsh, 2004). It has been suggested that consumers rely on a variety of approaches when interacting with the market space (Sproles & Kendall, 1986). For example, consumers tend to search for products with highest quality, strive for getting the best values for money, purchase in an impulsive or hedonistic manner, and routinely shop goods of certain brands (Sproles & Kendall, 1986; Mitchell & Bates, 1998; Walsh et al., 2001). Basically, such tendencies relate to decision-making styles. Although not acknowledged by this path of consumer studies (e.g., Walsh et al., 2001), those tendencies also relate to the distinction between intuitive and analytical reasoning. Specifically, a purchase approach meaning buying on instinct and shopping certain brands requires less cognitive efforts than an approach characterized by searches for lowest

price and highest quality, which is more or less in line with rational decision-making. Thus, consumer orientations to shopping could be divided into two broad categories: affective and rational.

A vast body of research has proposed that there are two interacting modes of reasoning: intuitive and analytical (Stanovich & West, 2000). These modes have been sometimes referred to as the tacit and the deliberate systems (Hogarth, 2005) or as the experiential and the rational systems (Epstein, Pacini, Denes-Raj, & Heier, 1996). While the tacit system is characterized by fast, automatic, and, associative cognitive processes demanding little computational capacity, the deliberate system is slow, controlled, deliberate, and rule-based (Stanovich & West, 2000). As the processing of the tacit system happens without conscious awareness (Hogarth, 2005), intuitive judgment is often difficult to articulate. Due to its demand for effortful cognitive capacity, the deliberate system is assumed to be used "sparingly" and allocated between judgmental tasks deemed to be important for the time being (Hogarth, 2005). Supposedly, the two systems operate in tandem in that the deliberate system is assumed to govern the tacit system implying that intuitive judgments could be replaced by ones that are more analytically based.

Despite their interconnection, certain conditions seem to trigger the use of the two systems. Basically, the use is driven by the emotional state of the individual as well as the decision-situations (Mellers with collaborators, 2002; Kahneman, 2003). Consumers in positive affect tend to reduce decision complexity and have shorter decision times (Isen & Labroo, 2003), but may, nevertheless, rely on simplified heuristics when making decisions (Schwarz, 2000). In contrast, consumers in negative affect appear to process information systematically leading to a kind of rational approach (Schwarz, 2000). Additionally, the decision-situations might entice certain emotions, which are likely to have an impact on the mode of reasoning. When faced with products evoking primarily affective reactions,

consumers seem to be prone to base their decisions on the tacit system, whereas the deliberate system may be activated when consumers make choices between products stimulating mainly cognitive reactions (Shiv & Fedorikhin, 1999). It is also possible that prompting consumers to solely focus on hedonic (utilitarian) dimensions might lead them to reason intuitively (analytically); see Dhar & Wertenbroch (2000). Recently, it has been argued that feelings towards objects guide judgments and decisions meaning that people apply a kind of affect heuristic (Slovic, Finucane, Peters, & MacGregor, 2002). Such a heuristic is in line with intuitive reasoning. In conjunction, elements (e.g., sound and furnishing) of the physical environment surrounding consumers when they make purchases might have effects on their emotional states, which could influence their modes of reasoning (see Bakamitsos & Siomkos, 2004).

Another issue concerns the accuracy of the two modes of reasoning. Behavioral decision research has documented many shortcomings of intuitive judgment (see Gilovich, Griffin & Kahneman, 2002). Many primers on decision-making also stress out the fragility of intuition and advocate analytical procedures as a superior way of reaching unbiased and accurate conclusions (Russo & Schoemaker, 2002). In contrast, the research program on naturalistic decision-making shows that intuitive judgment is superior in high-stake situations requiring immediate responses like fire-fighting and flight controls (Klein, 1999). In addition, people have different beliefs about the two modes of reasoning. In an innovative study, Sjöberg (2003) showed that people preferred intuition-based decisions in regard to consumer situations (e.g., choice of charter trip) but favored analytical reasoning when it comes to decisions made by professionals (e.g., auditors, teachers). Interestingly, intuition-based decisions were also perceived to have high levels of perceived control.

Obviously, money plays an important role for consumer decision-making like facilitating economic transactions and comparing values of products and services. For many

consumers, money also sets the limits for the amounts of purchases that can be made. People may also have different attitudes and beliefs concerning money (Furnham & Argyle, 1998). For example, money could be viewed as a mean to gain status or as something that should be managed with great concerns. There is, of course, an ethical perspective of money (Mitchell & Mickel, 1999). Perceptions of money are partly explained by demographical factors as well as political and religious convictions (Furnham & Okamura, 1999). Perceptions of money may also have behavioral consequences in that it affects how people manage their pecuniary resources. In other words, attitudes and beliefs with respect to money might shape the manner in which people make their decisions in the marketplace. Few studies have investigated this relation.

To sum up, the paucity of studies addressing how consumer decision-making relates to different modes of reasoning as well as to the psychology of money prompted the present study. The aim of this exploratory study is twofold. First, it aims to illustrate how consumer decision-making can be divided into two fundamental approaches: affective and rational consumer choice mode. We define the former term as the tendency to make purchase decisions based on emotional and spontaneous responses, while the latter term is referred to as the propensity to ponder over various issues before buying products and services. Second, the study aims to describe how the aforementioned approaches are linked to intuitive and analytical modes of judgment as well as to attitudes towards money.

2. METHOD

Participants

A total of 142 undergraduate students (84 men, 57 women) were recruited from two universities in Sweden to fill out a questionnaire. Their mean age was 23.19 years (S. D. = 2.81). No differences with respect to gender and age were found.

Questionnaire

The present research is based on the following measures that were included in the questionnaire: consumer choice mode, decision-making styles, and attitude to money.

Consumer choice modes. Affective and rational modes of consumer choice were measured with scales previously tested with a pilot instrument (see Engelberg, 2001) founded mainly on the scales developed by Allen and Ng (1999). The affective mode-scale measures choice on the basis of attention to product symbolism and experientially based perceptions that result in an intuitive liking. The rational mode-scale measures choice on the basis of a piecemeal judgment of information pertaining to utility, function, and price. Each scale had ten items. The affective mode-scale included items like "the moment I see a product I know whether I want to buy it" and "I usually buy things on gut-feelings". The rational mode-scale consisted of items like "I only make purchase decisions after thoughtful consideration" and "I usually weigh cons and pros before buying things". Participants were instructed to rate the extent to which they agreed with each item using a seven-point scale (0 = "not at all"; 6 = "entirely").

Decision-making styles. The inventory of decision-making styles (see Nygren, 2000) was used to validate the measure of consumer choice modes. This instrument consists of 45 items reflecting intuitive, analytical, and regret-based decision-making styles. The items, arranged in randomized order, were rated on a six-point scale (0 = "strongly disagree", 5 =

"strongly agree"). To validate the measure of choice modes, the 14 and 15 items related to the intuitive and analytical decision-making styles, respectively, were adapted.

Money attitudes. To measure attitude to money, 19 items were selected from the money belief instrument developed by Furnham (1984) (as quoted in Furnham & Argyle, 1998). Each item was rated on a seven-point scale (0 = "do not agree at all"; 6 = "strongly agree").

3. RESULTS

The items for the respective scales of consumer choice mode as well as of decision-making were averaged to form indices. As regards the items measuring money attitudes, they were factor analyzed using principal component analysis and varimax rotation (KMO = 0.73, Bartlett's test of sphericity = 545.30, $p < .0001$). As seen in Table 1, three dimensions emerged corresponding to the first four factors in the original solution (see Furnham & Argyle, 1998): (1) obsession, (2) power/spending, (3) retention, and (4) security/conservative. These factors accounted for about 48 per cent of the total variance. Basically, the three dimensions reflected the following beliefs: (1) money is a symbol of prestige and status, (2) money should be managed in a thrifty and restrained manner, and (3) money is a matter of economical security.

Table 2 shows that the mean values of many measures were somewhere between the endpoints of the respective scales. Exceptions were the dimensions of money attitudes, which had mean values closer to the lower end-points. Five of the seven measures had strong degree of internal consistencies, which ranged from 0.87 and 0.77; an indication of fairly good reliability (cf. Peterson, 1994). The degree of internal consistencies for the two dimensions of money attitudes was slightly below 0.60, implying some concerns with the reliability of those measures.

Table 1. *Factor solution with loadings of items measuring money attitudes.*

Item	Factor 1: Obsession, power & spending	Factor 2: Retention	Factor 3: Security & conservative
I often buy things that I don't need or want to impress people, because they are the right things to have at the time. (2)	.72		
I feel that money is the only thing that I can really count on. (11)	.71		
I firmly believe that money can solve almost all my problems. (8)	.70		
I think that time not spent in making money is time wasted. (13)	.65		
I am proud of my financial victories - income, wealth, investments, etc. - and I let my friends know about them. (16)	.57		
I sometimes feel superior to people who have less money than I do, regardless of their ability and achievements. (7)	.56		
I believe that money gives one considerable power.(12)	.43		
Even when I have sufficient money I feel guilty about spending money on necessities like clothes, etc. (3)		.73	
I would feel stupid if I paid more for something than other people. (18)		.61	
I often have difficulty in making decisions about spending money, regardless of the amount. (6)		.53	
Every time I make a purchase I 'know' people are likely to be taking advantage of me. (4)		.51	
In making any purchase, for any purpose, my first consideration is cost. (9)		.50	
I often discuss money with my partner. (19)		.37	
I often feel disdain for money and look down on those who have it. (10)		.32[a)]	
I am worse off than most of my friends think. (17)		28[a)]	
I know almost to the penny how much I have in my wallet, purse, or pocket, all the time. (5)			.89
I would do practically anything legal for money if it were enough. (15)			.73
I prefer not to lend people money. (14)			.57
I put money ahead of pleasure. (1)			.55

Notes: The numbers in parentheses refer to the order in which the items were stated in the money attitude scale.

[a)] Excluded due to low factor loadings.

Table 2. *Descriptive statistics and correlations between consumer choice mode, decision-making styles, and dimensions of money attitudes.*

Variable	**Mean**	**SD**	**Cronbach's alpha**	**1.**	**2.**	**3.**	**4.**	**5.**	**6.**
1. Affective consumer choice mode	4.01	.74	.77						
2. Rational consumer choice mode	4.05	.88	.80	-.10					
3. Intuitive decision-making style	3.01	.64	.86	.48***	.05				
4. Analytical decision-making style	3.42	.60	.87	.05	.38***	-.01			
5. Obsession, power, and spending	1.63	.91	.77	.40***	-.04	.10	-.03		
6. Retention	2.24	.88	.59	.02	.40***	.09	.05	.22*	
7. Security and conservative	2.56	1.15	.58	.21*	.30**	.09	.31**	.41***	.29**

*p<.05; **p<.001;***p<.0001

The scales for consumer choice mode were correlated with the variables of intuitive and analytical decision-making styles, and the three dimensions of money attitudes. As indicated by Table 2, construct validity for the two scales measuring consumer choice was supported in that the affective measure correlated significantly with the intuitive styles and the rational measure correlated significantly with the analytical styles. The inter-correlation between the affective and rational consumer choice scales was non-significant indicating that the two measures do not overlap. There was a strong positive correlation between the affective consumer choice scale and the Power-dimension, whereas the rational consumer choice scale related positively to the other two dimensions of money attitudes.

Table 3. *Standardized regression coefficients of hierarchical regression analyses for the affective and rational consumer choice mode, respectively, as criterion variable with two decision-making styles and three dimensions of money attitudes as predictor variables.*

	Affective consumer choice mode			**Rational consumer choice mode**		
	β	**t**	**R^2**	**β**	**t**	**R^2**
Analytical decision-making style	0.05	0.63	.01	0.32	3.96 ***	.14
Intuitive decision-making style	0.42	5.86 ***	.24	0.01	0.05	.14
Obsession, prestige and status	0.37	4.72 ***	.37	-0.18	-2.21 *	.14
Retention	-0.10	-1.43	.38	0.36	4.60 ***	.28
Security and conservative	0.05	0.65	.38	0.19	2.26 *	.31

* $p<0.05$; *** $p<0.001$

To examine how consumer choice related to decision-making styles and dimensions of money attitudes, hierarchical regression analyses were conducted. The analysis with affective choice scale mode as the criterion variable revealed a significant result, F (5, 130) = 15.31, p < .0001, R^2 = 0.38. Standardized regression coefficients for the final regression models are

presented in Table 3 and suggested that the most powerful predictors were intuitive decision-making style and the inclination to associate money with obsession, prestige and status. The corresponding analysis for rational mode of consumer choice also revealed a significant result, F (5, 127) = 10.98, $p < .0001$, $R^2 = 0.31$. As seen in Table 3, the standardized regression coefficients suggested that all predictors, except for intuitive decision-making style, made a significant contribution toward the explanation of rational consumer choice.

4. DISCUSSION

Overall results suggest that consumers interchangeably rely on affective and rational approaches. The non-significant relation between the two choice modes suggested that consumers who usually adopt an affective strategy tend to rely at the same time on more rational approaches and vice versa. This result is in line with theories about dual systems for judgment and decision-making and the operation in tandem of such systems (Stanovich & West, 2000; Kahneman, 2003; Hogarth, 2005). In addition, the result harmonizes with recent experimental evidence in consumer research (e.g., Hansen, 2005). In view of the limitations of human cognition, individuals often have to resort to fast, automatic, and, associative processes that demand little computational capacity. There is presumably, therefore, a need to be able to switch between different modes in situations of consumer choice (cf. the adaptive decision-maker model by Payne, Bettman, & Johnson, 1993).

The results clearly confirm our hypotheses that consumer choice modes are linked to corresponding styles of decision-making. A behavioral tendency for acting on experientially based perceptions was found to be strongly linked to an intuitive decision-making style. Conversely, an analytical decision-making style was strongly linked to a behavioral tendency for engaging in mental algebra when processing pieces of information about product attributes. Results thus show consistent links between behavioral tendencies and cognitive

style, in the same manner that rather consistent links were further discernable between choice and dimensions of money attitudes.

Interestingly, the two choice modes seem to tap into different dimensions of money attitudes. The affective mode was strongly associated with a higher importance attached to money as primarily reflected in the symbolism of power associated with financial resources. This detail of the results for affective choice may possibly reflect the inclusion of items measuring the psycho-social goals that are expected to be fulfilled with the certain kinds of products. In borrowing on the findings of Sproles and Kendall (1986), there may, for example, be an element of shopping well-known and expensive brands. There may furthermore be elements of impulsive buying and habitual brand loyalty in view of the effortless nature of this decision-making style as mainly based on sensory and affective impressions, although results are less explicit in these regards.

The results for the rational choice mode may similarly be interpreted in terms of the categories of consumer approaches assumed by Sproles and Kendall (1986). The strong link to the retention-factor, which represents careful spending, budgeting and saving plans, may correspond well with consumers' striving for value for money. Although once again not explicitly suggested by the present results, it makes sense that this mode may possibly reflect difficulties in making choices due to superabundance of products and information. Apparently, the scales for choice mode are somewhat crude as measures. Future studies should use refined versions in further explorations of the manner in which consumer decision-making relates to motives behind approaches to the marketplace.

Taken together, the present study suggests that consumer behavior is not only linked to cognitive styles underlying decision-making, but importantly also to cognitive beliefs about the means of exchange that makes consumption possible, that is, money. This latter finding points to the relevance of including measures of money attitudes in studies on consumer

decision-making in order to further our understanding with meaningful insights. Additionally, the present study is a contribution toward amending the paucity in consumer research on how choice relates to intuitive and analytical judgment. The overall findings provide an impetus to continue exploring the links between consumer choice, decision-making styles, and beliefs associated with money.

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