European Journal of Personality
Eur. J. Pers. **15**: S71–S83 (2001)
DOI: 10.1002/per.423

Individual Differences in Impulse Buying Tendency: Feeling and no Thinking

BAS VERPLANKEN[1]* and ASTRID HERABADI[2]

[1]*University of Tromsø, Norway*
[2]*Atma Jaya Catholic University, Indonesia*

Abstract

A 20-item scale to measure general impulse buying tendency was developed and validated in two studies. The scale includes cognitive aspects (e.g. lack of planning and deliberation) and affective aspects (e.g. feelings of pleasure, excitement, compulsion, lack of control, regret). The scale correlated significantly with reported purchase frequencies of typical impulse products and number of recent impulse purchases. Impulse buying tendency was found to be related to personality-based individual difference measures, including the Big Five. Cognitive and affective facets of impulse buying tendency were both related to extraversion. The cognitive facet was inversely related to conscientiousness, personal need for structure, and need to evaluate. The affective facet was related to lack of autonomy and action orientation. The results suggested that impulse buying tendency has a strong basis in personality. Copyright © 2001 John Wiley & Sons, Ltd.

INTRODUCTION

Whereas *homo economicus* purchases products on the basis of an evaluation of costs and benefits, most people are much less rational in their purchase behaviour. As has now long been acknowledged in the consumer behaviour literature, consumers' purchase behaviour seldom follows the principles of economic theory. Rather, consumers' purchases often seem to be desire, mood, or emotion driven, which thus seems natural and the default state of affairs (see e.g. Etzioni, 1986). Consumers buy products for all kinds of reason other than because these are strictly necessary, such as to relieve a depressed mood, to express an identity, or simply for fun. Such 'non-rational' purchase styles have become known as *impulse buying* (see e.g. Beatty and Ferrell, 1998; Dittmar, Beattie and Friese, 1995, 1996; Dittmar and Drury, 2000; Han, Morgan, Kotsiopulos and Kang-Park, 1991; Rook, 1987; Rook and Fisher, 1995; Rook and Gardner, 1993; Stern, 1962; Wood, 1998).

Impulse buying is a rather loosely defined concept, which covers many forms of non-rational purchase behaviour. It is mostly associated with an unplanned and sudden

*Correspondence to: Bas Verplanken, Department of Psychology, University of Tromsø, N-9037 Tromsø, Norway. E-mail: verplanken@psyk.uit.no

Received 26 January 2001
Accepted 31 May 2001

Copyright © 2001 John Wiley & Sons, Ltd.

purchase, which is initiated on the spot, accompanied by a powerful urge and feelings of pleasure and excitement (Rook, 1987). Impulse buying can take extreme forms (see e.g. Dittmar and Drury, 2000), and may even become pathological (see e.g. O'Guinn and Faber, 1989). Impulse buying includes at least two core elements. The first is the lack of planning and deliberation concerning the purchase of the impulsively bought product. However, purchases might be unplanned or not be deliberated for various reasons, for instance when a seemingly unplanned purchase had been planned longer before, or in the case of repeated or habitual purchases (Verplanken and Aarts, 1999). In order for a purchase to qualify as an impulse purchase it should include a second element, namely an emotional response (e.g. Beatty and Ferrell, 1998; Rook, 1987; Rook and Gardner, 1993; Wood, 1998). Such emotional responses might be elicited prior to, simultaneously with, or after an unplanned purchase. The most salient emotions, which usually accompany impulse purchases, are pleasure and excitement. But there may also be a sudden and immediate felt urge to buy prior to an impulse purchase, which might be considered as a mild form of compulsion. Regret might be experienced afterwards, for instance concerning the unnecessarily spent money (Dittmar and Drury, 2000).

As the lack of planning and the dominance of emotions thus characterize impulse purchases, such behaviour seems difficult to model by traditional attitude and attitude-to-behaviour models, such as the theory of reasoned action (Ajzen and Fishbein, 1980). In these models attitudes are predominantly viewed as cognition-based structures, which are derived from a consideration of costs and benefits. Another perspective, one that seems more appropriate in the context of impulse buying, is that attitudes may be based on qualitatively different elements, i.e. cognitions on the one hand (e.g. beliefs about costs and benefits) and emotions on the other hand (e.g. feelings of excitement, fear, or pleasure). Each component may have an evaluative loading, which may be in line with each other, but may also be discrepant, such as the familiar 'heart-versus-mind' problems (see e.g. Ajzen, 2001; Breckler, 1984; Breckler and Wiggins, 1989; Crites, Fabrigar and Petty, 1994; Edwards, 1990; Verplanken, Hofstee and Janssen, 1998; Zanna and Rempel, 1988).

What triggers an impulse purchase? Some variables are present in the retail environment, such as the appearance of products, the way these are exhibited, or the presence of features such as a nice smell, pretty colours, or pleasant music. Such affect-laden cues might attract attention, elicit purchase motives, or lead to positive mood states, and are particularly important during in-store browsing. In-store browsing may lead to positive feelings and an urge to buy, which are both characteristics of impulse purchases (Beatty and Ferrell, 1998). Other situational variables that influence impulse buying are available time and money, whether this is actual or perceived (Beatty and Ferrell, 1998).

Impulse buying is also influenced by person-related variables. For instance, Wood (1998) found a relationship between impulse buying and educational experience. Rook and Gardner (1993) suggested that certain mood states (e.g., the combination of pleasure, excitement, and power) might elicit impulse purchase behaviour in a more or less automatic or scriptlike fashion by activating themes and associations that are related to impulse buying. Consumers might also engage in impulse buying behaviour as a means to relieve an uneasy or depressed mood. In general, it can be assumed that temporary motives of various kinds might encourage impulse buying, such as wanting to reward, support, or comfort oneself. Such motives might be elicited by positive or negative events in one's personal life (e.g. passing or failing an exam). More structural motives might also drive impulse buying. Dittmar *et al.* (1995, 1996; Dittmar and Drury, 2000) suggested that impulse purchases might express symbols of self-identity. Such an identity approach might

Copyright © 2001 John Wiley & Sons, Ltd.

thus explain group (e.g. gender) as well as individual differences in the type of impulse purchases. Finally, impulse buying might be under normative constraints. Rook and Fisher (1995) found that impulse buying only occurred when individuals believed it was appropriate.

In the present studies we investigated the assumption that impulse buying tendency is rooted in personality, and might thus be a stable individual difference variable. If this is the case then impulse buying tendency is likely to correlate with personality-related individual differences. Impulse buying tendency, as a construct that is confined to the consumer behaviour area, might thus be an expression of broader personality patterns. For instance, individuals who never plan and deliberate in areas such as work or leisure activities might neither do so when purchasing products, and might thus be typical impulse buyers. Alternatively, someone who has an act-before-thinking style in communicating with other people might as well adopt such a style while shopping.

In Study 1 a scale was developed to measure impulse buying tendency. This scale was correlated with measures of personal need for structure, need to evaluate, need for cognition, and action versus state orientation. In Study 2 impulse buying tendency was correlated with a measure of the Big Five personality dimensions. In addition the predictive validity of the impulse buying tendency scale was investigated by relating the impulse buying tendency scale to measures of purchases of typical impulse versus non-impulse products (Study 1) and recent impulse purchase behaviour (Study 2).

STUDY 1

The first purpose of this study was to develop a scale to measure impulse buying tendency, whose main features will be described in the method section. The second purpose was to investigate the relations between impulse buying tendency and a number of individual differences, i.e. personal need for structure, need to evaluate, need for cognition, and action versus state orientation. Personal need for structure refers to the dispositional motivation to cognitively structure one's world in simple, unambiguous ways (see e.g. Newberg and Newsom, 1993). The need to evaluate refers to the chronic tendency to engage in evaluative responding (Jarvis, Blair and Petty, 1996). Need for cognition refers to a general tendency to engage in cognitive endeavours (Cacioppo and Petty, 1982; Cacioppo *et al.*, 1996). Action versus state orientation refers to individuals' affective self-regulation abilities and their ability to overcome inhibitions to engage action (see e.g. Kuhl, 1986). It was expected that impulse buying tendency would be inversely related to personal need for structure, need to evaluate, need for cognition, and positively to action orientation (i.e. inversely to state orientation).

Finally, this study was aimed at providing some preliminary evidence for the predictive validity of the impulse buying tendency scale. The scale was therefore related to self-reports of purchase frequencies of a number of products. On the basis of a pilot study products were selected that were typical for impulse purchases, which were compared with products that were not.

Method

Participants and procedure

Participants were 106 undergraduate students at the University of Nijmegen, The Netherlands, who received a small monetary reward for participation. The sample

Copyright © 2001 John Wiley & Sons, Ltd.

consisted of 69 females and 37 males. Ages ranged from 18 to 29 years ($m = 21.25$, $sd = 2.33$). Participants came twice to the laboratory, with a delay of one week. In the first session a questionnaire on past purchase behaviour was administered, which included self-reported purchase frequency of a number of products. In the second session a questionnaire was administered that contained 52 items on impulse buying tendency, and in addition the scales that measured personal need for structure, need to evaluate, need for cognition, and action versus state orientation. Two separate sessions were used so as to avoid responding to the past purchase behaviour questionnaire influencing responses on the impulse buying scale.

Past purchase behaviour

Participants were presented with a list of 36 products, and were asked to indicate how frequently they had bought these products. The list contained 18 products that were considered as products that students typically buy on impulse. The 18 products were selected on the basis of pilot interviews with 12 undergraduate students. These pilot participants were made familiar with the concept of impulse buying, and were asked which, if any, products they sometimes bought on impulse. Eighteen other products (which were not mentioned in the pilot interviews) were included as 'filler' products.[1] For each product participants indicated how many times they had bought it during the previous two weeks (for 22 products), the previous month (for four products), or the previous six months (for ten products). The different time frames were used to accommodate the fact that the products differed in expected purchase frequency. After having indicated purchase frequencies the products were once more presented. For each product participants were asked to indicate on five-point scales ranging from 1 to 5 whether this was a planned versus unplanned and a rational versus impulsive purchase, if they had bought that product within the indicated time frame.

Impulse buying tendency

During the second session participants were presented with 52 items that measured impulse buying tendencies. These items were assumed to represent the most important aspects of impulse purchase behaviour, and particularly focused on cognitive aspects, such as the absence of deliberation, thinking, and planning, and affective aspects, such as emotions like pleasure, excitement, and guilt. The generation of the items was first and foremost based on breaking the impulse buying process down into pre-purchase conditions (e.g. the degree of planning, the presence of reasons to buy certain products, the availability of bargains or new products), emotional processes upon confrontation with products (e.g. excitement, compulsive feelings, the urge to touch products), and post-purchase processes (e.g. regret, deliberations afterwards, surprise). Item generation also occurred on the basis of the pilot interviews mentioned above. In addition items were included that had been published by other researchers (e.g. Beatty and Ferrell, 1998; Rook and Fisher, 1995). Seven-point agree–disagree response scales ranging from 1 to 7 accompanied the items. The items were recoded such that high values indicated a high impulse buying tendency.

[1]The 18 impulse products were CDs, LPs, novels, study books, comics, clothes, posters, plants/flowers, perfumes (including aftershave, deodorant, perfume, eau de toilette), make-up, salty snacks, candy bars, chocolate (other than candy bars), cookies, candies, Belgian beers, regular beers, wine. The 18 filler products were: shampoo, washing detergent, body lotion, magazines, Dutch cheese, French cheese, grapes, bananas, apples, oranges, ready-made cigarettes, self-made cigarettes, soft drinks, cakes, meat/fish, coffee, tea, hard liquor.

Copyright © 2001 John Wiley & Sons, Ltd.

Individual difference scales

Personal need for structure was measured by a 12-item scale (Newberg and Newsom, 1993; Thompson, Naccarato, Parker and Moskowitz, 2001). Need to evaluate was measured by 18 items (Jarvis *et al.*, 1996). Need for cognition was measured by 18 items (Cacioppo, Petty and Kao, 1984). Action versus state orientation was measured by the 36 item Action Control Scale (Kuhl, 1994). Seven-point agree–disagree response scales ranging from 1 to 7 accompanied the items that measured personal need for structure, need to evaluate, and need for cognition. Items were coded such that high scores indicated high levels of the respective construct. The action versus state orientation items consisted of choices between two alternatives. The items were coded such that high scores indicated high levels of action orientation.

Results

Construction of the impulse buying tendency scale

The 52 items to measure impulse buying tendency were subjected to a principal component analysis. The first six eigenvalues were 13.77, 3.74, 2.67, 2.33, 2.01, and 1.87, respectively. Although there was a clearly dominating first factor, the pattern of eigenvalues gave reason to explore a two-factor solution as well. After rotation the first factor accounted for 19.30% of the variance, while the second factor accounted for an additional 14.36%. Inspection of the content of the items after a Varimax rotation suggested that the first factor included items that were predominantly related to cognitive aspects of impulse buying, e.g. the tendency not to deliberate, think, or plan when purchasing products. The second factor contained items that were related to affective aspects of impulse buying, such as feelings of pleasure and excitement, the urge to buy and difficulty to control, and possible regret. The ten highest loading items from each factor were selected so as to form a 20-item instrument to measure impulse buying tendency. These items were again subjected to a principal component analysis. The first six eigenvalues were 7.25, 2.79, 1.26, 1.04, 0.96, and 0.92. In Table 1 the items are presented together with factor loadings for a one-factor solution, as well as factor loadings for a two-factor solution. In the latter case an oblimin rotation was used, because the cognitive and affective components were substantially correlated: when the cognitive and affective items were respectively averaged (coefficient alphas of 0.91 and 0.83, respectively) their correlation was 0.43, $p < 0.001$. After rotation the first factor accounted for 29.24% of the variance, while the second factor accounted for 20.94%. Coefficient alpha was 0.86 for the complete 20-item scale.

Taken together, the results suggested that the 20-item impulse buying tendency scale is a reliable instrument. The instrument contains items concerning cognitive and affective aspects of impulse buying. Although the facets can well be distinguished in the factor structure, the general solution is a reasonable choice with good psychometric properties. In the following we will use the separate facets only to investigate the relationships between personality measures and impulse buying tendency so as to investigate the assumption that cognitive and affective aspects of impulse buying tendency are differentially rooted in personality.

Descriptives and gender and age differences in impulse buying tendency

The mean of the impulse buying tendency scale was 3.69 (sd = 1.00). Females scored higher than males, m—female = 3.90, m—male = 3.27, $t(102) = 3.15$, $p < 0.003$. There

Copyright © 2001 John Wiley & Sons, Ltd.

Table 1. The Impulse Buying Tendency Scale and factor loadings for a single-factor and a two-factor solution in Study 1

Item	IBT—total	IBT—cognitive	IBT—affective
Cognitive items			
1. I usually think carefully before I buy something.	0.63	0.83	− 0.18
2. I usually only buy things that I intended to buy.	0.84	0.79	0.19
3. If I buy something, I usually do that spontaneously.	0.75	0.78	0.07
4. Most of my purchases are planned in advance.	0.69	0.78	− 0.02
5. I only buy things that I really need.	0.77	0.74	0.16
6. It is not my style to just buy things.	0.81	0.74	0.21
7. I like to compare different brands before I buy one.	0.45	0.67	− 0.23
8. Before I buy something I always carefully consider whether I need it.	0.56	0.66	− 0.04
9. I am used to buying things 'on the spot'.	0.65	0.65	0.09
10. I often buy things without thinking.	0.67	0.65	0.12
Affective items			
11. It is a struggle to leave nice things I see in a shop.	0.56	0.02	0.81
12. I sometimes cannot suppress the feeling of wanting to buy something.	0.61	0.02	0.79
13. I sometimes feel guilty after having bought something.	0.32	− 0.15	0.66
14. I'm not the kind of person who 'falls in love at first sight' with things I see in shops.	0.25	− 0.20	0.65
15. I can become very excited if I see something I would like to buy.	0.42	− 0.09	0.63
16. I always see something nice whenever I pass by shops.	0.44	0.08	0.54
17. I find it difficult to pass up a bargain.	0.61	0.32	0.48
18. If I see something new, I want to buy it.	0.42	0.12	0.47
19. I am a bit reckless in buying things.	0.71	0.44	0.47
20. I sometimes buy things because I like buying things, rather than because I need them.	0.44	0.15	0.45

Note: Items 1, 2, 4–8, and 14 should be reverse coded.
IBT—total = the complete 20-item impulse buying tendency scale; IBT—cognitive = Impulse Buying Tendency—cognitive factor; IBT—affective = Impulse Buying Tendency—affective factor.

was no significant correlation between impulse buying tendency and age, $r = 0.07$. However, the range of ages was limited in this sample.

Impulse buying tendency and purchase behaviour

It was first checked whether purchasing the 18 products that were assumed to be typical impulse purchases was indeed considered as more unplanned and impulsive than purchasing the 18 filler products. Therefore the items that asked for each product the degree to which previous purchases of this product had been planned versus unplanned and rational versus impulsive were averaged across products within each of the two classes of products. As expected, the purchases of the impulse products were rated as more unplanned, $m = 2.78$, and more impulsive, $m = 2.85$, than the purchases of the filler products, $m = 2.11$ and $m = 2.04$, $t(105) = 8.95$, $p < 0.001$, and $t(105) = 10.71$, $p < 0.001$, for the two items respectively. These results confirmed the nature of the two classes of products as typical versus not typical impulse products.

Purchase frequencies of the 36 products were normalized and subsequently aggregated into impulse and non-impulse products. Normalization avoided products purchased more

Copyright © 2001 John Wiley & Sons, Ltd.

frequently having a disproportional weight in the overall class of products. A statistically significant correlation was present between the 20-item impulse buying tendency scale and the purchase frequencies of impulse products, $r = 0.32$, $p < 0.001$, whereas this correlation was not significant for the filler products, $r = 0.18$, ns. This pattern of correlations was present both for males and females, although the difference was more pronounced for males, $r = 0.46$, $p < 0.007$ for the impulse products and $r = 0.22$, ns for the filler products, than for females, $r = 0.25$, $p < 0.05$ for the impulse products and $r = 0.16$, ns for the filler products.

Impulse buying tendency and individual difference scales

The individual differences scales were first tested for internal reliability. Coefficient alphas were 0.85, 0.82, and 0.82 for personal need for structure, need to evaluate, and need for cognition, respectively. The action versus state orientation instrument consists of three 12-item subscales (Kuhl, 1994), i.e. (lack of) preoccupation, initiation versus hesitation, and volatility. Coefficient alphas were 0.77 and 0.78 for the first two subscales, respectively. The volatility scale was dropped, however, because of insufficient reliability (coefficient alpha < 0.20).

The two components of impulse buying tendency, as these are represented in the two facets of the impulse buying tendency scale, might have different bases in individuals' personalities. Therefore, in addition to the complete 20-item impulse buying tendency scale, the two facets of the scale were correlated separately with the other individual difference scales as well for the purpose of validating the impulse buying facets. Because the subscales were fairly strongly correlated, in these analyses factor scores were used from a varimax rotated principal component analysis on the 20 impulse buying tendency items. Using these (uncorrelated) factor scores thus ensured that the correlations between the individual difference scales and the cognitive and affective facets represented unique variance of the facets.

In Table 2 correlations between the cognitive and affective impulse buying factor scores, personal need for structure, need to evaluate, need for cognition, and the two action versus state orientation subscales are presented. A number of modest but significant relations appeared. The complete scale correlated significantly with action orientation. The cognitive factor scores correlated negatively and significantly with personal need for structure and need to evaluate. The affective factor scores correlated significantly with action orientation (and thus negatively with state orientation). A high impulse buying

Table 2. Correlations of impulse buying tendency with personal need for structure, need to evaluate, need for cognition, and action versus state orientation in study 1

	PNS	NE	NC	AOlp	AOai
IBT—cognitive	−0.33***	−0.24*	−0.10	−0.12	0.10
IBT—affective	0.08	0.03	0.01	0.27**	0.32***
IBT—total	−0.18	−0.17	−0.08	0.10	0.28**

Note: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.

IBT—cognitive = Impulse Buying Tendency—cognitive factor; IBT—affective = Impulse Buying tendency—affective factor; IBT—total = the complete 20-item impulse buying tendency scale; PNS = personal need for structure; NE = need to evaluate; NC = need for cognition; AOlp = action orientation—lack of preoccupation subscale; AOai = action orientation—action initiation subscale. Note that (uncorrelated) factor scores from a varimax rotated principal component analysis were used for the cognitive and affective impulse buying tendency factors.

Copyright © 2001 John Wiley & Sons, Ltd.

tendency as measured by the affective factor scores thus goes with a low tendency towards preoccupation and a high tendency to action initiation. There were no significant correlations between the impulse buying scale or the respective factor scores and need for cognition.

Discussion

The 20 items measuring impulse buying tendency formed a reliable scale. Preliminary indications of the predictive validity of the scale were demonstrated by the finding that the scale was related to the purchase of products that were considered as typical impulse products. The scale consists of two facets referring to cognitive and affective aspects of impulse buying, respectively. It was found that these facets were related in meaningful ways to a number of individual difference measures. Cognitive aspects were inversely related to personal need for structure and need to evaluate, while affective aspects were related to action orientation. Note that we used the separate facets here only for the purpose of validating the two components. In the next study the impulse buying tendency scale was correlated with the more fundamental personality dimensions represented by the Big Five. In addition, whereas the first study employed a Dutch sample consisting of undergraduate students, in the next study a Norwegian sample was used, which varied widely in terms of demographic background. The study also included a measure of previous impulse purchases.

STUDY 2

Method

This study consisted of a convenience sample of 144 individuals in Tromsø, Norway. Fifty-one participants were local civil servants, 81 participants were travellers at the Tromsø airport, and 12 participants were undergraduate students at the University of Tromsø. There were 67 males and 74 females. Ages ranged from 18 to 83 years ($m = 40.23$, $\mathrm{sd} = 13.54$). Participants first responded to an open question asking which products they had purchased on impulse during the last two weeks. This was followed by the impulse buying tendency scale and the Five-Factor Personality Inventory (FFPI; Hendriks, Hofstee and De Raad, 1999), which assessed the Big Five factors of personality. This inventory consists of 100 items, each of which is formulated in behavioural terms. Participants indicated on five-point scales ranging from 1 to 5 the degree to which each behaviour was applicable in describing themselves. One hundred and twenty-five participants completed all materials.

Results and discussion

Scale construction

The 20 impulse buying tendency items were subjected to a principal component analysis. The first six eigenvalues were 6.30, 2.20, 1.26, 1.25, 1.01, and 0.93, respectively. After an Oblimin rotation the first factor (cognitive aspects) accounted for 22.44% of the variance, while the second factor (affective aspects) accounted for 20.04%. The factor structure was similar to that found in Study 1. A high congruence of the factor structures in the two

Copyright © 2001 John Wiley & Sons, Ltd.

studies was indicated by Tucker's phi, which was 0.96 for the single factor, 0.90 for the cognitive factor, and 0.87 for the affective factor. These values are satisfactory and over the threshold of 0.85 to establish factorial invariance recommended by Haven and Ten Berge (1977). As in Study 1, the correlation between the cognitive and affective components was substantial. When the cognitive and affective items were respectively averaged (coefficient alphas of 0.82 and 0.80, respectively) their correlation was 0.54, $p < 0.001$. Coefficient alpha was 0.87 for the complete 20-item scale.

Descriptives and gender and age differences in impulse buying tendency

The mean of the impulse buying tendency scale was 3.08 (sd = 1.00). Females scored higher than males, m—female = 3.22, m—male = 2.94, but this difference was statistically not significant, $t(139) = 1.65$. In contrast to the sample in Study 1 the present sample varied widely in age. In this case impulse buying tendency correlated strongly and negatively with age, $r = -0.45$, $p < 0.001$.

Impulse buying tendency and recent impulse purchase behaviour

The number of products participants reported to have bought on impulse during the previous two weeks varied from 0 to 11 ($m = 1.97$, sd = 2.01). The impulse buying tendency scale correlated significantly with this number, $r = 0.25$, $p < 0.004$. This correlation was relatively strong for males, $r = 0.32$, $p < 0.009$, but not for females, $r = 0.17$, *ns*.[2]

Correlations of impulse buying tendency with the Big Five

The FFPI includes 20 items (ten positive and ten negative) for each of the five factors Extraversion, Agreeableness, Conscientiousness, Emotional Stability, and Autonomy, respectively (Hendriks *et al.*, 1999). After reversing the negative items, coefficient alphas were 0.79, 0.79, 0.81, 0.77, and 0.73 for the five dimensions, respectively. Because no Norwegian normative weights for the FFPI were available, normative weights were used based on a large sample ($N = 2494$) in The Netherlands (cf. Perugini and Ercolani, 1998). The FFPI has recently been shown to generalize well across a large number of countries (Hendriks *et al.*, manuscript submitted for publication). Using the Dutch weights the five dimensions appeared uncorrelated.

In Table 3 correlations of impulse buying tendency with the Big Five dimensions are presented for the cognitive and affective facets, as well as for the complete scale. As was done in Study 1, (uncorrelated) factor scores from a Varimax rotated principal component analysis were used to represent the cognitive and affective facets. As can be seen, the complete scale correlated with Extraversion, negatively with Conscientiousness, and negatively with Autonomy. As for the cognitive and affective facets, both facets correlated with Extraversion. The cognitive facet correlated strongly and negatively with Conscientiousness. The affective facet correlated negatively with Autonomy. Agreeableness and Emotional Stability were unrelated to impulse buying tendency. These correlations confirm the nature of the impulse buying tendency, and in particular of the two facets that made up the impulse buying tendency scale, i.e., the lack of deliberation and emotions elicited by impulse purchases. These results thus clearly indicate that impulse buying tendency has firm roots in individuals' personality structure.

[2]Females indicated they had bought more products on impulse than males, m—females = 2.32, m—males = 1.58, $t(139) = 2.20$, $p < 0.03$. However, the difference in correlation with impulse buying tendency was not caused by restriction of range effects, as the variances of impulse buying tendency and purchase behaviour did not differ between males and females, $F = 0.60$ and 1.51, respectively.

Copyright © 2001 John Wiley & Sons, Ltd.

Table 3. Correlations of impulse buying tendency with the Big Five personality dimensions in Study 2

	EXT	AGR	CON	EMO	AUT
IBT—cognitive	0.28**	− 0.02	− 0.53***	− 0.06	− 0.06
IBT—affective	0.29**	− 0.03	− 0.07	− 0.17	− 0.19*
IBT—total	0.37***	− 0.01	− 0.39***	− 0.10	− 0.20*

Note: *$p < 0.05$; **$p < 0.01$; ***$p < 0.001$.
IBT—cognitive = Impulse Buying Tendency—cognitive factor; IBT—affective = Impulse Buying Tendency—affective factor; IBT—total = the complete 20-item impulse buying tendency scale; EXT = Extraversion; AGR = Agreeableness; CON = Conscientiousness; EMO = Emotional Stability; AUT = Autonomy. Note that (uncorrelated) factor scores from a varimax rotated principal component analysis were used for the cognitive and affective impulse buying tendency factors.

GENERAL DISCUSSION

In the two studies a 20-item scale to measure general impulse buying tendency was developed, tested for reliability, and correlated with self-reported purchase frequencies as well as with a number of personality-based individual differences, i.e., personal need for structure, need to evaluate, need for cognition, action versus state orientation, and the Big Five personality dimensions. The scale showed good reliabilities and psychometric properties in both studies. Significant correlations between the scale and measures of impulse purchases in both studies provided preliminary indications of the predictive validity of the scale. However, because the behavioural measures were retrospective self-reports, further studies with better behavioural measures (e.g. prospective or observation studies) are needed to confirm these findings. The instrument is based on two sets of items, which refer to cognitive and affective aspects of impulse buying respectively. Cognitive aspects concern the lack of planning and deliberation when making purchases. Affective aspects concern feelings of pleasure and excitement, an urge to buy, the difficulty to leave things, and possible regret afterwards. Although the facets are clearly different, and were apparent in the factor structures, they were relatively strongly correlated. In using the scale we thus recommend the use of the complete 20-item scale. Future studies should test the possibly differential predictive value of the two facets when predicting relevant criteria.

The most important findings were meaningful patterns of correlations between the impulse buying tendency scale and the personality-related variables. In order to validate the cognitive and affective basis of the impulse buying tendency scale the two facets were correlated separately with the personality measures. The cognitive and affective facets were found to be differentially related to these variables, suggesting that each component has indeed a different basis in personality. The cognitive facet was associated with low personal need for structure, low need to evaluate, and a lack of conscientiousness. These constructs are typically related to cognitive processes. The lack of planning and making elaborate evaluations in the area of purchasing products, which characterizes the impulse buyer, thus seems to be part of a similar general personality-based tendency that will be apparent in other domains as well. The affective facet was found related to a high action orientation and lack of autonomy. Individuals who are high in action orientation tend to act immediately without being inhibited by preoccupation, rumination, or long decision-making. The lack of autonomy points for instance at the tendency to be easily

Copyright © 2001 John Wiley & Sons, Ltd.

influenced by others. The cognitive and affective facets were both associated with extraversion. While these patterns provided strong evidence for the construct validity of the impulse buying tendency scale, the findings may also have important implications for our understanding of the phenomenon of impulse buying. The studies thus suggested that impulse buying tendency is anchored in fundamental personality characteristics. Impulse purchases thus seem to represent one of many behavioural domains in which more general personality traits are revealed.

The relations of impulse buying tendency to the personality variables might also reveal some hints as to functional aspects of impulse buying. Take, for instance, the positive relationship between impulse buying tendency and extraversion. Typical impulse buyers might use the purchase of products or certain types of product as means to express themselves, or express a group identity (Dittmar *et al.*, 1995, 1996; Dittmar and Drury, 2000). For instance, certain products might symbolize a particular group one feels belonging to or to which one desires to belong, such as, for example, the 'young woman', the 'business man', or the 'cool teenager' (cf. Wicklund and Gollwitzer, 1982). Another example of how our results may shed some light on functional aspects of impulse buying might be the positive relationship between affective aspects of impulse buying tendency and action orientation. Action orientation is particularly related to affective self-regulatory mechanisms. Impulse purchases might thus be a way to channel or deal with emotions. This may occur in the context of positive emotions, in which case an impulse purchase might function as a way to reward oneself, or negative emotions, when impulse purchases might function as a way to comfort oneself. Impulse buying might thus seem 'non-rational'; it certainly need not be not functional.

Impulse buying is typically a domain where gender differences seem apparent. The present study is no exception. The most reported findings are that females tend to buy on impulse more frequently and buy different products on impulse than males (see e.g. Dittmar *et al.*, 1995, 1996; Wood, 1998). Our findings were somewhat discrepant from what has been reported by others. In line with previous research, females showed a higher impulse buying tendency than males, but only in Study 1. In Study 2, in which the sample was more diverse in terms of age and educational background and more balanced in terms of gender, no significant gender difference was found on impulse buying tendency. In addition, the relationship between impulse buying tendency and self-reported purchases of impulse products seemed to be stronger among males than among females. It thus seems important to keep on focusing on gender differences in impulse buying, because these might also reflect more fundamental underlying processes, such as expressions of identity, as has been convincingly argued by Dittmar and colleagues (1995, 1996; Dittmar and Drury, 2000).

Clearly, impulse buying may take many forms, and may be manifested in a large variety of consumer environments. The present studies strongly suggested that the tendency to buy on impulse is rooted in personality. Future studies might further investigate in more detail the precise mechanisms that link personality to impulse buying and, more generally, to consumer behaviour.

ACKNOWLEDGEMENT

The authors wish to thank Camiel Beukeboom for conducting pilot work for Study 1, Lisa Vivoll Straume for translation work, Lene Hoset for collecting the data of

Copyright © 2001 John Wiley & Sons, Ltd.

Study 2, and Marco Perugini and two reviewers for their helpful comments and suggestions.

REFERENCES

Ajzen I. 2001. Nature and operation of attitudes. *Annual Review of Psychology* **52**: 27–58.

Ajzen I, Fishbein M. 1980. *Understanding Attitudes and Predicting Social Behavior.* Prentice-Hall: Englewood Cliffs, NJ.

Beatty SE, Ferrell ME. 1998. Impulse buying: modeling its precursors. *Journal of Retailing* **74**: 169–191.

Breckler SJ. 1984. Empirical validation of affect, behavior, and cognition as distinct components of attitude. *Journal of Personality and Social Psychology* **47**: 1191–1205.

Breckler SJ, Wiggins EC. 1989. Affect versus evaluation in the structure of attitudes. *Journal of Experimental Social Psychology* **25**: 253–271.

Cacioppo JT, Petty RE. 1982. The need for cognition. *Journal of Personality and Social Psychology* **42**: 116–131.

Cacioppo JT, Petty RE, Feinstein JA, Jarvis WBG. 1996. Dispositional differences in cognitive motivation: the life and times of individuals varying in need for cognition. *Psychological Bulletin* **119**: 197–253.

Cacioppo JT, Petty RE, Kao CF. 1984. The efficient assessment of need for cognition. *Journal of Personality Assessment* **48**: 306–307.

Crites SL Jr, Fabrigar LR, Petty RE. 1994. Measuring the affective and cognitive properties of attitudes: conceptual and methodological issues. *Personality and Social Psychology Bulletin* **20**: 619–634.

Dittmar H, Beattie J, Friese S. 1995. Gender identity and material symbols: objects and decision considerations in impulse purchases. *Journal of Economic Psychology* **16**: 491–511.

Dittmar H, Beattie J, Friese S. 1996. Objects, decision considerations and self-image in men's and women's impulse purchases. *Acta Psychologica* **93**: 187–206.

Dittmar H, Drury J. 2000. Self-image—is it in the bag? A qualitative comparison between 'ordinary' and 'excessive' consumers. *Journal of Economic Psychology* **21**: 109–142.

Edwards K. 1990. The interplay of affect and cognition in attitude formation and change. *Journal of Personality and Social Psychology* **59**: 202–216.

Etzioni A. 1986. Rationality is anti-entropic. *Journal of Economic Psychology* **7**: 17–36.

Han YK, Morgan GA, Kotsiopulos A, Kang-Park J. 1991. Impulse buying behaviour of apparel purchasers. *Clothing and Textiles Research Journal* **9**: 15–21.

Haven S, Ten Berge JMF. 1977. Tucker's coefficient of congruence as a measure of factorial invariance: an empirical study. *Heymans Bulletins* HB-77-290 EX. Department of Psychology, University of Groningen.

Hendriks AAJ, Hofstee WKB, De Raad B. 1999. The Five-Factor Personality Inventory (FFPI). *Personality and Individual Differences* **27**: 307–325.

Jarvis W, Blair G, Petty RE. 1996. The need to evaluate. *Journal of Personality and Social Psychology* **70**: 172–194.

Kuhl J. 1986. Action control: the maintenance of motivational states. In *Motivation, Intention, and Volition*, Halisch F, Kuhl J (eds). Heidelberg: Springer.

Kuhl J. 1994. Action versus state orientation: psychometric properties of the Action Control Scale (ACS-90). In *Volition and Personality: Action vs State Orientation*, Kuhl J, Beckmann J (eds). Seattle: Hogrefe and Huber.

Newberg SL, Newsom JT. 1993. Personal need for structure: individual differences in the desire for simple structure. *Journal of Personality and Social Psychology* **65**: 113–131.

O'Guinn TC, Faber RJ. 1989. Compulsive buying: a phenomenological exploration. *Journal of Consumer Research* **16**: 147–157.

Perugini M, Ercolani AP. 1998. Validity of the Five Factor Personality Inventory (FFPI): an investigation in Italy. *European Journal of Psychological Assessment* **14**: 234–248.

Rook DW. 1987. The buying impulse. *Journal of Consumer Research* **14**: 189–199.

Copyright © 2001 John Wiley & Sons, Ltd.

Rook DW, Fisher RJ. 1995. Normative influences on impulse buying behavior. *Journal of Consumer Research* **22**: 305–313.

Rook DW, Gardner MP. 1993. In the mood: impulse buying's affective antecedents. *Research in Consumer Behaviour* **6**: 1–28.

Stern H. 1962. The significance of impulse buying today. *The Journal of Marketing* **26**: 59–62.

Thompson MM, Naccarato ME, Parker KCH, Moskowitz GB. 2001. The Personal Need for Structure and Personal Fear of Invalidity Measures: historical perspectives, current application and future directions. In *Cognitive Social Psychology: On the Tenure and Future of Social Cognition*, Moskowitz GB (ed.). Erlbaum: Hillsdale, NJ; 19–39.

Verplanken B, Aarts H. 1999. Habit, attitude, and planned behaviour: is habit an empty construct, or an interesting case of automaticity? *European Review of Social Psychology* **10**: 101–133.

Verplanken B, Hofstee G, Janssen HJW. 1998. Accessibility of affective versus cognitive components of attitudes. *European Journal of Social Psychology* **28**: 23–35.

Wicklund RA, Gollwitzer PM. 1982. *Symbolic Self-completion.* Erlbaum: Hillsdale, NJ.

Wood M. 1998. Socio-economic status, delay of gratification, and impulse buying. *Journal of Economic Psychology* **19**: 295–320.

Zanna MP, Rempel JK. 1988. Attitudes: a new look at an old concept. In *The Social Psychology of Knowledge*, Bar-Tal D, Kruglanski AW (eds). Cambridge University Press: Cambridge.

Copyright © 2001 John Wiley & Sons, Ltd.