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The Impact of Emotions on Weighting Hedonic and Utilitarian Product Attributes

Summary

The purpose of this paper was to investigate how different affective states (positive vs. negative) influence weighting hedonic and utilitarian product attributes. The proposed hypotheses indicated that attributes consistent in valence with decision-makers affective state and product category should gain more weights than inconsistent features. Two experiments were carried out to test those predictions. The findings from the study suggest that the role of affective state on the perceived importance of product attribute is limited. Individuals who participated in Experiment 1 perceived hedonic attributes as more important than utilitarian ones when they experienced positive affect. On the other hand, Experiment 2 showed that participants in negative-affect group weighted consistent features more than inconsistent.

Key words: emotions, affect, decision-making, hedonic attributes, utilitarian attributes, weighting attributes.

JEL codes: D81, D87, D91

Introduction

Scholars have documented many situations in which affect influences buyers' behaviour. In general, it can be said that affect has an impact on (meta)cognitive processes engaged in motivation, information processing, evaluation and choice itself (Loewenstein and Lerner 2003; Schwarz 2000; Tiedens and Linton 2001). The most prominent theories underline the interplay between emotions and memory (Bower, 1981). This approach suggests that current affective state increases accessibility of memories that are congruent in valence with those emotions. This may result in different goal-orientation set by decision maker as well as in different preference for a product and its features. On the other hand, Schwarz and Clore (1983) presented a feelings-as-information theory that explains how buyers interpret their affective states and use them in judgement.

Recent findings from studies considering the role of hedonic and utilitarian products and its features in decision-making process revealed that buyers act differently due to the product category. For example, Klein and Melnyk (2016) proved that interaction between consumer's goal and hedonic (utilitarian) product arguments impacts on information processing and evaluations. Lu, Liu and Fang (2016) showed that hedonic products are more often preferred for others, while utilitarian for ourselves. In this paper, author investigates how different affective states (positive vs. negative) influence weighting hedonic and utili-

tarian product attributes. It is assumed that people assign more weight to those attributes that are consistent in valence with his or her affective state. Two experiments were conducted to confirm those assumptions.

Role of affect in judgement – a theoretical perspective

A classic example of the effect of mood on judgement is the study by Schwarz and Clore (1983), which showed that people rate things differently depending on their mood. Feelings-as-information theory suggests that individuals use their subjective feelings (emotions and metacognitive experiences) as a source of information about the object being evaluated. And so, the positive mood enhances positive judgment, while negative leads to worse ratings. On the other hand, According to Pham (2004), the affect transfer hypothesis suggests that feelings experienced during evaluation automatically shape impressions of a target. This mechanism is mostly driven by the valence of feelings and indicates that people transfer their current mood on evaluation.

From an evolutionary point of view, emotions are seen as functional and selected programs designed to solve adaptive problems (Doliński 2000). The function of emotions is to interact with cognition and guide behaviour (Tooby and Cosmides 2008). For example, affective states change perception and attention, influence memory processes, set different courses of actions and have an impact on one's goals and motivational weighting.

Current study

Research problem

In the following research, author is concerned with emotions as functional programs that set goal orientation and motivational process. This leads to an assumption that positive emotions signal safety environment and increase preference toward features consistent with the emotional valence. On the other hand, negative emotions signal danger and increase preference for attributes that offer security. Thus it is believed that product attributes corresponding with evoked needs receive more importance. For example, a person who feels threatened gives more weights to product feature that may reduce those feelings. And people in positive mood may assign more weights to attributes that help to maintain in experiencing positive feelings. This idea is supported by hedonic principle suggesting that people want to approach pleasures and avoid pains (Higgins 1997).

The second assumption relates to feelings as information theory and affect-confirmation hypothesis (Adaval 2001; 2003). When people's emotions are similar in valence to product information this *fit* can elicit an impression of *feeling right* about an object. That leads to weighting affectively consistent information more than inconsistent information. In his study, Adaval (2001) actually showed that people give more importance to affect-consistent

information, but only when they base their evaluations on hedonic criteria. This result is in line with other studies considering the role of emotions in attitudes formation toward hedonic or utilitarian information. For instance, Pham (1998) showed that decision makers base their evaluations on feelings only when they perceive hedonic criteria as relevant. Shiv and Fedorikhin (1999) proofed that more experiential product presentation enhances affective judgement and in such situations, people are prone to choose hedonic products.

In the current research, however, the author predicts that emotions influence weighting for both hedonic and utilitarian attributes. This assumption is made primarily because negative affect and feeling of loss have a greater impact on people decision-making process (Loomes and Sugden 1982) compared to positive emotions. It is predicted that consistency between valence of one's affective state and attribute category (hedonic or utilitarian) result in *fit* and *feeling right* about product information. A motivational approach serves as a support for this statement. If different affective states set distinct goals for a decision, this effect should occur independently of decision criteria. However, this assumption is contrary to the previous findings from other studies (Pham 1998).

To test those predictions, the following hypotheses are proposed:

H1: Attributes consistent in valence with decision maker current affective state gain more weight compared to inconsistent product information.

H2: Decision-makers in (a) positive affective state weight hedonic attributes as more important compared with individuals in negative affect (b) who assign more weight to utilitarian product features.

H3: Attributes consistent in valence with product category gain more weight compared to inconsistent product features.

Pretests

In order to define independent variables applied in experiments, a series of pretests were conducted. Participants were undergraduate and graduate students who filled questionaries during their classes. Those students did not take part in further experiments. The main purpose of pretests was to identify hedonic and utilitarian attributes/products as well as to define emotional stimuli.

Product attributes. The aim of this pretest was to determine which products attributes are perceived as hedonic or utilitarian. For this purpose, a quasi-experiment was performed in which subjects (N = 38) assessed 8 different features of 6 different products. Each of the attributes was evaluated on four 7-point Likert scale, which concerned the utilitarian/hedonic dimension of the feature; practical/entertaining dimension of the feature; attribute weights and pleasant/unpleasant associations with a certain feature. Such procedure results from the fact that the participants may not know what utilitarian and hedonic features are. The dimension of practicality/entertainment is more intuitive. Based on the respondents' ratings, the attributes were classified into 3 groups: hedonic, utilitarian and neutral.

Product category. This pretest was conducted to determine which products are seen as hedonic and utilitarian. Participants were presented with 4 different products and asked to evaluate hedonic/utilitarian dimension of the product. Ratings were reported on two 10-point Likert's scales (0 - definitely utilitarian; 10 - definitely hedonic). Participants were also provided with definitions of the hedonic and utilitarian product category. Results showed that mineral water and math calculator were seen as utilitarian ($M = 1.0$ and $M = 1.5$) while sweet drink and MP3 player were rated as hedonic products ($M = 6.2$ and $M = 6.8$). All differences between scores were statistically significant, $p < .000$.

Emotions. The aim of the pretest was to define stimuli that induce a positive and negative mood. It should be noted that literature distinguishes two main concepts determining the buyer's affective state: emotions and moods (Ekman and Davidson, 1999). The basic difference is their duration. Emotions are shorter than moods and easier to manipulate. Moods last longer and are more difficult to be manipulated. The purpose of the induction task was to change participants' current affective state. To do so, 3 different stimuli were tested. This procedure was used in similar studies investigating the role of affect in decision-making (see Martin et al. 1993; Adaval 2001).

In this pretest, participants were asked to watch 3 different commercials compilation, each of them took about 3 minutes to watch. Then, participants were asked to evaluate to what extent they experienced 8 specific emotions during watching commercials (happy, angry, pleasant, sad, delighted, glad, unpleasant and distressed). After reverse scoring, the stimulus was rated as positive, negative and neutral. The difference in affective evaluations between positive and negative commercials was statistically significant $M_{negative} = 20.9$; $M_{positive} = 47.5$; $t = 7.171$; df = 30; $p < .000$.

Experiment 1

Procedures. The aim of this experiment was to determine if decision-maker current affective state (positive vs. negative) influences amount of weight attached to hedonic and utilitarian attributes. According to Hypothesis 1, features consistently in valence with the current affective state should gain more weights compared to attributes that are not consistent. To test this assumption, a simple online experiment was carried out. Dependent variables were attribute weights.

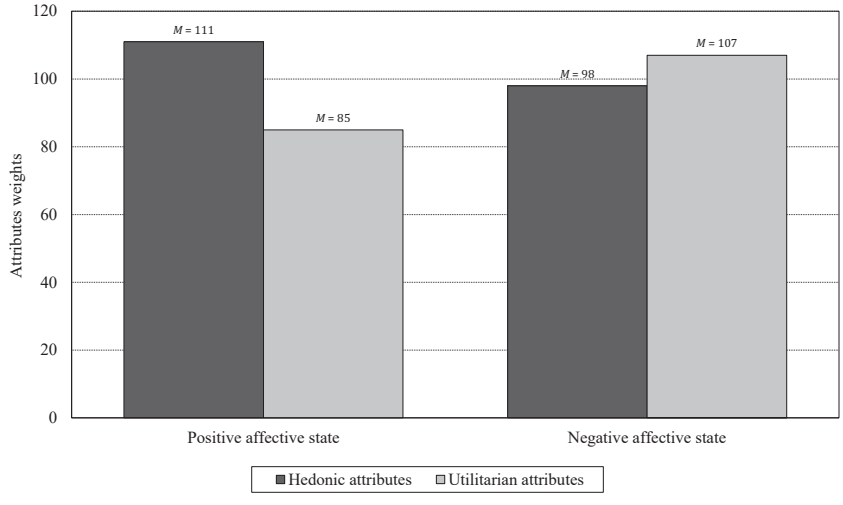
Participants ($N = 32$) were undergraduate and graduate students who took part in the study in return for extra points for classes. They were randomly assign to one of two conditions: positive or negative current affective state. Participants were provided with a cover story suggesting that there are two not related studies and they were asked to take a part in both of them. The first study was a mood-induction task. Positive or negative commercial compilations was presented and participants answered questions about brands they saw in the video. After that, they were informed the first study is over and to move to another page to start the second task.

Participants saw 3 different product (laptop, toothpaste and milk chocolate) described with 3 different attributes (hedonic, utilitarian and neutral). The task was to divide 100 points into 3 product attributes. Participants were informed that the more points are described to an attribute, the more important this feature is. The amount of weight assign to each category of attributes was then summed up and compared between 2 conditions (positive vs negative affect).

Results. The effect of emotions on attribute weighting was measured by comparison of summed points assigned to consistent and inconsistent product feature. A between-subject comparison revealed a statistically significant difference between weights assigned to utilitarian attributes (Figure 1). Participants in negative affect weighted utilitarian attributes ($M = 107$) more compared to those in positive (M = 85), $F(1;31) = 4{,}865$; $p = .035$. However, affective state did not influence weight assigned to hedonic attributes ($M_{negative} = 98$ vs. $M_{positive} = 111$), $F(1; 31) = 1{,}896$; $p = .179$.

Figure 1

Mean scores of weights attatched to hedonic and utilitarian attributes



Source: own data.

Within-Subjects comparison was carried out to compare weights assigned to consistent and inconsistent attributes. Student's t-test showed that product features consistent with participant's affective state ($M = 109$) weight slightly more compared to inconsistent features ($M = 92$), $t = 1.914$; $df = 31$; $p = .065$. However, this effect was significant only among participants in positive affective state ($M_{consistent} = 111$ vs. $M_{inconsistent} = 85$; $t = 2.095$; $df = 14$; $p = .055$).

Experiment 2

The purpose of experiment 2 was to examine effects of product category and decision maker's affective state on weights attached to consistent and inconsistent product attributes. This study follows findings from Experiment 1 and deepens interaction between affective state and product category. To investigate this interplay, a two-factor between-subjects design was used. Each of two independent variables were presented at two levels: 2 (product category: hedonic vs. utilitarian) *x* 2 (affective state: positive vs. negative).

Procedure and predictions. Fifty-two participants were invited to take a part in the study for extra points for classes. Participants were informed that they would take a part in the two not related studies. Each of participant was randomly assigned to one of four experimental conditions. The first task was an affective state manipulation. The procedure was the same as in Experiment 1.

Participants were presented with 2 different products from the same category (utilitarian vs. hedonic). Each of the product was describe with the 4 features. Two of them were neutral, one was hedonic and one was utilitarian. The stimuli were designed to be different in terms of product category but to be presented with the same attributes. In general, there were 4 products and 8 different attributes. This method was chosen to investigate if weights assigned to the product features change when the product category is different. As hypothesis 2 suggest, the effect of one's current affective state should be independent of the decision criteria. It was assumed that decision criterion is evoked by the product category. As Holbrook and Hirshman (1982) noted, decision criteria and buyer's expectations are related to the product itself. Base on that, it was believed hedonic and utilitarian products elicit different goals for a decision maker thus influence perceived importance of consistent and inconsistent attributes.

The method of assessing participants weights was identical to the procedure in Experiment 1. Individuals saw a product and were asked to divided 100 points across its features. This procedure was then repeated for the second product. At the end of the experiment, participants evaluated to what extent they experienced 8 specific emotions. The manipulation check showed that individuals in positive and negative affect differed in their current affective state. After reverse scoring, the general index of affective state was $M = 62.0$ for positive affect and $M = 25.0$ for negative affect ($t = 12.3$; $df = 44$; $p < .000$).

Results. To measure the effects of current affective state and product category on weighting attributes, points assign to consistent and inconsistent attributes were summed up and compared. Neutral attributes were not taken into consideration. Further analysis was carried out to investigate effects of independent variables and the interaction effect. A between-subjects ANOVA revealed that effect of current affective state was significant for both utilitarian $F(1; 48) = 7.678$; $p = .008$ and hedonic product attributes $F(1; 48) = 7.020$; $p = .021$). The effect of product category was also significant for weights assigned to both hedonic $F(1; 48) = 7.020$; $p = .011$ and utilitarian attributes $F(1; 48) = 9.447$; $p = .003$. However, the interac-

tion effect was not significant; $F(1; 48) = .274$; $p = .603$ for utilitarian features and $F(1; 48) = .292$; $p = .591$ for hedonic features.

Student's t-test showed that participants in positive affective state weighted hedonic attributes more compared with negative-affect group ($M_{positive} = 40.2$ vs. $M_{negative} = 28.1$; $t = 2.119$; $df = 49$; $p = .039$). Individuals in negative affect assigned more weights to utilitarian product features than those in positive affect ($M_{negative} = 87.7$ vs. $M_{positive} = 65.1$; $t = -2.361$; $df = 50$; $p = 0.21$). However, the within-subject comparison reveled that individuals in positive-affect group did not perceive consistent attributes as more important. Surprisingly, they assigned more weights to utilitarian then to hedonic product features; $M_{consistent} = 87.7$ vs. $M_{inconsistent} = 28.1$; $t = 6.876$; $df = 23$; $p = .000$. Participants in negative-affect group weighted utilitarian more then hedonic features and this result is consistent with Hypothesis 1, $M_{consistent} = 40.2$ vs. $M_{inconsistent} = 65.1$; $t = -2.355$; $df = 25$; $p = .026$.

Further analysis was carried out to compare how product category (hedonic vs. utilitarian) influence attribute weighting. The between-subject comparison showed that more weights were assigned to utilitarian than hedonic attributes for utilitarian product category and participants perceived hedonic features as more important then utilitarian for the hedonic product category. To see if there is any difference in perception of the importance of consistent and inconsistent attributes with the product category, a within-subjects student's t-test was carried out. The difference is significant, so that consistent attributes weighted more then inconsistent, $M_{consistant} = 65.0$ vs. $M_{inconsistant} = 47.2$; $t = 2.236$; $df = 51$; $p = .030$. However, in general, utilitarian features were evaluated as more important then hedonic, thus Hypothesis 3 was confirmed only among individuals in the negative-affect group.

Discussion and conclusions

As results from Experiment 1 and 2 indicate, Hypothesis 1 is partly confirmed. When weights of consistent and inconsistent attributes were compared within-subject, the effect was significant only in one experimental condition: in the positive-affect group in Experiment 1 and in the negative-affect group in Experiment 2. Individuals who participated in Experiment 1 perceived hedonic attributes as more important than utilitarian when they experienced positive affect. On the other hand, Experiment 2 showed that participants in negative-affect group weighted consistent features more than inconsistent. It should be noted that in the Experiment 1 general weight of utilitarian and hedonic attributes did not differ ($M_{hedonic} = 104$ vs. $M_{utilitarian} = 97$; $t = .803$; $df = 31$; $p = .428$). However, in Experiment 2, the general weight attached to utilitarian attributes was higher then hedonic.

Between-subject comparison revealed that participants differently weight utilitarian attributes due to the current affective state, which is consistent with Hypothesis 2. Utilitarian features seem to be more important for individuals in negative than positive affect but participants in negative affect did not weight utilitarian features more than hedonic (Experiment 1). The Experiment 2, however, provided slightly different findings. The role of affect in attribute weighting was significant for both hedonic and utilitarian features. As proposed

in Hypothesis 2, participants in negative affect weighted utilitarian features more than individuals in positive affect who evaluated hedonic attributes as more important.

Hypothesis 3 was tested and partly confirmed in Experiment 2. Individuals evaluating hedonic products assigned more weights to hedonic attributes than those presented with utilitarian products who weighted utilitarian features more. However, comparison of weights given to consistent and inconstant attributes revealed that Hypothesis 3 is confirmed only for utilitarian products. The reason for that is the difference in general importance of product attributes used in the experiment. As other authors suggest (Holbrook and Hirschman 1982), buyers set goals for both experiential and rational consumption as well as products offers both hedonic and utilitarian benefits. The role of the affective state in attribute weighting may be then moderated by the symbolic meanings of product category or dominance of attribute type. However, in the current study, the interaction effect (affective state *x* product category) was not significant.

There are a few potential explanations for those observations. The first one relates to the characteristics of attributes used in experiments. Product features were pretested for hedonic and utilitarian dimensions but not for their perceived importance. In experiment 1, there was no difference between hedonic and utilitarian features when they were compared regardless of affective state. In experiment 2, the general weight of utilitarian was higher than of hedonic attributes, so hypothesis 1 was confirmed only for negative affect.

Findings offered by other authors suggest that affective information values more when the subject of decision is hedonic (Adaval 2001; Shiv and Fedorikhin 1999; Pham 1998). This can be also supported by the claim that people in positive mood base their decision on heuristics and process information less carefully (Slovic et al. 2005). Therefore, participants in positive affect could be more prone to focus on hedonic dimensions of product information because it was easier to process such an information. Adaval (2003) in a similar study proposed a conceptualization for those observations. He introduced an affect-confirmation hypothesis suggesting that individuals *feel right* about an information when the affective reactions to the attribute are consistent with his or her extraneous affect. The one's current affective state can serve as a validation for affect elicited by the consistent product information. In consequence, people perceive such information as more appropriate and thus more important.

Secondly, a potential explanation for observations from experiments 1 and 2 is related to motivational consequences of emotional experience. Specific affective states set goals different goals, guide behaviour and cognition. For instance, Raghunathan and Pham (1999) suggest that negative affective states may shape decision maker's motives. However, those motives serve as a strategy for „repairing" one's mood (Zillmann, 1988). This suggests that participants in negative affect should weight more those attributes that could retrieve their mood. It should be noted however that this statement is contradictory to the information processing perspective which stresses the role of compatibilities between one's current goal orientation and attributes describing the product (Chernev, 2004).

Taken all together, there are two different views on the role of affect on attribute weighting. The motivational perspective suggests that importance of attributes is interpreted in the context of approaching pleasure and avoiding pain. This means that determinants of attribute importance are related to the benefit that a feature offers but not to its hedonic or utilitarian dimension per se. On the other hand, processing perspective indicates that compatibility between one's motives and product information leads to *feeling right* about an attribute that is then evaluated as more important.

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Wpływ emocji na ważenie hedonistycznych i utylitarnych atrybutów produktów

Streszczenie

Celem artykułu było zbadanie, jak różne stany afektywne (pozytywne kontra negatywne) wpływają na ważenie hedonistycznych i utylitarnych atrybutów produktów. Zaproponowane hipotezy wskazywały, że atrybuty zgodne pod względem wartości z afektywnym stanem decydentów i kategorią produktu powinny mieć większe wagi niż cechy niezgodne. Do przetestowania przewidywań przeprowadzono dwa eksperymenty. Wyniki badania sugerują, że rola stanu afektywnego w kwestii postrzegania ważności atrybutu produktu jest ograniczona. Osoby uczestniczące w eksperymencie 1. postrzegały atrybuty hedonistyczne jako ważniejsze niż utylitarne, kiedy doświadczały pozytywnej emocji. Z drugiej strony, eksperyment 2. pokazał, że uczestnicy z grupie o afektach negatywnych ważyli cechy zgodne jako wyższe niż niezgodne.

Słowa kluczowe: emocje, afekt, podejmowanie decyzji, atrybuty hedonistyczne, atrybuty utylitarne, ważenie atrybutów.

Kody JEL: D81, D87, D91

Влияние эмоций на взвешивание гедонических и утилитарных атрибутов продукта

Резюме

Цель статьи – изучить, как разные эмоциональные состояния (положительные и отрицательные) воздействуют на взвешивание гедонических и утилитарных атрибутов продукта. Предлагаемые гипотезы указывали, что атрибуты, совместимые по своему значению с эмоциональным состоянием принимающих решения и категорией продукта, должны обретать бóльшие весы, чем несовместимые свойства. Для проверки этих гипотез провели два эксперимента. Результаты изучения подсказывают, что роль эмоционального состояния в отношении полученного значения атрибута продукта имеет ограниченный характер. Лица, которые принимали участие в эксперименте № 1, воспринимали гедонические атрибуты как более существенные, нежели утилитарные, когда они испытывали положительное ощущение. С другой стороны, эксперимент № 2 показал, что участники в группе с негативными ощущениями взвешивали совместимые свойства выше, чем несовместимые.

Ключевые слова: эмоции, аффект, принятие решений, гедонические атрибуты, утилитарные атрибуты, взвешивание атрибутов.

Коды JEL: D81, D87, D91

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