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Elements of the essence

The role of consumer memories prior to and in purchase decisions

Theses of Doctoral Dissertation

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1. The Aim of the Dissertation and the Research Questions

My doctoral dissertation has a positivist, descriptive view. It aims to discover the role of episodic consumer memories in non-decision situation (when the assortment is unknown yet) and in decision situation (during the purchase decision). Its fundamental question is if the consumer memories appear in the mentioned periods. If yes, then (1) whether they dominate in the certain phases and (2) whether their attribute value is stable. Further question is if their quality (positive – neutral – negative) remains the same between the two situations. But this is beyond the framework of this dissertation. It focuses on the relation between the memory related attributes and the non-memory related attributes.

From the economic science's aspect the dissertation belongs to the behaviorist school. It starts with the inverse of the neoclassical economic theory's axiom system – except the principle of state of perfect information. As the dissertation focuses on the internal environment from the decision making aspect, the state of perfect information, as external factor does not influence the algorithm of this mental process. I suppose the existence of an attribute preference system before the purchase, in the non-decision situation. The principle of utility maximization as preference order construction principle can not be fully applied, as it has numerous aspect: rational, identity loyal, based on the objective needs, driven by conformity etc. The research investigates purely the preference constructions' stability. The third axiom, the rationality appears rather than irrationality. Irrationality is considered a phenomenon, which can be described with patterns: the individual decision-maker is held to be a pattern follower.

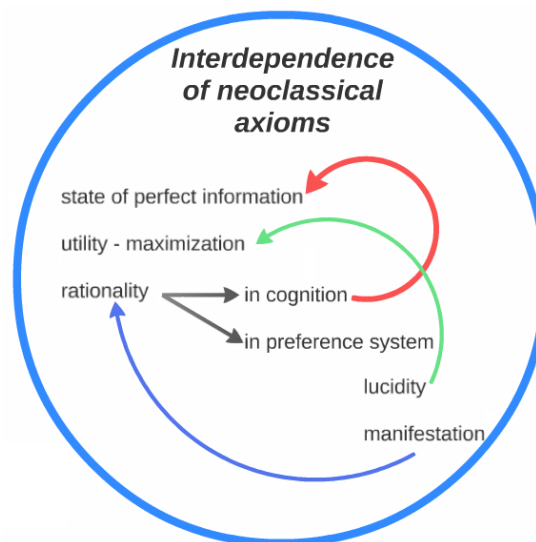


Figure 1. Interdependence of neoclassical axioms (Platz, 2015)

I suppose specializing Dan Ariely's definition on irrationality (2011) is a potential explanation for the preference reversal. It says that in the present (meaning in a non-decision situation) humans plan how will they be behave in a future situation (meaning in a decision situation); but, as soon as they reach the future state (the real decision situation) they do not follow the expected logic. It functionally happens as the preference system in the present, in the non-decision situation changes: it will be (1) completely restructured or (2) modified in the future decision situation. I agree with that some parts of the attribute preference system can remain stable. These are in connection with the context independent attributes: their value is the same in the non-decision and the decision situation. The literature calls these attribute values global. The main question of the dissertation is whether the memory related attributes are global or more stable than the non-memory related attributes. Another topic would be to find out the characteristics of the dominant memories. Considering their quality (positive – neutral – negative); if they are individual or shared memories, if they were gained close in time to the purchase decision etc.; furthermore in case of respondents, whose memory related attribute evaluation is more stable, would be interesting to know personality features on two dimensional scales, like extrovert – introvert, level of subjective knowledge, attitude to the product, involvement. The preference reversal phenomenon can be seen on figure 2.

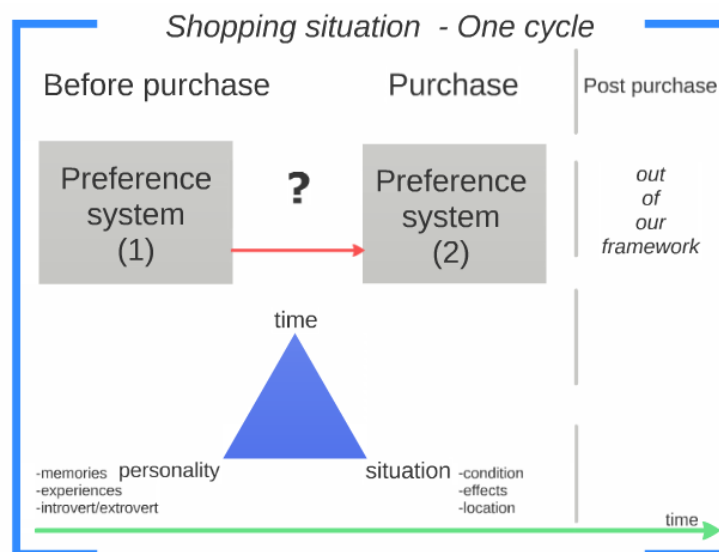


Figure 2. The preference reversal (Platz-Veres 2014)

The research tries to reveal the role of consumer memories before the purchase decision and during the purchase decision. It aims to discover their importance, their clarity and stability. The research questions are the followings:

- Do the consumer memories appear in the preference system, which was constructed before the purchase decision?
- Do the consumer memories influence the shopping decision?
- Do they play the same role in the non-decision and in the decision situation?

Based on the research question, on the former methodological, preference and memory related literature my hypotheses go for a potential explanation for the inconsistencies of the shopping decisions. Summarizing: a potential explanation for the preference reversals can be the effect of the external factors on the internal environment. From the elements of the internal environment I chose to examine the memories. The overview of the hypotheses can be seen in table 1.

Table 1. Hypotheses (own edition)

<i>Hypotheses</i>
H1: The relation between the consumer memories and the attributes can be identified.
H2: The memory related attributes appear more dominant before the purchase than during the purchase.
H3: The memory related attributes' behavior in the preference system depends on the presence of the direct reference group during the consumption.
H4: The stability of the memory related attributes depends on the frequency of the consumption.
H5: The appearance of the memory related attributes in the preference system depends on the relation between the consumer and the service: <ul style="list-style-type: none"> - H5 (a): the appearance of the memory related attributes depends on the consumer's involvement - H5 (b): the appearance of the memory related attributes depends on the consumer's subjective knowledge about the service

H1: *The relation between the consumer memories and the attributes can be identified.*

I mean those consumer memories, which were experienced during the consumption not during the purchase. I suppose that there are certain consumer memories, which are not personal, but refer to the service elements, so the service attributes can be discovered in those consumer memories. I guess that the two information ranges: the one, which contains the consumer memories and the other, which contains the service attributes have a common share. This segment is show on figure 3.

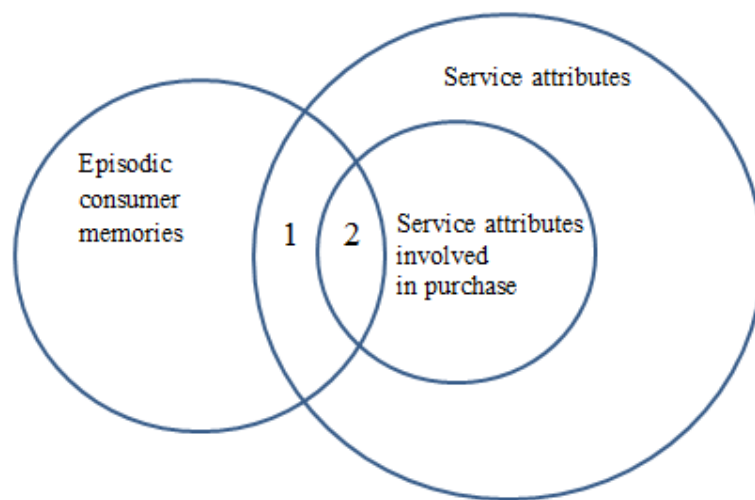


Figure 3. Visualization of the common segment of consumer memories and service attributes (own edition)

The hypothesis was tested with the MEC methodology. As first step the memories were revealed with the collage technique. The service related consumer memories were chosen from this memory database. The consumption related consumer memories stood out within the group of memories in most cases. After this selection thematic memory groups were created according to the affiliation in the service process. The first hypothesis makes me question the existence of segment 2 on figure 3. It would be interesting to get to know its relevance, if these service related consumer memories will be involved in the purchase decision.

H2: The memory related attributes appear more dominant before the purchase than during the purchase.

As next step the role of consumer memory related attributes can be analyzed in the shopping decision. As the previous figure showed the position of segments 1 and 2 will be clarified. I make it with the comparison of the preference systems in the two states: in the present (recalling memories in non-decision situation) and in the future (recalling memories in decision situation). My expectation is to prove that the memory related attributes play a more dominant role in non-decision situation than in the decision situation. The hypothesis is tested with an experiment. The respondents' first task was to evaluate the service attributes according to their importance by placing them in the Q grid. The Q grid has a pyramid form and it is a forced choice, because in order to fill the whole grid, each attribute needs to be evaluated. This attribute set (which contains the same number of memory related and non-memory related attributes) was given for the respondents a second time as well. The second Q grid ordering happened right after a simulated purchase. The second Q grid ordering represents the preference system in the decision situation. As the attributes were settled in the Q grid I converted them. Their meaning was not important; I focused on their memory background. The aggregate results of the Q grids were compared. I expect that in the Q grid, which was constructed in the non-decision situation, has more memory related attributes in the 'very important' and 'important' segments as they are in the Q grid, which was constructed right after the purchase decision.

H3: The memory related attributes' behavior in the preference system depends on the presence of the direct reference group during the consumption.

All memories are personal: they are individual. When it is about a usual service – especially when it is shared during the consumption – can happen that the different participants have different opinions about the same process. I analyze this question from the ‘attention’s aspect’: I suppose that the service related memories are more dominant if the service is consumed alone, that if the service is shared with acquaintances (in pair or as group member), not with strangers. The time, which was potentially spent with each other, distract the attention from the service process and draws it to the companions. As a present external factor it can influence the service perception, the memory storage and the further memory recalls. The hypothesis is one chosen example of the external influencing factors, like any noise which can interrupt the relation between the service provider and the service recipient. It also can be a parallel activity, for example reading, writing, using the cell phone or surfing on the internet. Attention can not be divided. It is a misbelief, the subject of attention can be changed extremely fast; but in one moment humans can only concentrate on one thing. From the researches’ aspect it is hard to reconstruct every other external factor, which can potentially drag the attention. Theoretically, in order to reach a perfect measure state, the experimenter should have followed every respondent on their most memorable flight, and observe the whole journey long what the travelers did. It would have been almost impossible. I chose reference group as an external factor, because a fellow-passenger is an interactive external factor, who can initiate communication (meaning to take the respondent’s attention).

H4: The stability of the memory related attributes depends on the frequency of the consumption.

Based on the literature I suppose that the respondents, who flew only a few times the memories, are potentially clearer than in case of respondents, who flew more times. I suppose that the respondents with only a few experiences have more dominant memory related attributes before the purchase and in the purchase situation. The respondents, who flew one, two or three times, remember the single journey, not the script. If one repeats an action with a low frequency the script about the service process has not developed yet. It results that the passenger does not remember the certain steps of the service process, but some particular episodes. From this memory separation I expect a stressed role in the preference systems. First I separated the groups of respondents who flew more times from the ones who flew few times, and then I made a comparison within the groups. As the action is repeated more times, the completion of the task requires less attention, the completion will be successful without concentration. As the newness frets the pleasure level of the need gratification will be lower by each time. According to the microeconomic principle of diminishing marginal utility, the value of the experience decreases, unless there is a special motivation linked to the service. So exceptions would be collectors and addicts. Based on this principle there is a question: is there another inner characteristic which keeps the consumer motivated in spite of the repeats?

H5: *The appearance of the memory related attributes in the preference system depends on the relation between the consumer and the service:*

- **H5 (a):** *the appearance of the memory related attributes depends on the consumer's involvement*
- **H5 (b):** *the appearance of the memory related attributes depends on the consumer's subjective knowledge about the service*

The memory related attributes should be more important in the preference systems of those respondents, who are more devoted to the service: who feel more involved or desire to get to know more about it. H5 has two parts: one part investigates the level of involvement and the second part investigates the level of subjective knowledge. I suppose that the respondents with low or with high involvement are more resistant to the marketing messages than the respondents with middle involvement, which practically means no interest. These middle involved users are not against the service, but they do not do any effort to make the best out of it: they accept the bits of information, which find them. They embody the classic consumer.

The subjective knowledge means the estimated level of knowledge: what the consumer thinks about his level. During this research I do not check for instance with a quiz or a test the real depth of knowledge. It has the potential that the highly estimated subjective knowledge contains fixed mistakes or the underestimated subjective knowledge in real life is much higher, compared to the others. This is an irrelevant part in respect to the dissertation. I consider the subjective knowledge as the indicator of self-consciousness: it indicates if the consumer feels comfortable with the service. In order to test the hypotheses I create divide the sample in two parts: one is for respondents with high subjective knowledge and another is for respondents with low subjective knowledge. The subjective knowledge was measured on a validated 7 point Likert scale, which consisted of 5 items, developed by Flynn and Goldsmith (1999).

2. Research Methodology

Mixed research methodology was applied to conduct the primary research. The mixed research methodology was suitable to the theoretical question, as they aimed to reveal different steps of a certain process. Another reason was to use the mixed method is that the research required both quantitative and qualitative parts. The hybrid research design's overview is shown by table 2.

The object of the research was air passenger transport. A service, compared to a product is intangible (see the HIPI principle); that is why a clearer recall function can be expected in case of services. Besides, the services are not only functional but have a one-time experience value. This experience characteristic makes me expect a clearer memory recall. Furthermore, I wanted to involve a service, which is not used frequently. It has two reason-whys: in case of low frequency the script theory is not valid yet, and the experiment process took three months, so I wanted to reduce the chance that the respondents repeat the service within this period. Air passenger transport seemed to fit these requirements. The respondents were full-time university students. They are part of the well-described leisure segment – both in marketing theory and business praxis. Within the leisure segments the students form a special group. By the selection of the respondents the minimum level of experiences (1-10 flights) was a criterion, so as the willingness to participate in the research, but not the involvement in the air passenger transport.

Table 2. Phases of the hybrid research design (own edition)

<i>Phase</i>	<i>Topic</i>
0.	<i>in-depth interviews in order reveal memory structures (pilot)</i>
1.	creating digital collages in order to identify service related memories
2.	creating links between memories and attributes with the help of MEC complementing the attribute item kit from previous researches, which were published in scientific journals summarizing the item kit for the Q grid
3.	Q ordering in non-decision situation
4.	Q – ordering in decision situation right after the simulated biotic choice
5.	statistical analyses

During step zero a qualitative pilot research was conducted in order to reveal memory structures: it aimed to describe their details, their exactitude, the depth of subjectivity, individuality, clarity, logical sequence, the potential highlights. The saturation principle was applied: the in-depth interviews were taken as long as they yielded new bits of information. After the analysis it was revealed that the memory structures are middle-detailed, well-separated, but the elements were not thematic. The participants of the in-depth interview do not participate in the next phases of the experiment.

In the first step the service related memories were discovered with the help of another qualitative technique. As humans remember not in words but pictures, the respondents had to create a digital collage with five to ten pictures about their most memorable flight. A further task was to summarize and explain the collage they made in 300 words. The last part of this first phase was to answer attitude statements on a validated Likert scale about their involvement in this service and their subjective knowledge on air passenger transport.

The second step was an inactive part: the items were partially selected from the memory related attributes and from the literature. This mixed item kit was supposed to be ordered in the Stephenson Q grid. Two times: once in a non-decision situation and once right after the simulated purchase decision.

The third phase was the representation of the non-decision situation. The respondents ordered each item from the kit into the Q grid, according to their importance. During the fourth step the task was repeated with one exception: the respondents met offers and chose one from the repertoire. The offers were free from price: the task said that the ticket is a prize for the participants. The brands' role was also minimized. The repertoire contained offers from airlines only, which were not mentioned in neither of the collages. Then they made the Q grid order.

The fifth step was the data clearance and the analysis. The Q grid items were converted into memory related and non-memory related attributes; so there was not scale. The Q grids finally consisted of binary values only. The tests were made with statistical tests customized for the requirements of non-metric, dichotom and ordinal variables: Pearson correlation and crosstab analysis was made in SPSS.

3. Results and the Evaluation of the Hypotheses

The results are discussed below hypothesis by hypothesis. After the data clearance the sample consisted of 142 elements.

H1: The relation between the consumer memories and the attributes can be identified.

H1 is the basis for the further research. It was tested by the means-end chains: links were revealed between the consumer memories and the service attributes. The result of each collage was six to ten pictures (In every case the solution consisted of more than the minimum of five pictures.) and an explanation in 300 words. By creating the means-end chains the relation between the consumer memories and the collages were not reduced from “an abstract level”. There were several pictures, which portrayed a certain service attribute. For example pictures and thoughts about the airplane, what is exactly this service’s physical evidence; in most of the cases self-made pictures about the catering, what is directly the consumed physical content of this service process; or the flight attendant, who represents the service provider. There were indirect memories about the service besides the direct connections. Such tacit pictures were about the respondents, who sit in the seat with curled legs or in another collage a participant with a U form pillow behind her neck. These pictures refer to the circumstances of the flight: its convenience or its inconvenience. In some cases the word, “convenience” appeared in the description. After the identification of the consumer memories the collages and the Q grids were synchronized in a way that there was no general memory related item group, but it was fitted to the collages: in which it appeared as a memory, it was coded as memory related item, in which collage the item did not appear, it meant a non-memory related attribute. Figure 4 and 5 give insight in the analysis. Figure 4 shows how the memories were ordered in groups. The word cloud in figure 5 portrays the most frequently used terms from the sample.

	A	B	C	D	E	F	G	H	I	J	K
1	Kulcsszó 1	Kulcsszó 2	Kulcsszó 3	Kulcsszó 4	Kulcsszó 5	kulcsszó6	kulcsszó7	kulcsszó8	kulcsszó9	kulcsszó10	összesen
2	ellenőrzés	izgatottság	kedvesség	kilátás	szórakozás	gyorsaság	megnyugvás	buszozás			8
3	látkép	felszolgálás	elvesztett csomag	kommunikáció	gyorsaság	kényelem	utasvédelem	biztonság			8
4	várakozás	biztonság	felszállás	egyenruha	nasí	nemzetiség	szépség	szeretet	szabadság		9
5	hatalmas	kényelem	szép	kedves stewardess	felhők fölött	enni	az első vele				7
6	érkezés	keresés	csekkolás	beszállítás	utastér	felszállás	felhők felett	érkezés	börönd		9
7	csoda	élmény	izgalom	utazás	kiszolgálás	kényelem	látvány	fedélzeti étkezés			8
8	becheckolás	várakozás	felszállás	kijelző	felhők fölött	szűkös hely	fárasztó	óceán átrepülése	landolás		9
9	boarding pass	várakozás	tökéletesség	mesészerű	kényelem	fel-és leszállás	becsekkolás	kilátás	bepakolás	kedvesség	10
10	fapados	vásárlás	felelősség	szárnyal	dilemma	tátogás	emberi erő	álom	kerozin		9
11	izgalom	tériszony	szabadság	végtelesség	új kezdet	aggodalom	határtalanság	mélyesség			8
12	egyenruha	kényelem	felhők	táj	ellátás	gyorsaság	várakozás	leszállás			8
13	kedvesség	reggeli	tejszínhab	rágó	Alpok	osztokodás	hideg				7
14	izgalom	felkészültség	kilátás	tenger	boldogság	kedves kiszolgálás	félelem	szabadság	boldogság		9
15	indulás	levegőben	várakozás	megékezés	kikapcsolódás						5
16	félelem	izgatottság	hányinger	szabadságérzet	fárasztó						5
17	hatalmas	gyönyörű	szennyező	luxus							5
18	felhők	étkezés	álmatlanság	tömegnyomor	baleset	egyenruha	minivécé				7
19	mozi	energia	baleset	étkezés	landolás	stardess	hely				7
20	reptér	bejelentkezés	felszállás	kedves stewardess	drágaság	tömeg	legörvény-felelem	landolás			8
21	szórakozás	kényelem	vámmentes zóna	pihenés	leszállás	félelem	utasellenőrzés				7
22	társaság	kilátás	felszállás	egyenruha	taps						5
23	stewardess uniform	segítőkézség	rosszullét								3
24	gépmadár	panoráma	monumentális	bonyolult	tágas						5
25	egyenruha	kijelző	étel	információ	érkezés						5

Figure 4. Example (Platz and her group, 2014)



Figure 5. Wordle (Platz and her group, 2014)

Some of the recalled episodic consumer memories are fully compatible with one phase of the service process. So as there are some of the recalled episodic consumer memories which refer to a certain phase of the service process. These relating memories have a common characteristic: they overestimate one step in the service process, and act more dominant compared to the whole service process. These memories are rare: do not appear often. Their

description is not very informative, rather general, not meaningful or personal – it makes me suppose that it is not very important. At least they seem to be less important than the personal and service related memories. As the research results showed the most frequent expressions were not directly a reference to the service process, but to the service experience. The markers and the designations about the service itself do not dominate.

H1 is accepted.

H2: *The memory related attributes appear more dominant before the purchase than during the purchase.*

The first result of the crosstab is shown by table 3: the Chi-square test was successful. At the significance level of 0,005 is suitable for samples with minimum 200 items. Furthermore, according to Sajtos–Mitev (2007) if the sample’s numerosity is near to 100 – in this case N=142) – the significance level of 0,10 assures valid results. As table 3 shows the 0,000 significance level is excellent. There is a correlation within the not important categories. Based on the results the same can be told about the neutral categories, but in this case with weaker results. The result of Chi-square test in the positive categories is 0,188, which means that there is no correlation between the preference systems.

Table 3. Crosstab analysis about H2 (own edition)

	Non-decision situation – Decision situation					
	not important		neutral		important	
	Sign.	Phi	Sign.	Phi	Sign.	Phi
memory related attributes	,000	,559	,006	,487	,188	,248

Summarizing: it is easy to follow category by category how the memory related attributes lose their importance as we shift from the non-decision situation to the decision situation. The memory related attributes’ importance between the two situations correlated in the not important category, with a strong correlation and in the neutral category, with a weaker correlation. Despite these correlations the memory related attributes did not show correlation in the important category. There is no statistical significant correlation within this group. In accordance with this statement the results of the frequency test is that the number of memory related attributes decreased in the important category as we shifted from non-decision situation to decision situation.

H2 is accepted.

H3: *The memory related attributes' behavior in the preference system depends on the presence of the direct reference group during the consumption.*

During the consumption of the service we need to count with the capacity of the attention. According to Weinschenk's (2011) primary results attention can not be divided: at one time humans can concentrate on one thing. Interpreted to this case the passenger can pay attention to the service process itself or to his own microenvironment. In the second case the passenger only physically sits in the seat, s/he is not really involved in the service. The most probable factor, which draws attention, can be a familiar fellow-passenger. Besides the goal of the flight the presence of a reference group can be determining from the aspect of collecting, storing and grouping memories. The fellow-passengers' quantity and quality can influence the storage process. The dissertation does not deal with the quality of the fellow-passengers (family member, relative, friend, acquaintance, schoolmate etc.). The dissertation focuses on their numerosity. The lonesome passengers had 18%, respondent with one fellow-passenger had 22% from the whole sample. 60% of the participants travelled in a group, with two or more fellow-passengers. Due to the low rate of lonesome passengers (N=26) can not form a segment in itself within the sample. They were ordered to the group with one fellow-passenger. Despite this effort the cross table did not bring fruitful results. There are not significant correlations in neither of the categories.

Table 4. Crosstab analysis about H3 (own edition)

		Non-decision situation – Decision situation					
		not important		neutral		important	
		Sign.	Phi	Sign.	Phi	Sign.	Phi
reference group	not in group (alone or in pair)	,072	,668	,032	,839	,147	,511
	in group	,000	,559	,005	,541	,317	,246

Considering the lewinian group dynamics theory being alone or in pair are both special categories. These two categories can not be contracted, but, in this case it is a good contrary to the group passengers. The phenomenon can be only understood from the aspect of group passengers. As table 5 shows there is a significant result in the case of group travelers in the not important and neutral categories. These correlations will be explained without comparison. In the not important category the Phi resulted 0,559 by 0,000 significance level, which means that the result is middle strong. In the neutral category the Phi value is 0,541 by 0,005 significance, which is also a middle strong correlation. There is not significant

correlation in the important group, because the level of significance is 0,317. The Phi results is also low (0,246) in accordance with it. The lonesome or the in-pair travelers' case the memory related attributes' behavior does not depend on the presence of the fellow-passenger. As it was already published in the literature this primary analysis has the same results: the evaluation of the memory related attributes were constructed right in the decision situation, at least regarding to the not important and important categories. If it is about a wider group, the passenger's memories do not appear in the purchase decision.

H3 is partially accepted.

H4: *The stability of the memory related attributes depends on the frequency of the consumption.*

The memory recall has many capabilities. One of them hangs together with the time, from the frequency's aspect. H4 deals with the potential effect of usage frequency on service related consumer memory recall in the purchase decision. During the test two sub-samples were created according to the frequency. The heavy users in the sample were those respondents, who flew more than 3 times (minimum 4 times, maximum 10 times). The rare passengers flew maximum 3 times. As the script theory says that those actions, which were repeated more than three times, can not be divided one by one. They form a unit. The actions, which were repeated once, twice or maximum three times are stored individually. The primary results show that the relevance of memory related attributes changes according to the frequency: as it is about lower frequency, the memory related attributes are dominant in the neutral category. It supports the literature as well, as the memories besides heavy usage are not separated, that is why their role is uneasy to follow – and not important as well. The strength of the correlation in both cases (low and high frequency) is strong.

Table 5. Crosstab analysis about H4 (own edition)

		Non-decision situation – Decision situation					
		not important		not important		not important	
		Sign.	Phi	Sign.	Phi	Sign.	Phi
frequency	low (1-3)	,077	,486	,000	,820	,204	,300
	high (4-10)	,000	,672	,378	,475	,363	,294

H4 is accepted.

H5: The appearance of the memory related attributes in the preference system depends on the relation between the consumer and the service:

- *H5 (a): the appearance of the memory related attributes depends on the consumer's involvement*

- *H5 (b): the appearance of the memory related attributes depends on the consumer's subjective knowledge about the service*

Involvement

Kotler and Caslione (2009) define the involvement as an answer for a stimulus. Involvement in this sense is a personal relevance. Another understanding of involvement is the level of importance, which is linked to the product purchase by the consumer. Both explanations link the topic close to the dissertation. The logic of this research is assonant with the literature in the way other researchers also differentiate between buying behavior with low or with high involvement. Greenwald and Leavitt (1984) experienced that by higher involvement the consumer can work with a greater amount of cognitive information. This was proven by this dissertation's primary results as well. At the same time, like Peter and Olson's (1990) research says that the level of consumer involvement depends on the current mindset in the buying situation: this is called the perceived involvement. However, this measurement is excluded from this research, because the level of involvement was registered in a non-decision situation. Its consideration would have directed the attention away from the real focus. The research rather emphasizes the situational context, focusing on the episodic consumer memories.

Sub-segments were created as well. This segmentation was based on the average of the involvement scale: 4,51. The median 4,6 on the 7 grade Likert scale. I considered high involvement from 4,7 to 7; low involvement from 1 to 4,6. As the middle of the scale would be 3,5 a correction was needed. In the case of involvement the correction was 15,7%, in the case of subjective knowledge was 4,28%. The idea of the correction was supported by the equal volume dispersion. As table 6 shows those respondents, whose involvement is higher, the memory attributes are relevant in the important category. (As the numerosity of this sub-sample is closer to 100, between 100 and 200 the threshold value of the significance is 0,010 instead of 0,005.)

Table 6. Crosstab analysis about H5 (a) (own edition)

		Non-decision situation – Decision situation					
		not important		not important		not important	
		Sign.	Phi	Sign.	Phi	Sign.	Phi
involvement	low	,000	,713	,025	,612	,983	,118
	high	,562	,345	,685	,376	,006	,473

H5 (a) is accepted.

Subjective knowledge

During the further analysis the memory related and the non-memory related attributes are not compared. Only the memory related attributes' behavior is observed. In the examination of the subjective knowledge sub-segments were created, based on the level of subjective knowledge. The scale's average is 3,74, its median is 3,8. As the Likert scale had 7 grades, the subjective knowledge only counted high above 3,9. So the volume of the two sub-segments became balanced.

Table 7. Crosstab analysis about H5 (b) (own edition)

		Non-decision situation – Decision situation					
		not important		not important		not important	
		Sign.	Phi	Sign.	Phi	Sign.	Phi
subjective knowledge	low	,000	,687	,022	,656	,849	,152
	high	,034	,544	,100	,621	,357	,330

The respondents with low subjective knowledge had significant results in the not important category: here is the correlation middle strong. The respondents with high subjective knowledge did not show significant findings in neither category. This result does not enable comparison, that is why H5 (b) denied. It means that the memory related attributes' appearance does not depend on the consumer's level of subjective knowledge on the service.

In the frequencies can be seen that the respondents with low subjective knowledge rated memory related attributes more important in the decision situation, as the respondents with high subjective knowledge did it (memory related attribute in important category : non-memory related attribute in important category = 0,728 : 0,704). On the contrary the

participants with low involvement rated memory related attributes in each category lower than participants with high involvement.

H5 (b) is denied.

H (5) is partially accepted.

Table 8 gives an overview of the results of the research.

Table 8. Overview of the results (own edition)

<i>Hypotheses</i>	<i>Results</i>
H1: The relation between the consumer memories and the attributes can be identified.	Accepted based on qualitative MEC technique.
H2: The memory related attributes appear more dominant before the purchase than during the purchase.	Accepted based on crosstab and frequency analysis.
H3: The memory related attributes' behavior in the preference system depends on the presence of the direct reference group during the consumption.	Partially accepted based on crosstab and frequency analysis
H4: The stability of the memory related attributes depends on the frequency of the consumption.	Accepted based on crosstab and frequency analysis
The appearance of the memory related attributes in the preference system depends on the relation between the consumer and the service: - H5 (a): the appearance of the memory related attributes depends on the consumer's involvement - H5 (b): the appearance of the memory related attributes depends on the consumer's subjective knowledge about the service	Partially accepted based on crosstab and frequency analysis H5 (a): accepted. H5 (b): denied.

4. Conclusions and Boundaries

Based on the empirical results the following methodological and theoretical theses can be stated. Science uses models to portray the economic – societal processes. These models are the simplifications of the reality. The models always focus on one factor's role within the framework, in between underestimate or neglect the role of other influencing factors. The consequence is that the models are destined for showing one factor's behavior. This abstraction has the potential threat that the model does not describe the facts well. That is why each model should be tested in the reality. The implementation, as a way of verification can also be threatening: they can easily collapse as the static results are replaced into the dynamic environment. That is why science's latest challenge is to work with dynamic models, which fit the real life environment better. A dynamic model's main characteristic that it operates with time. It is especially true for the behavioral economic researches, in which the results are based on comparison of different states.

This doctoral research follows the above described logic, and aimed to answer the research questions by a separated analysis of the memory effects in the system of purchase decisions. I have not met such researches so far, which would examine the interconnections of episodic consumer memories, attribute preference system and purchase decisions, I can claim that I still see possibilities in this field. The results give an insight into a partially known area: the decision-making. As there are no reliable models for the prediction of buying decisions in economic, in marketing, in praxis or in theory, the results of the dissertation support to understand a complex topic.

Due to the memories' nature, as they are hard to undercover and follow, the analysis did not enable to clarify the whole preference reversal related to memory attributes. It can not be stated with a whole confidence how the memory-related attributes move within the importance categories in the preference system. Only the results can be seen. For example, attributes, which are relevant in the non-decision situation sometime move to the not important category in the purchase decision, and they dominate there. How the memories' volume spread can not be considered as a factor, because the Q grid requires a forced choice: it is the Q grid's standard how many items can be in a certain category (important – not important). A further characteristic of the Q grid is that it is pyramid shaped, which excludes the possibility of skewness or curtness analysis. The methodology's other imprecision is that

the ranking within the category can not be followed. No matter how many items are contained by a category, they all represent the same value within this framework. This features block the information about the (memory related) attribute values' change. In order to follow the attribute values' detailed change a more specific measure tool should be found. That is why the greatest part of the research focused on the experience: under which internal (level of involvement and subjective knowledge) and external circumstances (presence of reference group(s), frequency) were the experiences stored.

5. New and Novel Scientific Findings

This chapter summarizes the theses of the dissertation.

1. The means-end chains work if it is about consumer episodic memories instead of values. There is a direct link between the consumer memories and those service attributes, which describe the service.

T1: There are certain episodic consumer memories which directly refers to a service attribute.

2. The memory related attributes have different importance in the preference systems, which were constructed in non-decision and decision situation. The appearance of memory related attributes differs according to the consumer characteristic: who consumed the service alone or shared, who used the service less times or more times, who are lower or higher involved in the service. The level of the consumers' subjective knowledge does not influence the appearance them behavior of memory related attributes.

T2: From the elements of external and internal environment the episodic consumer memories, as internal element play a role in the purchase decision. The not important and neutral memory related attributes show significant correlation in both preference systems (which were created in non-decision and decision situation).

3. The present reference group influences the future evaluation of memory related attributes' importance.

T3: The present reference group buffers the importance of memory related attributes in the decision situation, if the shared consumption happens in a group (not in pair or not alone).

4. The frequency decreases the memory related attributes' importance: the more the consumer uses the service the less importance will be linked to the service related memory attribute in the decision situation, compared to the non-decision situation.

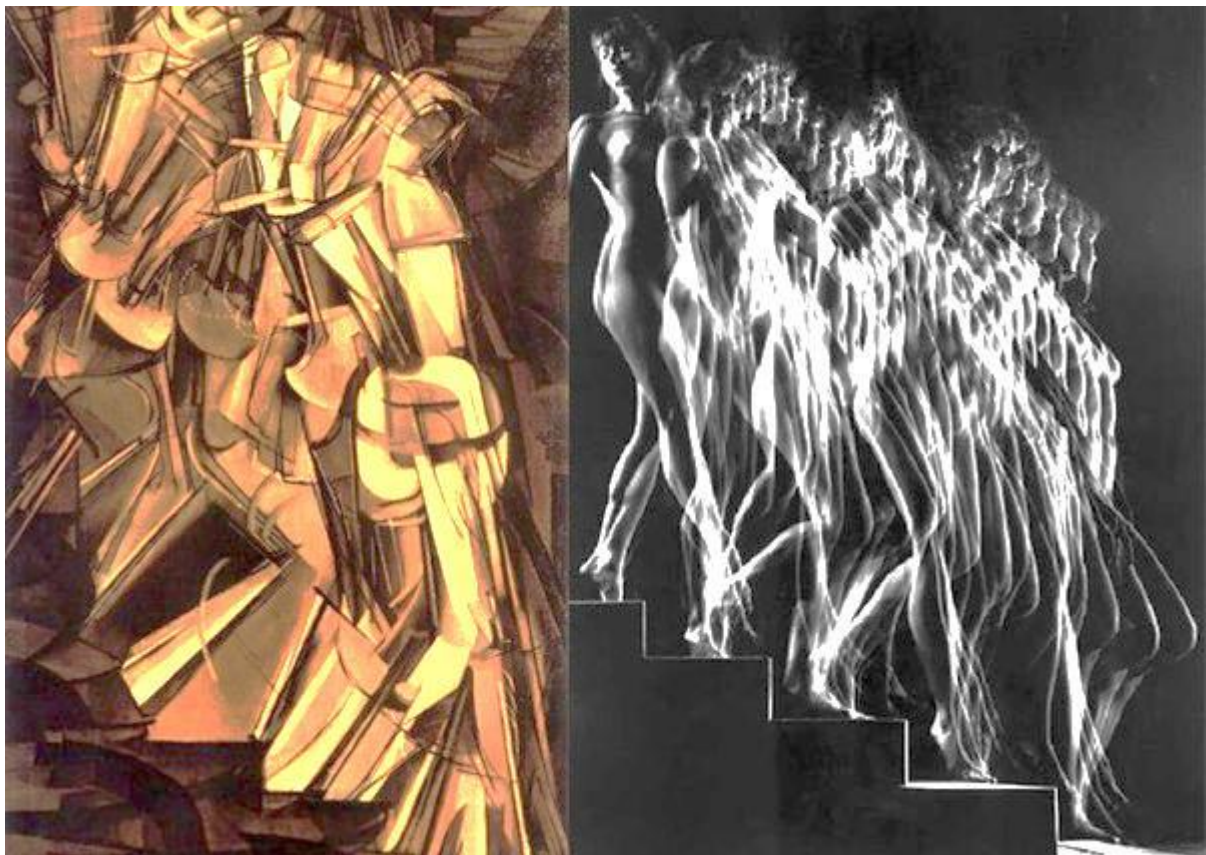
T4: The relevance of memory related attributes depends on the usage frequency. The consumers, who used the services less times, the memory related attributes are probably neutral during the purchase decision than those consumers' memories, who used the service more times.

5. It is partially proven that the consumer's attitude towards the service influence the evaluation of the memory related attributes in the purchase situation.

T5: The memory related attributes' evaluation during the purchase is influenced by the consumer involvement in a small proportion, while it is not influenced by the level of the consumer's subjective knowledge on the service.

Summary

The results of the doctoral research are novel because of its aspect; as it supposes that the internal environment's individual element, the consumer memories play a role in the purchase decisions. A new finding is that it empirically showed the position of memory related attributes in the preference system in non-decision and in decision situation. From a methodological aspect a new finding is that the means-end chains can be understood not only in value – attribute connection, but in memory – attribute relation as well. Furthermore, this mapping is more exact and more generalizable than the consumers' value expectation's manifestation in an attribute.



Marcel Duchamp: Nude descending a staircase no. 2 (1912)

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