Reflections on the role of internal environment in the preference system construction

The issues of the preference system stability appear in various fields of science: microeconomics places it under the utility theories, behaviourism discusses it as part of the irrational human behaviour, while psychology considers the consumer preferences as our projection. As all the aspects focus on a common topic, on the consumer preference system, there should be an overall concept of the preference system itself, which defines its structure, elements and the interrelations between its parts. Based on numerous scientific approaches – psychological, social, and economic, as it was mentioned before – the preference system is internal, and it is revealed in the choices. The latest trend made those findings popular, which put an emphasize on the determining role of the current external circumstances. In order to gain real insight, researchers shall balance the weights between the internal and external environment, because normally the preference system is built as a result of an interaction between the internal and the external environment. The question is: which elements of these environments are involved?

PREVIOUS FINDINGS IN CONSUMER PREFERENCE CONSTRUCTION

The issues of consumer preferences appear in various fields of science: microeconomics places them under the utility theories, behaviourism discusses it as part of the irrational human behaviour, and psychology considers the consumer preferences as our projection. All the theories about the preference systems are reasonable, meaning that they all focus on its special feature. However, the discrepancies of the consumer preference systems appear in the methodological relations first: in the questions of their measurement. Nowadays, the common scientific view regarding the preference system is that humans in decision situations cannot always, or cannot fully reveal their real internal preferences. According to Amartya Sen (1973) the result of the purchase decision, the choice itself is a hard piece of information, which is suitable for observation, but it is weak as an

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explanatory variable. He suggests that in order to gain real insight researchers shall put emphasis on the process prior to the choice made: how exactly the preference system will be built. Sen criticized the economic approach saying that it lacks the consideration of the circumstances. I agree with this statement; however, I interpret it as if the formation of the preference system was influenced by internal and external factors. This complexity determines the preference system and the choice itself as well.

In my concept, the choice is an extrapolation based on the current optimum of the internal and external factors. These internal and external factors can be classified as constant and inconstant, important and unimportant factors in each group. The interrelation between those factors defines the choice pattern. The analysis and the classification of these factors are problematic. Till now, the action was the only empirically testable variable. Unfortunately, in an economic sense, when a consumer defines that he prefers x to y, it often happens that he does choose y to x. This confrontation refers to the dominance of an internal preference system, which was not revealed or could not be revealed in this current shopping situation. (This pattern often leads to post-purchase disappointment.) The next challenge of science is to go deeper in order to understand the logic and later to estimate the expected behaviour in a certain purchase situation.

There were already theoretical experiments to explain this hidden mechanism. Samuelson (1938)[3] suggests keeping the basis of the economic modelling on the revealed preference. He and his followers believe that rationality is a subjective, but consistent system: it can be reasonable for others if the observers are emphatic enough. When fitting the prior description to Samuelson’s statement, we can see that the prior description details a part of Samuelson’s logic: as he concedes that the consumers are rational and different at the same time, the description refers to the different patterns, according to the interrelations of the internal and external, constant and inconstant, important and unimportant factors. This variance hides behind the different optimums, if we accept the optimum as one consumer’s optimum, instead of an economic optimum. This requires suitable measurement, evaluation and forecast techniques instead of the pure economic – statistical models. If we still experience discrepancies between the internal and the revealed preference systems, we need to go back to Sen’s theory, which says humans cannot always optimize, neither in an individual nor in an economic way. Maybe the reason for that can be found with the help of this new model: the detailed analysis would show the weak links between those internal and external factors, which cannot be reconciled with one another. However, Sen and Samuelson emphasize different parts of the same process (formation or preparation and output) they both talk about the same issue: the unexpected consumer behaviour.

My individual conjecture is that in some cases the decision cannot be articulated at once. I believe that if we want to take an action (choose, answer, etc.) first we need to formulate the action for ourselves. That is why I would divide the purchase decisions into two styles, according to the literature: core cognitive processes and regulatory decision processes.\[4\] The core cognitive processes are activated in making decisions while the regulatory decision processes are concerned with choice regulation. As regulatory decision processes are habitual, they might be suitable for the analysis, from the behaviourists’ aspect, where the main question is to identify the right ratio of the influence of the external environment on the behaviour.

**THE KINKY PERSONALITY OF CONSUMER PREFERENCES**

Our versatile personalities can also give answers to our apparently inconsistent choices. In different situations (and environments!) different identities and goals dominate. Our decision styles should be fitted to our changing identities. Some principles remain the same under every other circumstance. Of course, it depends on the individual which are those environment resistant principles. Goldstein (1990)\[5\] supposed that humans are not conscious about their internal preference systems, at least if it is a regulatory decision situation, they are only conscious about their output: the holistic choice, but not about the details. Furthermore, he supposes that the elements of the preference system have systematic importance weights, which is consistent with their will. He called the environment resistant preferences global preferences. Global preferences keep their importance weights under any circumstances. The other type of preferences – according to Goldstein (1990) is called local preferences: their importance weight is not constant; it always depends on the current situation. I suppose, that this phenomenon reflects the personality through the internal preference system.

Another typology from Pellerone (2015) follows the logic of humanistic psychology. The mentally healthy individuals apply different decision styles. Those, who are able to rationalize their decisions in consort with their self-interest, are also conscious about their goals, visions, and themselves. Pellerone (2015) also notes that the decisions (meaning: clear intention) and the choices (meaning: action, in which the decision reveals) reflect to the personality, so as to the personality-driven internal preference system. This is a very interesting note if we consider our research question from a progressive aspect: which preference importance weights remain the same throughout the situation in case of a mentally healthy human?

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Based on former results (see: Slavic – Lichtenstein, 1971; Nisbett & Wilson, 1977), it can be considered that the preference importance weights are calculated in an intuitive way. The author supposes that these fuzzy weights do have components dependent on, in the one hand, the personality, like the level of consciousness, the level of concentration, former experiences, consumer memories; on the other hand, from the relation between the consumer and the subject (motivation, willingness to have, attitude, and involvement). This complex internal environment contacts the current external environment (with alive and physical elements) during the decision situation. The changing external environment can be an explanation for different repeated choices, even if the internal environment is all stable. In this sense, the settled internal environment reacts to the different purchase situations (online or in-store, sales person involvement or self-service etc.) in a different way. I consider that in case of a stable internal preference system this system is the driving force in the if-then mechanism. Vice versa: when the internal preference system is not constant, the external environment will dominate, and the behaviour pattern can be influenced from outside. This is what behaviourism says. However, some behaviourists go further and suppose that the internal environment is always dependent on the external one, no matter how stable it is - the external environment will always enjoy a greater influence. If we examine this question in a broader context and involve macro-level variables, like social conformity, we can believe in this phenomenon. Király (2014) emphasizes that in some cases the individual decides as others expect him to decide. This, however, violates the individual’s utility maximization. Because the choice orientation came from a reference group - and their preferences were so-called ‘half-internal’ for the individual, as a wannabe group member. Other classic theories echo this view: Veblen (1975) and the conspicuous consumption, or more specific: the visibility of the products (Bourne, 1957) or the exclusiveness of the products (Tárkányi, 2008). The common core of these theories is that the possession of certain goods offers utility for the consumer’s image, but not for the consumer itself. They suppose, during the purchase and the consumption of some sort of goods, an external environmental factor: the opinion of others prevails and provides feedback to the internal preference system.

MORE WORDS ON THE INTERNAL ENVIRONMENT

Scientists say that experience cannot change cognition. At the same time, it is still an unanswered question whether it unequivocally drives to one behaviour pattern. Some attempts were made to clarify the influential internal human factors. Warren, McGraw and Van Boven (2010)\textsuperscript{[12]} worked with goals, experiences and cognitive boundaries; Hlédík (2012)\textsuperscript{[13]} classified decision related (nearness, importance), product related (perfect information, involvement, experience, loyalty), personality related (risk avoidance, willingness to pay) and task related (simple or complicated) factors. Koltay – Vincze (2009)\textsuperscript{[14]} considered self-interest, insatiability and analytic-mathematic competences as determining internal factors. The list of internal factors has never been fully comprehensive in the researches until now.

I focused on the role of consumer memories in my dissertation (Platz, 2016)\textsuperscript{[15]} The memory works independent of demographic variables, in case of mentally healthy grown-ups (the memory of ill or elderly people and children works in a different way – these groups are not suitable for analysing individual decisions from other aspects either). Despite the former praxis, my research focused only on the influence of one internal factor on the output. The main empirical findings are that the consumer memories‘ role dropped in the purchase situation compared to the non-purchase situation. The consequence is that if it is about a regulatory purchase decision, the consumer rather focuses on the present circumstances and does not invest energy to consider. This supports the system 1 – system 2 theory: humans try to get a good and, first of all, fast decision. The yearning for easy solutions stands close to Johnson’s (1984)\textsuperscript{[16]} idea, who supposed that the preference system is not constructed on detailed internal and external environmental factor analysis, but on an abstract impression. The production of this abstract impression requires less cognitive energy than an analytic approach. In some cases, it can be a truly good way. Dijksterhuis and his research group (2004)\textsuperscript{[17]} conducted a conjoint analysis-like experiment. Car profiles were shown to the participants. The car profiles listed four attributes, and there was an optimal car hidden in the car profiles. The participants were in a group of two: the first group had time to consider which model they would like to have, while the second group had to make a random decision. Under these circumstances, the first group performed better:

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there were a relatively low number of bits of information, so they could optimize them. Then, the experiment was repeated. The car profiles now contained sixteen attributes! The first group, which had enough time to decide, mostly failed. The second group found the optimal car in a higher ratio with the random decision strategy. Though these valuable researches lack the influence of internal environment: they are focused on the various elements of the external environment and linked it to one part of the internal environment: to the information processing or to the decision style without counting in other internal factors. The result is that we see an output, where almost every corner of the external environment and only one element of the internal environment are involved – but not the whole! The big picture is still missing.

There were other early attempts to look for stable internal preferences, which make the person resistant to the environmental factors, or which simply dominate over the external environment. Lawless (1985)\cite{Lawless1985} found that the preference for sweet taste is biologically determined on a sensory basis in every one of us, or the avoidance of bitter tastes, because it might refer to toxicity. Simonson (2008a, 2008b)\cite{Simonson2008} has a more specific idea about the existence of complex stable internal preferences. He supposes that we bear underlying inherent preferences, which can operate as a preference index for an external environmental factor. Their greatest advantage is that they are constructed in a context-independent way. Their operation is simple: they orientate if a certain element of the environment is ‘yes’ or ‘no’. Simonson (2008a) reckons that this tiny ‘yes, I like it’ or ‘no, I don’t like it’ orientation about a detail is extended to the whole product, so, finally, this is what determines the result of the evaluation and is revealed in a biotic choice – even in the real purchase situation: ‘yes, I take this’ or ‘no, I do not take this’. He does not explain if that choice is not about one individual product, but between two or more alternatives. This concept is not an easy one to test, first of all, because its subject is underlying. However, the underlying inherent preferences should be global preferences with a stable preference value. Simonson (2008b) believes that the preliminary information or the desire for the product can create a skin-deep preference system or opinion, but when it comes to the decision, the underlying inherent preferences show themselves and decide.

In my interpretation, the researcher thinks that the preference system, which is revealed in the choice, is the real, original preference system, and at the same time, the preference system, which was created in the non-decision situation, is not real. To formulate in another way: the moderation of the preference system from the non-decision situation is necessary. This manifestation of arbitrari-

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ness or free will, does it completely replace the passive Pavlovian conditioning or even complete it? In order to answer this question, we need to know whether an underlying inherent preference can be modified on the long run with the help of learning or gaining experiences. Maybe the right choice is based on the Pavlovian reflex on a higher level: the various experiences offer a wider range of alternatives, which can contain the optimal one with a higher probability. Because Schank and Ram (1988) \cite{20} found that humans do not classify the memories during the storage process according to stimuli (for example visual or audible). They say the memories are stored in schemes, in their complexity. They call it the script theory. As we do our daily routines we lean on such schematic scripts, which are basically examples for the resolution of the same previous situations. The difference is that however the optimum is found, it does not happen via the analysis of the current situation, but on the recall of a previous good example.

**EVEN MORE WORDS ON THE MEMORY**

It is very remarkable that the three memory researchers, Eysenck, Anderson and Baddeley \cite{21} (2010) call the perception the entrance hall of the memory. They introduced it as the sensory memory in literature. The sensory memory basically means the ability that the mind can hold the external environmental information after the stimulus ends; it is enough to transfer the information into the short-term memory. The key is that from the cardinality of external factors only those serve as perception, which mean stimulus for the person. So the whole process, from the very beginning, is induced from inside. It can depend on the current focus of attention or on the personality. A premise of perception is the experience. If we observe the phenomenon as a process, which consists of the same repeated action, there should be a kind of saturation point, from which there is a quality change. Right at the beginning, without any former experiences, it would be crucial to know how the first stimuli were taken: driven by some internal aptitude, by chance, or by the external environment. If we accept that the first stimuli had nothing to do with any internal aptitude, then the behaviourist patterns should prevail. If there was an influence from inside from the beginning, the behaviourist theory should be reconsidered. In case we fit in Eysenck and his research group’s view into the process, we should admit that the internal environment dominates the external environment, so the internal environment is the independent variable, while the external environment is the dependent variable. Nowadays, science is able to describe that the stimuli is only activated, if its strength is above a certain threshold for the sensory organs. This biological mechanism is not clearly linked to the conscious level: to the context of consumer choices and purchase decisions.

If we pay attention to a previous key word, ‘strength’, it should ring a bell that the stimuli cannot have a discrete (yes or no) value, either. I suppose that the stimulus is an interval variable, which makes the understanding more complicated, as there are no clear limits between the values. Regarding the further steps, on the methodological level researchers should find a suitable measurement scale and statistical tests as well, in order to get a proper analysis. If the marketers’ goal is to get reliable information about the product attribute preferences, which serve as items in the preference system, they need a clear access to the consumer memories, where those product related experiences are stored. It is particularly interesting in case of services or products with low physical content: as there is a lack of physical existence, the consumer is not able to recreate the attribute evaluation prior to the purchase on an empirical basis. The consequence is that in such cases the consumer need to lean on her memories about a previous consumption (as there is a lack of observable attribute prior to the purchase). If the consumer needs to make a buying decision under such circumstances, she has two options: first, she pays attention to the available attributes, which might not be in direct contact with the service. So she forms her internal preference system according to service-related attributes, but not service attributes – and this makes a difference. In this case, the consumer can only deduce. The consumer’s second option would be to recall her memories about a script or a certain previous consumption. Due to the discrepancies of the human memory system, this way does not offer a perfect evaluation either. Because both alternatives have encoded mistakes, none of them can guarantee a reliable forecast on the right choice.

To have a more analytic look at the second option (consumer memory recall), a bunch of failure points can be easily listed according to Tulving’s summary (2007): [22]

- The memory recall is based on conceptual representation, which is complex. The consequence is that it does not give a detailed impression on the attributes, rather a holistic one.
- This cognitive structure operates the same way, no matter the origin of ‘consumer memories’: the memory information could be heard from somebody else, or could be experienced by the consumer herself, or it can represent only a similar situation.
- Humans tend to remember in accordance with the present expectations and desires. The recalled memories are usually context conformed.
- The quality of the memory depends on the type of storage: short or long term. The memories from the short-term storage usually show a weighted behaviour: a couple of sharper details besides the mostly fuzzy rags.

• The reliability of the memory is also bounded by its availability and the amount of ancillary information (as the memory is always stored with some additional information, like time) and on the cardinality of the recalled memories also.

THE ROLE OF MEMORY IN THE CONSTRUCTION OF THE PREFERENCE SYSTEM

The psychologists’ preferred research topic is the change of the memory system with the age. Brand managers deal with the outputs of the memory: the success of the recall in a certain situation, where the brand enjoys the limelight. Practitioners use the memory functions. Marketing academics focus on the memory in connection with the learning process, experiences, information processing, and past evaluations. Reminiscences appear in qualitative researches as methodological techniques. There are no widely-accepted general findings on the role of consumer memories in the construction of the attribute preference system prior to, in, or after the purchase situation. There are some studies which focus on the effect of consumer memories on the consumer behaviour, but not on the purchase decision: Ratnayake, et al, (2010),[23] Teichert & Schöntag; (2010),[24] Herz és Riefler (2013).[25] Their results in common are that the brand-related experiences influence the brand recognition and the brand loyalty. All three research teams admit that they faced difficulties by reaching and also by following up the memories.

This insufficient knowledge basis does not give answer to the following questions:
• How do the consumer memories appear in the revealed preference system?
• Is there a difference in memory influence between consumers with various profiles, like demographic variables, personality or lifestyle?
• Is the intensity of the consumer memories in the preference system dependent on their emotional context: whether the memories are linked to basic emotions (joy, surprise, sorrow, fear, disgust, rage)?
• Is the type of the memory (for example semantic or episodic) more vivid?
• Are there more or less memorable goods?
• Is there a purchase situation or are there any external factors which would be beneficial for the consumer memories?

As the above mentioned questions have remained unanswered until now, complete marketing management (product development, branding, communication etc.) guidelines and techniques are absent both on the strategic and on the operative level. The insight into the role of consumer memories in the construction of the attribute preference system would have a fruitful effect on the efficiency of the participants in the whole process in each relation: producers, suppliers, merchants and consumers.

REFERENCES


HUNGARIAN SUMMARY

A preferenciarendszer stabilitására vonatkozó kérdéskör a tudomány különböző területein megjelent: a mikroökonómiaiban a hasznosság elméletek részeként, a behavioristák az irrazionális viselkedést magyarázzák vele, a pszichológia pedig úgy tartja, hogy a preferenciarendszer a szelf kinyilvánítása. Mindegyik megközelítésben közös pont a preferenciarendszer, a preferenciarendszer elemi és a köztük lévő kapcsolat tranzitív definiálása. Több tudományos megközelítésre – társadalomtudományi, pszichológiai, gazdaságtani – alapozva elfogadhatjuk, hogy a preferenciarendszer elsősorban a belső tényezőrendszert viszonyai alapján konstrukálódik és választásainkban megjelenik. A legutóbbi trend ezzel szemben azt erősíti, hogy a döntési szituációban jelen lévő külső tényezők módosító hatással lehetnek a preferenciarendszere. A kutatónak a két nagy tényezőcsoport (belső és külső) egyrészt egymással, másrész számos elemével szintézisbe hozása nagy kihívás, hiszen a döntési szituációban a két körülményrendszer interakcióinak nyomán történik meg a választás. Ezért a fő kérdés a továbbiakban inkább az, hogy a két nagy tényezőcsoport, mely elemei dominálnak a preferenciarendszer kinyilvánításának alakulásában.