**ORIGINAL ARTICLE**

# The future of consumer decision making

Hanna Willman-Iivarinen[1]

## Abstract

Mediatisation of the world and the increasing power of social networks, means that consumers' choices are more and more based on identity play, gaining social currency and self-branding. Furthermore the choices are significantly influenced by the changes in decision making context for example time pressure and endless opportunities. All these changes affect consumer's decision making that is the choice of decision making strategy. This study is based on theoretical reasoning and empirical data. The results show that the choice of decision making strategy will depend on the social potential the products have. The approach is multidisciplinary, taking elements and ideas from several theoretical frames related to consumer's decision making. This topic is of outmost importance to all BtoC marketers. It is important to know how customers decide and what changes to anticipate. Furthermore, it is important for policymakers who wish to be able to influence consumers' consumption habits in order to make them healthier, greener, more ethical or to favour domestic products. Future developments of variables affecting consumers' choices are estimated and implications for marketing are discussed.

**Keywords** Consumption · Decision making · Identity · Consumer psychology

## Introduction

Consumers have a nearly endless amount of opportunities nowadays. Since the products are quite similar and there are no significant differences in quality or price, the choices are based on more than "traditional" variables. Mediatisation of the world and the increasing power of social networks means that consumers' choices are based more and more on identity play, gaining social currency and self-branding. Furthermore, the choices are significantly influenced by the changes in the decision-making context. The research question, therefore, has two parts: What are the relevant changes in consumption and the decision-making context that affect consumers' decision-making, and how do they affect it? To answer this question, it is necessary to look at how consumers make their decisions and what psychological and social drivers are involved. Some variables of key features are discussed and their connection to (correlation with) different decision-making strategies is presented. Next, we look at changes in the consumer's decision-making environment and ponder how these

changes will affect decision-making in light of the correlation table. Future developments of variables affecting consumers' choices are estimated and implications for future branding, product development and marketing are discussed.

The approach is multidisciplinary, taking elements and ideas from several theoretical frames related to consumers' decision-making, for example Decision theory, Consumer psychology, Media research, Brand theory, and Mood management theory (Zillman), Cost of thinking (Shugan), Theory of decision goals and heuristics (Bettman), Theory of extended selves (Belk), and Theory of stuff and identity (Gosling). Research on future consumer decision-making is nearly non-existent with the exception of Gastrein & Teufel [1], who have explored consumer decision-making in the choice of electricity providers and crowd energy management environments. These findings are context-specific and cannot be generalised to all consumer decisions. More generally, Kelly [2] suggests that predictive modelling is how to make decisions in the future despite the six-figure costs of creating the models. This is not applicable to consumer decision-making. McAfee [3] expresses a desire for more evidence-based decision-making, strongly arguing against intuition. While McAfee might be right, it will not change consumer decision-making. The purpose of this article is to map the variables and changes in consumer decision-making in general and participate in scientific discussion with the findings.

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This topic is of utmost importance to all BtoC marketers. It is important to know how customers make decisions and what changes to anticipate. Furthermore, it is important for policymakers who wish to be able to influence consumers' consumption habits in order to make them healthier, greener, more ethical or more in favour of domestic products.

## How people do decisions

We do decisions all the time. Some decisions are automatic (or nearly so): making morning coffee, stopping at red lights, brushing our teeth in the morning, muttering "Good morning" to co-workers, etc. Some decisions are semi-automatic; they can be part of routines, but not totally automatic, for example choosing clothes in the morning, choosing lunch or choosing whether to buy an ice cream on the way home. Then there are highly deliberated decisions like buying a house, choosing a vacation destination, etc. Even though the decisions seem quite different, the decision-making process is similar. However, people might not be aware of the subconscious steps in the decision-making process and the elements affecting the choice.

Decision-making theorists (e.g., Tversky & Kahneman [4], Bettman et al. [5]) seem to basically agree on the steps in the choice process. First there is a need for something, a motive. After the need is established, there is a set of alternatives called an *opportunity set*. Typically, opportunity sets are too large to be examined, so people limit their size to a *consideration set*. After evaluating the benefits and costs of the alternatives in the consideration set, a choice needs to be done. There are a number of different strategies, which can be used to do a choice. Due to restricted cognitive abilities and desire to lower decision-making costs, some heuristics are typically used in decision-making. In addition to heuristics, people may attempt to consider all possible options and features (make a so-called rational decision) or decide intuitively or nearly automatically (i.e., habitually). There is growing excitement over intuitive decision-making. This is due to some populist books, for example Malcolm Gladwell's *Blink: The Power of Thinking Without Thinking* [6] and the appealing thought of saving the effort of thinking and still doing the right choices [7, 8]. Academic researchers are much more sceptical about intuitive decision-making. While they agree on the benefits and stunning results, they argue that intuition only works well in certain conditions and when the experts are doing the decisions [9, 10]. Consumer motives, consumption situations, consumer characteristics and available alternatives can be considered as exogenous variables, which could be jointly considered as frames for the choice.

Heuristics are methods of simplifying the decision process by eliminating and ignoring some information and paying attention only to certain aspects of alternatives. Some heuristics need to be used intentionally and deliberately, but some can be quite automatically used, even without us consciously noticing it [11]. The researchers in decision-making have quite different views on the role of heuristics in decision-making. Simon [12] argues that limited human capacity and imperfect information makes people accept good enough solutions instead of seeking an optimal solution. Payne, Bettman & Johnson [13] argue that people adapt their decision-making strategies to the decision task at hand. That is, people use heuristics intently in order to avoid effort when the choice is non-important. Kahneman & Tversky [14, 15] had yet another very different view on heuristics: They concentrated on showing (firstly) that people use heuristics in their decision-making and (secondly) that those heuristics lead to biases, that is, systematic errors compared to "rational decision" making. While Gigerenzer & Todd [16] agree mainly with Kahneman & Tversky on the usage of heuristics, they have a totally different view on the heuristics' goodness. While Kahneman & Tversky point out problems and biases, Gigerenzer & Todd concentrate on embracing the ingeniousness of heuristics. All the researchers seem to agree that decision strategies and heuristics are adaptive and depend on personal preference as well as the decision context. Some typical heuristics are:

- **Satisficing heuristic**: One considers the alternatives one at a time, in the order they occur or come to mind [12]. The first acceptable alternative is chosen: The consumer simply chooses the first satisfactory choice, the one that is good enough. If none passes evaluation, the requirements may be relaxed slightly and the process will start again.
- **Lexicographic heuristic:** The most important feature will be chosen first and the alternatives will be ranked accordingly [17], for example the cheapest, fastest, most trustworthy, etc. When using a lexicographic heuristic, the consumer will not be satisfied with the first possible choice, but will choose the best alternative according to one chosen attribute. This heuristic is sometimes called the one-reason heuristic [16] or the take-the-best heuristic [18].
- **Eliminating by aspects heuristic**: First, the consumer considers the most important aspect and then eliminates the alternatives below the cut-off level [19]. Then they turn their attention to the second-most important feature and repeat the process until only one alternative remains. This method combines elements of both the lexicographic and satisficing strategies.
- **Frequency of good and bad features heuristic:** The decision maker makes a list of the good and bad attributes of each alternative and then counts the sum. The sum of bad attributes is subtracted from the good ones and the alternative with highest score will be chosen. The decision maker needs to decide the cutoff level, which separates good attributes from the bad ones [17].

- **Equal weight heuristic**: Each attribute is given a value, all the alternatives' values are added, and the highest score wins. This method does not separate the attributes into important/unimportant or good/bad. This kind of method is used in school grade evaluations or on Likert scale questionnaires. The one with the best average score will be chosen [17].

The choice of decision strategy is of utmost importance since it dictates what will be chosen. For example, if I were to choose a travel charger for my phone, I might opt for colour (intuitive) or price (lexicographic), or I might consider price, battery capacity, colour, brand, etc., giving each feature a plus or minus (frequency of good and bad features heuristic). With the same preferences, same options and same alternatives, the choices differ based on the choice of decision strategy.

## What affects the choice of decision strategy

Shugan [20] compared different decision-making strategies on the basis of cost and benefit to the decision-maker. The costs in Shugan's model were effort required and number of mistakes made. He found out that a reduction in thinking costs often leads to a reduction in benefits due to a growing number of mistakes. Later, Payne et al. [21] and Bettman et al. [5] compared decision-making strategies on accuracy vs. effort framework. The basic idea is that each decision strategy can be characterised by its accuracy (the low level of mistakes) and the effort it requires. Decision makers select strategies based on a compromise between the desire to make an accurate decision and the desire to minimise cognitive effort. A number of studies have validated the effort and accuracy model of strategy selection [22, 23]. When we try to make choices as accurately as we can (making as few mistakes as possible), we need quite a lot of cognitive effort. We need to acquire and process information and make comparisons and evaluations. Therefore, the goals of Maximising accuracy and Minimising effort are quite opposite. The idea of the effort-accuracy framework led Bettman et al. [5] to note that there can be different decision-making goals. Sometimes people prefer accurate decisions, and other times easy, fast, justifiable, etc. Decision goals are extremely important because they dictate (partly) the choice of decision strategies, which in turn affects what is chosen.

Different decision-making strategies require different amounts of consumers' time, energy and attention. These resources are scarce and the amount and willingness to use them is highly situation-dependent. Our energy level and ability to concentrate (attention) varies. Some decision-making strategies can be used quite effortlessly and without paying much attention (like satisficing or lexicographic), and some require more deliberation (like rational decision-making or elimination by aspects).

We can use and want to use different amounts of time on decision-making. Sometimes there is no time limit for our choices, and sometimes the choice must be done before a certain deadline. Time pressure affects how much information is gathered and processed, how many alternatives and attributes are considered, how the choice will be done and what will be chosen [5, 21, 24, 25]. Time pressure affects information search and processing. If we have time pressure, we search for less information [21], accelerating the process and spending less time on each piece of information [5, 25, 26]. This seems logical: When we do not have much time, it makes sense to consider less information and process it faster. With time pressure, information is processed more selectively; people concentrate on important information [5, 25, 26]. It is natural that we want to consider more details only if we have more time. When we are in a hurry, we want to simplify our decision-making process, so we therefore use faster heuristics.

Consumers' decisions are found to be highly context-dependent (e.g., [19, 27, 28]). Decision context differs from the consumption situation because decision context variables describe the features of the decision task, whereas a situation describes psychological, physiological and social surroundings of the shopping event. For example, the subjective importance of the choice affects how much we seek for extra information [29]. If the choice is important for us, we give the matter more effort, search for more information, ask advice and agonise over difficult trade-offs. The complexity of decision task has a direct impact on choices. Bettman et al. [5] argue that if a decision task is more complex, people ease their decision-making accordingly and use simpler heuristics rules. The decisions can be difficult if there are many motives, many options, conflicting values, difficult trade-offs, etc. For example, a typical trade-off difficulty arises when we try to decide which we value more: low price or product safety. If the task is too complex, it may prevent people from choosing at all [30]. Emotions have been shown to affect cognitive processes [31] and play a rather important part in decision-making [32, 33]. Negative emotions during the decision process arise, especially when the decision task is difficult [30] or when we have time pressure. Our emotions provide immediate and automatic evaluation on the "goodness" or "badness" of a feature or possible consequence [34]. People especially rely on their emotions when the decision is difficult, when there is a limited amount of information or when they feel the emotions are relevant [35].

# The psychological drivers of consumer behaviour

There is much more to consumption than just satisfying physical needs. Everything we consume can be used as social currency, an identity claim, a tool for self-branding, a signal for values or a tool for regulating mood. We form emotional connections to different products. There are products we like and dislike (or even love and hate). These types of relationships are explained by brands. All products have a brand. That is, all products, product groups, companies, institutions, politicians and even ordinary people have a brand. Brand is the image the others have about the product, company or person. We connect emotionally with brands because they have symbolic features and personalities [36, 37] and because they add many unique features to products, which make them extremely interesting. Due to symbolic features, brands can be used for many purposes.

According to Belk [36], Fournier [37] and Escalas & Bettman [38], consumers use possessions and brands in identity building. We choose what we consume in order to define ourselves [38] and because certain products are connected or enable certain social roles [39]. Some owned items function as identity claims. Those items are symbols for belonging to certain groups, one's identity, achievements or future goals. According to Gosling [40], identity claims can be meant for ourselves or for others. The identity claims meant for ourselves remind us about what kinds of people we are or want to be. The identity claims meant for others are situated in visible places and signal to others how we want them to see us. Brands and consumption can easily be used as identity claims due to their ability to transfer brand qualities into user qualities. Therefore, one can easily attach certain desirable qualities for oneself by simply buying them [39]. Walker [41] says that a brand attaches an idea to the product. When this is done well, people want to consume the idea by consuming the product. Or they want to attach the idea of the product to their own personality by consuming the product.

While identity building is something we do for our inner purposes, self-branding is something we intend to show others. Very few of us want to reveal all our thoughts, interests and behaviour to others. The rest of us do some conscious or unconscious planning about what we reveal and to whom. We can brand ourselves by the amount and type of consumption, status of consumption or by the brands we use. Consumed products can be used as signals and can communicate our identity and values [36, 42] or our ideal selves [43]. We can consume in order to signal certain personal characteristics to others. Consumption is a communication tool and is an easy way to signal personality and values [36, 37]. While shopping, consumers ponder (more or less subconsciously) how the products will help them become a better version of themselves and signal it to others. Since consumption can be used as a

symbol, consuming certain products connects us (connecting tool) with other users. People prefer products that have a user group they feel is similar to their own and that they want to belong to [44]. Consumption can therefore be used as social currency. We use brands to signal our belonging to certain groups or for distancing ourselves from them.

Some consumed items remind us of nice things and they make us feel good. Sam Gosling [40] calls this kind of usage of things *feeling regulators*. We buy brands for comfort and delight: in other words, for mood management purposes. People are rather talented at regulating their moods, and it has been shown that people use consumption a lot in order to do so [45, 46]. Mood management through consuming media products has been researched quite a lot in television program choices [47–50], music choices [51, 52], video rentals [53] and even news choices [54]. However, there are many other different ways to manage mood. For example, people attempt to improve their mood by walking, exercising, playing with kids or pets, or go shopping [55, 56]. The ideal mood management solution depends on what kind of original mood we have, and which method we expect to help either maintain or change the mood. Mood management methods vary from person to person and situation to situation [57]. Zillman's [45, 58] famous mood management theory basically says that when people are in a good mood, they try to maintain it, and when in a bad mood, they try to change it. The idea is to optimise mood by taking action. According to Luomala [55], people use certain actions deliberately to alter their bad mood, and usually those activities chosen to change mood are also effective.

# How decision-making context, consumer resources and psychological drivers of consumption are related to different decision-making strategies

Variables affecting decision strategy and psychological drivers of consumption variables along different decision-making strategies described above are collected in correlation Table 1. The data used in this study were originally collected for Willman-Iivarinen's forthcoming [59] dissertation about consumers' media choices. There were 336 acceptably completed questionnaires in total. The data were gathered during summer 2014. The description of data and forming of variables is explained in Appendix.

The data shows that all the variables affect the choice of decision strategy, that is, there are statistically significant correlations between each variable (in rows) and at least one decision strategy (in columns). It also shows that each decision strategy is very different and correlates only with certain kinds of variables. Furthermore, it can be concluded that decision goals of maximising accuracy and minimising effort are quite the opposite (correlate with very different variables). For

**Table 1** Correlation data of decision-making context, consumer resources, psychological drivers of consumption and decision-making strategies based on data in Willman-Iivarinen (2018)

| | Rational choice | Satisficing | Lexicographic | Elimination by aspects | Frequency of good and bad features | Equal weight | Habitual | Intuitive |
|---|---|---|---|---|---|---|---|---|
| **Consumer resource:** | | | | | | | | |
| Attention capacity | 0,12** | 0,04 | −0,02 | 0,04 | −0,02 | 0,07 | −0,15** | 0,02 |
| Energy level | 0,15** | −0,08 | −0,02 | 0,02 | 0,10 | 0,17** | −0,12** | 0,00 |
| **Decision context:** | | | | | | | | |
| Difficulty of choice (reverse) | 0,13** | −0,04 | 0,07 | −0,12** | 0,04 | 0,09* | 0,01 | −0,06 |
| Time pressure | −0,07 | 0,10* | 0,03 | −0,01 | 0,10* | −0,05 | −0,10* | −0,06 |
| **Decision goal:** | | | | | | | | |
| Minimising effort | −0,12** | 0,08 | 0,00 | 0,10 | 0,00 | −0,04 | −0,01 | −0,03 |
| Maximising accuracy | 0,13** | −0,13** | 0,20** | −0,07 | −0,01 | 0,11** | −0,11** | 0,03 |
| **Social currency & connecting:** | | | | | | | | |
| Social currency - Product is a symbol for belonging | 0,07 | 0,15** | −0,12** | 0,06 | −0,04 | 0,02 | −0,03 | −0,09 |
| Connects - Products connect me with other people | 0,06 | 0,18** | −0,07 | −0,01 | −0,03 | 0,07 | −0,07 | −0,09 |
| **Branding tool & signal of values:** | | | | | | | | |
| Self Branding - Use in order to provide a better picture of oneself | 0,23** | −0,01 | 0,03 | 0,05 | 0,05 | 0,02 | −0,05 | −0,22** |
| Signal - Using this product signals my values and style | 0,12** | 0,08 | −0,07 | 0,10* | −0,01 | 0,04 | −0,05 | −0,13** |
| Symbol – Product is a symbol for future aims | 0,09* | 0,04 | −0,04 | 0,14** | 0,02 | 0,08 | −0,04 | −0,17** |
| **Feeling regulator:** | | | | | | | | |
| Mood management - Use to improve mood | 0,03 | −0,05 | −0,08 | 0,09* | −0,06 | 0,15** | −0,02 | 0,01 |

example, people use rational decision-making when they want to maximise accuracy (0.13**), not when they want to minimise effort (−0.12**). The nature of the symbolic power of consumption matters also. When consumers can use products in self-branding or as a signal of their values, they deliberate their decisions carefully; that is, they use rational decision-making (self branding 0.23** and signalling 0.12**). If products are used as social currency, they are not very carefully deliberated, but people settle with the first good enough product. They use satisficing for social currency (0.15**) and when connecting with other people (0.18**). According to Table 1, it could be concluded that products can be divided into three groups based on their social or psychological usage potential: self-branding or signalling, social currency or socially insignificant. See illustration and marketing implications below in Table 2.

## Changes in consumption and the decision-making context

The changes related to available media products and how we use them are dramatic. People can choose whatever content they like and use it whenever and wherever. Media technologies surround us and saturate our everyday lives. It has been said that we live in mediatised society [60–62]. According to Deuze [63], media becomes such a natural part of life that it even becomes invisible. It is seamlessly integrated into everyday life. Before, media audience members were only passive receivers, but now the audience has new roles: They participate, produce and distribute the content [64–67]. People blog, update Facebook or Instagram, contribute to discussion groups, share content in other platforms and tweet. Media has become a tool for ordinary people to promote their cause and especially to promote themselves—self-branding. We can tremendously influence how other people see us. We can choose which sides of ourselves to reveal, which qualities we attach to ourselves and how we present our thoughts and to whom. Villi [68] and Matikainen & Villi [69] argue that one of the most important forms of audience participation is the distribution of media content by links, likes and comments. In addition to news clips, pictures of cute kittens and funny quotes, people distribute their consumption experiences and information about products they like.

Since media connects people in a new way, people form a huge social network. Gorbis [70] says that the world is socially constructed and that this phenomenon transforms how society is organised. When people are nodes in a social network,

**Table 2**   How decision-making and ideal marketing strategy vary according to the potential social role the product has

| Self-branding and identity play | Social currency | Socially insignificant |
|---|---|---|
| •**Decision-making**: Rational decision-making or elimination by aspects<br>•**Marketing**: Provide information, find out decision-making criteria and cut-off levels | •**Decision-making**: Satisficing<br>•**Marketing**: Make sure consumer understands your product's role as social currency | •**Decision-making**: Intuition, habitual, lexicographic or frequency of good and bad properties<br>•**Marketing**: Since decisions are based on other than social aspects, find out what the drivers are |

it enables them to be part of something larger than themselves, but it also stresses the value of social connections. There are already interesting signs of how valuable one's social network can be. It is no longer just getting a better job, but getting loans from the bank or getting the job at all. Facebook has a patent for software that scans people's trustworthiness (e.g., ability to pay back their loans) by scanning the social network they have [71, 72]. The algorithm is based on social media presence and the trustworthiness of people one is connected to. In 2016, UK insurance firm Admiral intended to launch an application offering a discount on car insurance based on an analysis of customers' Facebook posts, but this idea was turned down by Facebook [73]. These examples show how social networks are more important than ever and that people need tools to make themselves appear in a better light.

With power to share, contribute, produce and participate in a mediatised world, and being a member in the socially structured world where one needs to have social currency, signal values and tools for self-branding, it seems that the symbolics of consumption will become more important. Consumers' choices will be based more and more on reasoning about how this product will help them to see themselves in a better light, or provide a better picture of themselves to others.

Choices themselves become more and more complicated because we have so many more alternatives, features and more information about them (with smartphones, that information is available all the time). This leads to information and choice overload. There is a great paradox between people wanting to have a lot of choices and actually being better with fewer options. People seem to overestimate the fun of choosing and underestimate its costs [74, 75]. Mick et al. [76] discusses the psychological costs of having to live in a hyperchoice environment all the time. They also claim that the combination of hyperchoice and time stress is extremely exhausting. As the consumer world becomes more complicated due to endless opportunities and multiple social motives, it is no wonder that consumers seek for convenience. For example, according to Heneghan [77], convenience is a driving force behind food consumption nowadays. Longing for convenience explains the appeal for effortless and intuitive decision-making.

Due to mediatisation in keeping up with social connections and facing choice and information overload, consumers suffer from the time scarcity problem. People do not have enough time to do all the things they would like to. Time scarcity is highly problematic, but one way to resolve it is by multitasking. It has been noticed that especially young people multitask [78, 79]. One obvious consequence of increasing multitasking is attention deficit. Human attention is a scarce resource, and we can only focus on a limited number of items at one time [80]. Beckwith [81] argues that we really cannot do many things at the same time; we just try to. He says, "We do not multitask, we multitry". He agrees that physically we may be able to do many things simultaneously, but our minds concentrate on only one thing at a time. The more we do, the less we notice. If people pay more attention to one thing, they notice the others less [80].

## How will the changes affect consumer decision-making?

The previous chapter pondered the changes in the decision-making context. In short, it was stated:

– Consumers pay less attention
– Decision-making will become more complicated
– Consumers are under time pressure more than before
– Symbolic power of consumption will become more important
– Consumers seek for more convenience

Paying less attention would imply that habitual decision-making (choosing the same option as before) would be more common (−0.15**) and rational decision-making more seldom (0.12**). The more complicated the choices are, the more people use certain heuristics. One example of this is elimination by aspects (−0.12**) and their lessening ability to use rational decision-making (0.13**), that is, considering all options and all alternatives. The more time pressure there is, the more people use satisficing (0.10**) and the more they

settle with good enough. Some products have more symbolic power than others. For example, buying toothpaste or sneakers bears totally different social currency potential. It can be concluded that products will be more divided into those with symbolism potential and those without. When consumers seek convenience, they also want effortless decision-making, which implies using some heuristics, for example elimination by aspects (0.10**).

Another way to look at the future of decision-making is to look at how young people (14–25 years) make decisions compared to older people. Decision-making style is not a feature that develops by age, but is a construct of environment and personality. The same data revealed that younger people have more motives (age correlates with number of motives by 0.13**), they experience more time pressure (0.17**), they find it more difficult to decide (0.22**), they have less energy for their decision-making (0.16**) and they are less able to concentrate when making decisions (0.13**). Being impatient and suffering from time shortage, they also want to decide as quickly as possible (0.23**) and as effortlessly as possible (0.15**). These needs lead to using more satisficing (0.14**), more lexicographic (0.12**), less careful deliberation (−0.21**) and less counting of plusses and minuses (0.20**).

In summary, this would imply that consumers will use more heuristics, satisficing and habitual decision-making in the future except when self-branding, or when careful deliberation is in order. Due to a complicated world and more specific social needs, it is likely that the interplay between easy decision-making and accurate decision-making will be more important. Some decisions demand more deliberating and some can be settled with good enough. One interesting consequence of the more complicated world and consumers wanting to minimise effort while deciding is that the appeal for outsourcing the decision-making will grow. Shopping suggestions applications (like Amazon or Netflix recommendations) will become more popular. A similar phenomenon is the interest people show for all kinds of "our most popular items" lists. People think that if others have bought it, it must be good, and I should buy it, too. The appeal of outsourcing decision-making is also visible when making voting decisions: People rely more and more on voting advice applications [82].

## Discussion

It has been shown in this study that consumers' decision-making strategies depend on many context- and situation-dependent variables, and the changes in those variables change how decisions are made and what will be chosen. Furthermore, some changes were speculated based on mediatisation, the power of social networks, increased opportunities, shortage of time and attention deficit. It was argued that consumer decision-making will firstly be dependent on identity play and social currency–related needs and secondly that the choices will be dependent on the social identity–related potential the product has. More generally, consumers will struggle between wanting to make accurate decisions and effortless decisions. Since one cannot have both, the important decisions will be deliberate and the non-important ones can be intuitive or even outsourced.

There are many marketing implications based on the changes in consumer decision-making. For marketers it would be very important to find out how their customers use their product in identity play, in self-branding and as social currency. Since these roles are of growing importance, the product's potential to be used in these roles should be raised by marketing and product development. This also leaves room for clever positioning of products. If the customers use the product for self-branding, it would be good to provide a lot of detailed information for them (because they use rational decision-making and elimination by aspects). Enable the usage as social currency and remind your customers of the potential. Another implication is that the decision-making should be done as easily as possible and perhaps offer the change to outsource decision-making by providing lists of the most popular items, items that people like you have bought, etc.

From policymakers' view the socially constructed world of consumers (or citizens) is mainly good, since the goals of policymakers are commonly accepted in the society. That is, there is a common agreement that people should eat healthier food, make less waste and buy more domestic products. Which means that people can and will use these virtues in their self branding and consumption. By buying healthy products, making ethical environmentally or locally friendly choices people can gain useful social currency. Socially constructed world has also its downsides from the policymakers' view, since it is impossible to govern. However, if the wanted virtues are branded carefully to be attached to consumers' identity and used in self branding the policymakers have more opportunities to influence consumers' consumption habits than they used to.

Although the research has reached its aims, there are some limitations related to rather small sample data and data being only from Finland. While Finland is quite similar to many other western countries there are some differences. Finns have been quite eager to accept new technological devices and to connect to social networks. Since the country is quite small the social circles are small also. This and the fact that Finns not big on small talk could lead to greater need for social currency achieved by consumption. The subtle identity and value cues provided by consumption and outspread by social media are very useful. However, it is believed that the need for social currency is great in other cultures, too.

The future of consumer decision-making would be interesting to analyse further in light of what neuroscience has recently found out about brain plasticity—the ongoing development of our brains based on what we do [83]. For example, it has been found that taxi drivers' brains have developed in the area of navigation ability [84] and musicians' brains develop differently [85]. Very recently it has been noticed that playing games, for example Super Mario, changes the players' brains as well [86]. It has been suggested that gaming or gamers (due to the differences in their brains) could be used to solve problems of the modern world. For example, Camille [87] argued that gamers learn to co-operate, face different people and cultures, anticipate and adapt. The Finnish army believes in gamers, too, since according to Huhtanen's [88] article, they plan on recruiting gamers as a separate group to offer a good challenge in war simulations. Multitasking, time shortage, social pressures and mediatisation will most likely bring along interesting changes in brains and consumer decision-making in the future.

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## Appendix: Description of data

The data used in this study was originally collected for Willman-Iivarinen's (2018) dissertation about consumers' media choices. There were questions related to media usage and preferences in general, but the main part of the questionnaire was dedicated to the last media usage event. The respondents were asked to ponder which media products they considered, media usage motives, situations, habits and how they reach their decision. The method for gathering data was a web-based survey. There were 336 acceptably completed questionnaires in total, gathered during summer 2014. To provide an incentive for participation, a 50€ prize was drawn among the participants. The questionnaires and sweepstakes were marketed on the internet and in Facebook. Because of the inadequate amount of responses (probably due to the length of the questionnaire), the questionnaire was further marketed in Tampere University's doctoral student e-mail list, and an invitation was sent to Miratio's (a marketing research company) mailing list. Later, an additional data set was gathered and themed "Facebook usage", which contained many of the same questions, along with some new ones. This new dataset was needed to get more reliable results (more per question data) and to specify a few questions that arose from analysing the original data. The additional dataset was gathered in fall 2016. Even though the sample is collected from several sources, it represents Finnish people rather well by age, living area and education. See the table below:

|  | Sample | People in Finland |
|---|---|---|
| 15–25 years | 9% | 14% |
| 25–44 years | 45% | 30% |
| 45-64 years | 37% | 31% |
| Over 65 years | 9% | 25% |
| Men | 25% | 49% |
| Women | 75% | 51% |
| Basic education | 12% | 27% |
| Upper secondary school | 35% | 50% |
| Bachelor's degree | 21% | 12% |
| Master's degree | 32% | 22% |

A great challenge in designing the questionnaire was caused by the very abstract nature of the concepts and the research subject being the decision-making process, which consumers are typically not even aware of and certainly not able to elaborate upon. Steps can be taken automatically without conscious deliberation, and the consumers are thus unable to elaborate about their behaviour when asked directly. That is why many indirect methods have been used in this study when examining the people's choice process. The problem of limited memory was overcome by two simple tricks: Firstly, the respondents were asked to choose one media event they *remembered* well in an attempt to help respondents subjectively delete the options they do not remember well. Secondly, there was a control question: "How long ago was this media usage event?". This question was used to delete such respondents from the data that had used media a long time ago (more than one day). However, there were none. The variables in Table 1 were mainly formed using Likert-type statements. The variables were collected from several questions:

The elements of the decision task were formed by 5 –point scale Likert statements. The question was Q32: "*How well do the following statements relate to your last media usage event?*". The statements were coded as:

| Variable | Statement |
|---|---|
| Time pressure | *I did the media choice in a big hurry* |
| Difficulty of choice | *Making media choice was easy (disagree)* |

The respondents were asked about their resources at the time they used their chosen media with question Q28. ""*How did you experience the time while you used your*

*chosen media last time?*". A 5 –point Likert scale was used. The statements were coded as:

| Variable | Statement |
| --- | --- |
| Attention capacity | I felt it was easy to concentrate |
| Energy level | I felt energetic |

Decision making goal variables was formed by presenting a list of different decision making goals and asking the respondent with Q34: "*Which of the following things did you consider important when you made the choice? Please mark all the alternatives, you considered important*". The statements were coded as:

| Variable | Statement |
| --- | --- |
| Minimising effort | I tried to decide with as less effort as possible |
| Maximising accuracy | I tried to choose the best of all possible alternatives |

The social aspects of choices were measured by question 27 "*How would you describe your relationship with the media you used*?" and a 5-point Likert scale was used.

| Social currency | The product symbolizes my connection to certain group or area |
| --- | --- |
| Connects | Products connects me with other people in the area |
| Symbol | Product is a symbol for my future aims |
| Self Branding | I use ii in order to provide a better picture of oneself |
| Signal | Using this product signals my values and style |
| Mood management | I use in order to gain a better mood |

The respondents were then asked which decision strategy they used when making media choice. Since it was believed that the decision strategies are unfamiliar to many respondents an introductionary question was provided first and the respondents were lead to think about their decision making way in general. This was done with Q35: "*Which of the following decision-making styles do you use at least occasionally? (please mark all styles you use)*". After this, respondents were asked to choose from the same list the strategy they used when making their media choice last time. The chosen decision strategy was formed by Q36: "*Which of the decision-making systems did you use when making your last media choice?*" The alternatives are listed below. The statements provided a short explanation in order to clarify the used terms.

| Variable | Statement |
| --- | --- |
| Rational | Careful deliberation system: I deliberated carefully all the alternatives and compared their properties |
| Satisficing | Good enough system: I chose first suitable option, that came to my mind |
| Lexicographic | Best characteristics system: I chose according to one superior feature |
| Elimination by aspects | Elimination system: First I eliminated all the options that did not meet my criteria |
| Frequency of good and bad features | Plusses and minuses system: I counted plusses and minuses and chose the best one |
| Equal weight heuristic | School grade system: I gave alternatives grades and chose best |
| Intuitive | Intuitive system: I trusted my instincts and chose the alternative that felt best without deliberation |
| Habitual choice | Habitual system: I chose the same option I am used to without much deliberation |

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