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14 'Interesting but scary'

Customers' perceived value of MyData

Heidi Haapio and Outi Uusitalo

Introduction

Most organisations regularly collect large amounts of data about their customers and use it for different purposes. When consumers use their credit cards or apps or allow the use of cookies, they accept the storage of the data in a data warehouse. The owner of the data warehouse can mine the information and selectively use it to fit the needs of the organisation (Janasik-Honkela and Ruckenstein, 2016).

Big Data is a new form of capital: it facilitates decision-making and operations. Data are also a valuable resource for organisations because understanding customers' buying behaviours and constantly changing needs helps organisations develop the direction of their operations and servicescapes (Janasik-Honkela and Ruckenstein, 2016). Information is used to predict customers' actions and contemplate and estimate tactics and strategic business activities. Recent discussion has emphasised the quality of data, analytic tools and the ability to analyse and use data in decision-making (Erevelles, Fukawa, and Swayne, 2016; Gandomi and Haider, 2015).

Despite the proliferation of data collected from customers and the transformation of customers' actions into data – a phenomenon called datafication (Ruckenstein and Schull, 2017) – there is still little understanding of how customers can control and use that data. To date, two major approaches have been identified. In the first approach, organisations offer access to data to their customers via different websites and apps. For instance, electric companies offer information about their customers' electricity usage, which the customers can use to find ways to reduce their own electricity consumption. The second approach is consumers collecting data themselves, such as with sports trackers and mobile phones. Various apps provide tools for analysing, for example, one's everyday activity or quality of sleep. Both forms of data are called MyData.

Datafication has raised concerns about and awareness of the possible risks of sharing personal data. Nevertheless, data equal value for organisations and customers. Previous research has addressed the issues of well-being apps (e.g. Koivumäki *et al.*, 2017), and the value of the data to organisations (Kumar and Reinartz, 2016). Saarijärvi (2012) focuses on grocery shoppers' reverse use of data (customers using data that have been collected about them) from nutrition codes to support healthy eating, which could lead to changes in customers' buying habits.

One risk to this approach, as perceived by customers, is uncertainty about the types and details included in the data. Previous studies indicate that customers' main worries include data privacy and security (Kshetri, 2014; Kuoppamäki, Uusitalo, and Kemppainen,

2018). However, other dimensions of data, such as its direction (positive vs. negative) or its potential to awaken thoughts, feelings or social meanings, have rarely been addressed.

Data are coveted as a valuable resource in the marketplace because they can reveal insights regarding customers' actions and uncover previously unknown patterns (Erevelles, Fukawa, and Swayne, 2016). Previous studies have examined customers' perspectives on MyData, including its benefits and affordance in the field of self-tracking and quantified self, measuring health and exercise information (Nafus and Sherman, 2014; Ruckenstein and Pantzar, 2017). Studies in information technology have proposed models for how to exploit data and share it with different actors. However, regarding data value, little is known about its content, the prerequisites for creating it, when it decreases and its contradictions. This study aims to increase our understanding of how consumers benefit from these data. We examine what MyData means to customers, how they define data that capture their purchases and how they feel after they have explored the data.

The value of MyData for consumers

MyData refers to data that have been personified, personalised and returned to the owner to use for their own needs. MyData includes understanding Big Data from the customers' perspective, which highlights the data's visibility and transparency and allows people to control and use information that is collected from them. The consumer is then free to use the data as desired. They can read, sometimes correct and ultimately decide who is allowed to use their data (Poikola, Kuikkaniemi, and Kuittinen, 2014). Essential features of MyData are accessibility to and control by people. All the information is personalised and adequate from the customer perspective (Saarijärvi, 2012).

Online services provide an illuminating example of value creation in collaborations between customers and organisations. Online customers interact with technology (i.e. the physical resources that the company offers) instead of directly interacting with a company's personnel or resources (Grönroos and Voima, 2013). MyData implies that people use data collected of them for their own purposes, and in this situation, value-in-use is created. Value creation is interwoven with various social and physical tasks that are prevalent in the customer's everyday life. Accordingly, customers create value in their context and from their own starting point. Friends, family and work are typically part of customers' everyday lives, and experiencing value is related to all these important aspects of life (Heinonen and Strandvik, 2015).

Organisations enable value creation processes and provide service facilities, such as web services and platforms, which help customers manage their daily chores (Galvano and Dalli, 2014; Grönroos and Voima, 2013; Heinonen, Strandvik, and Voima, 2013; Saarijärvi, 2012; Saarijärvi, Kannan, and Kuusela, 2013). Value is created and experienced when the customer is using the product or service (Holbrook, 1999). Accordingly, when an organisation succeeds in giving value to its customers, it is likely to gain a significant competitive advantage (Helkkula, Kelleher, and Pihlström, 2012).

Value-in-use implies that consumption involves experiences that enable value creation. An integral condition in value-in-use is that the product or service has a concrete use. For the provider organisation, value-in-use processes are often invisible, and it may not be possible to affect or intervene in them. Customer-Dominant Logic (CDL) indicates that the customer controls service situations and thus creates value independently; customers

decide what products or services to use (Anker *et al.*, 2015; Heinonen and Strandvik, 2015). CDL suggests that value is multi-contextual; consequently, many different factors of customers' lives affect how their created value is experienced (Heinonen, Strandvik, and Voima, 2013). Additionally, customers decide whether to look at their own data, and if they do look, they decide what to do with it or (if they are indifferent to the data) to ignore it.

Both customers and organisations are needed to ensure value creation (Echeverri and Skålén, 2011; Eichentopf, Kleinaltenkamp and van Stiphout, 2011). The data in this study include answers from customers who have tested S-Group's 'Omat ostot' [my purchases] service. The data are shared with customers in the S-mobile app, which allows them to view their personalised information. We focused on perceived value and which meanings it reflects. Customer value emerges when the customers scroll through their own shopping data and find pieces that are interesting and/or necessary for decision-making. The company is a facilitator of value when it offers the data back to the customer, even though there is no interaction between the customer and the company. The customer has a relationship with the data service (Anker *et al.*, 2015).

Data and method

The empirical data in this study describe the meanings, benefits and risks that customers perceive in their data. We utilised survey data and answers to open-ended questions that contained meanings, hopes, expectations, information, associations, perceptions and attitudes. The data were collected from S-Group's Omat ostot service. In this platform, customers can view their purchase data, which are gathered from their membership cards. The data are organised by product group level and displayed as the number of products purchased and the euros spent. The data were collected in March 2017 while the service was in its pilot stage. The Omat ostot service was officially released in 2019. The questionnaires were sent by email to panellists who had consented to receiving a questionnaire. While the questionnaire included both structured and open-ended questions, this paper utilises data from the latter.

In total, 2,070 (15%) panellists answered the questionnaire. While 70% of the respondents used the Omat ostot service, 20% did not use it, and 10% did not want to answer the questionnaire. Regarding gender, 44% of the respondents were male and 56% were female. The panellists were active customers who were interested in developing the company's performance; thus, they did not represent the average S-Group customer.

In the open-ended questions, the respondents were asked to write their opinions and understanding of five topics depicted in Table 14.1.

The answers provided a rich variety of descriptions, opinions and convictions, some of which included a lengthy discussion on the service, whereas others featured only a

Table 14.1 Topics of the open-ended questions

Describe freely what kind of thoughts you had when you saw your shopping data	n = 1,703
Give free-form feedback on the features of the Omat ostot service and its usability	n = 706
Give free-form feedback on how the Omat ostot service could be improved	n = 404
If you want, please state any compliments you have for the developers of the service	n = 283
If you want, please write feedback on this questionnaire; you can also further define previous answers if needed	n = 93

word or a smiley face. The one-word answers and answers that included, for example, addresses, were deleted, resulting in 1,259 answers being included in the data analysis. The textual data were analysed using the qualitative content analysis technique as follows: (a) the material was coded; (b) the codes were reworked iteratively several times to ensure that all possible codes were found; (c) words, phrases and sentences that emerged from the data were used as code units (e.g. the codes funny, big brother, unnecessary, amazement and fear were generated from the data); (d) all codes were arranged into categories; (e) categories were examined carefully so that all the relationships between the categories were found and potential new categories were identified and (f) larger themes were constituted based on the categories (Eriksson and Kovalainen, 2015; Hair *et al.*, 2016).

Findings

Analysis of the data produced six themes – entertainment, learning, reflecting on buying behaviour, easing everyday living, transparency and privacy – which reflected the value experienced by the respondents when examining their data.

The results found that 47% of the respondents mentioned things that were either positively or negatively related to entertainment, while a reflection of buying behaviour was present in 29% of the responses. Learning and privacy were both adduced in 7.4% of the responses, and transparency was highlighted in 7.1% of the responses. Easing everyday life was highlighted in only 2.1% of the responses, but notably, the answers in this value reflected more negative than positive associations.

Formation of value in MyData

Regarding the role of the service provider, privacy and transparency were connected to the possibility of S-Group contributing to value creation. For example, when referring to privacy, some respondents felt that the company was monitoring and stalking people; thus, many did want to use MyData and the Omat ostot service. Some customers appreciated how everyday life became easier when using the Omat ostot service. By contrast, others found it too time-consuming and difficult to use.

Holbrook's (1999) typology of customer value, which was used to analyse expressions of value in the data, states that value is created when using a service or product, and each customer creates value from his/her own basis and needs, resulting in some customers getting more value and others getting less value. Value creation is contingent on the situation and the relationship between different services. Value is essentially a subjective experience.

Three different dimensions of value experience emerged when using the service: extrinsic/intrinsic, self-oriented/other-oriented and active/reactive (Gallarza *et al.*, 2017; Holbrook, 1999; Willems, Leroi-Werelds, and Swinnen, 2016). The extrinsic condition is when a service is used to gain a functional or utilitarian purpose other than consumption. Conversely, the intrinsic condition is when customers use the service to gain value for themselves. When it is self-oriented, value is meant for the individual and that individual uses it for his/her own purposes. Other-oriented value is that which stems from a consumption situation that depends on how other people react to it or how it affects others, such as family, friends or nature. Value is active when a customer does something, such as drive a car, and it is reactive when value is created through, for instance, admiration or reverence. A product can also create value although activity from the customer is not required.

Group 1: benefit

Answers to the open-ended questions in our data indicated that the customers experienced various positive outcomes when using the service and contemplating their data. Thus, benefits were created. Customers actively reviewed data when seeking desirable benefits for themselves, such as savings or healthier purchases. The benefits in the current study were extrinsic and varied between respondents, ranging from financial to nutritional, etc. The expressions of value creation were connected to easing everyday life (positive), learning (positive) and reflecting on buying behaviour (positive).

The responses indicated efficiency (Gallarza *et al.*, 2017), how life became easier when using the service and that different uses for the data can be found. Planning and tracking one's economy are easier when there is no need to document the expenses. Therefore, the service saves time. The utilisation of MyData involves creating apps and affordances that are supposed to ease everyday life, such as by allowing customers to track their energy or water consumption.

MyData allows people to learn something new from their behaviour and subsequently conduct favourable actions (e.g. control their finances or improve their health). Thus, by gaining access to their consumption data, customers can move their buying habits in a positive direction. While data are important to both companies and customers, MyData shows that customers need to learn about and reflect on their data to reap benefits from it.

When the customers noted that the service eased their everyday life, they attributed it to the ability to track their expenses and buying behaviour. However, for some, their days became more complicated because the data activities required extra time to sign in to services and review the information. Importantly, the respondents who had been tracking their consumption in one way or another experienced easing of their everyday life. Conversely, the respondents who had not tracked their consumption felt that the service required too much of their time, thus the lack of efficiency.

Learning often involved accumulating new facts about consumption habits (e.g. where and how much money they spent). A common thread was that customers were unaware of how much money they were spending. Therefore, the data were often either a positive or a negative surprise. The presentation of their true spending caused many shocked reactions, but the data helped the customers understand their consumption habits. A sample of the responses included the following:

> *I was shocked by how much I buy sweets and chocolate. I hadn't realised the amount of euros I spent on those. I think this kind of service really opens your eyes.*
>
> (female, aged 35–44)

> *It was absolutely a shock that the second most money has gone to cheese after fuel. All aspects are demonstrative of your own buying habits.*
>
> (male, aged 45–59)

However, reflecting on one's purchases via the data was described as a useful experience. The expenditures and their content became understandable.

> *The experience was WOW!! Here my life is now wide open – when I go to a store, where I shop, what I buy and how much. But all the same, I think the information I received is very interesting and certainly thought-provoking.*
>
> (male, aged 25–34)

One consequence of reflecting on their shopping habits was the strengthened perception of previously invisible purchasing habits. Even without obtaining any new information, it was felt that buying behaviour can be managed, which strengthened the positivity of the experience.

Group 2: uselessness

Several responses indicated that the users of the service failed to recognise why they should use their data and how to benefit from the information. We labelled this value uselessness, as it reflects lack of excellence (Willems, Leroi-Werelds, and Swinnen, 2016). In Holbrook's (1999) typology, this type of value is self-oriented and aimed at gaining external benefits, such as saving money. This value is considered reactive because it does not imply any actions from the consumer.

Here, uselessness involved expressions of reflecting on buying behaviour (negative), learning (negative), entertainment (positive and negative) and easing everyday life (negative). However, at the time of the survey, the service was not yet published and the respondents used it only to answer the survey. Therefore, the respondents may not yet have found reasons for using the service.

Entertainment involved responses that described looking at MyData as 'just for fun'. When the respondents did not see a purpose for watching their data, they did not perceive any aspects that would affect them, such as their buying behaviour. Exploring their data was mostly considered fun yet pointless. For some respondents, the amount of data offered caused anxiety and even irritation. Some responses included the following:

> *Quite funny . . . maybe I should buy chocolate less frequently:).*
>
> (male, aged 45–59)

> *Pretty interesting trivia.*
>
> (female, aged 25–34)

> *I don't see any purpose for this. Pure nonsense.*
>
> (male, aged 60–69)

When reviewing one's buying behaviour was considered negative, there was nothing to reflect on, and thus, the service was considered unnecessary. Some respondents also felt insulted about the insinuation that they needed help with their memory and understanding of past purchases.

> *I know what I have bought, and I don't need any services for this.*
>
> (male, aged 45–59)

> *I feel that such detailed information is unnecessary, and I don't understand how I could use it. I have budgeted my expenses and have kept track of my purchases for decades, so I know what I am spending my money on.*
>
> (female, aged 60–69)

The respondents who considered learning negative connected it to a lack of need or reason. In these cases, the respondents reacted extremely negatively to the service:

> *Completely unnecessary and indifferent service that officers who regulate consumers and Data Protection have already been forbidden [from using].*
>
> (male, aged 60–69)

> *I don't see any reasons why I would need information about my own purchases. It wouldn't guide me to make certain types of purchases.*
>
> (female, aged 45–59)

Uselessness was connected to negative meanings regarding easing everyday life, which became more complicated and difficult when using this service. This was justified because signing into a new system requires remembering a new username and time to look at the data. Some complaints were as follows:

> *Nobody bothers or has time to see their MyData constantly?????*
>
> (female, aged 60–69)

> *Quite pointless to be straight. Just a waste of time.*
>
> (female, aged 45–59)

Group 3: privacy

The responses conveyed several worries related to privacy, such as feelings of being monitored and spied on by organisations. The concern that a third party is monitoring customers' shopping raised the respondents' concerns that service providers are invading people's private lives. Privacy was also associated with worries about information security. Customers' information could end up with an unintended party; thus, others could review the data without permission. Privacy value is similar to aesthetics (Gallarza *et al.*, 2017). Connected to Holbrook's (1999) model, the privacy of data is a self-related and intrinsic value, especially when consumers feel that their privacy has been violated. It was also reactive because the respondents did not want to give out such information.

The fear of losing their privacy stirred strong feelings of irritation, distress and fright. It was interesting when the respondents realised that, regardless of their wishes, the organisation was collecting information about its customers, and the Omat ostot service is not the only service that collects and analyses MyData. Some respondents' comments included the following:

> *Big brother is watching. Everything seems to be known frighteningly accurately.*
>
> (male, aged 45–59)

> *It is completely unnecessary, and it outrageously insults privacy if there is any more.*
>
> (female, aged 60–69)

> *The information is endangering privacy if it's available for others, such as from an error in information technology, data theft or due to some other situation.*
>
> (male, aged 45–59)

Privacy was considered important, and the threat of losing privacy created negative feelings. There were also suspicions about opportunism. The Omat ostot service is useful

for S-Group; thus, they tried to sell data collection as acceptable in the eyes of customers. The control of privacy translated to an unwillingness to let others see the customers' shopping data and the customers not wanting to look at the data themselves.

Group 4: transparency

In our study context, transparency is other-oriented, that is, created when customers have an experience through others, such as seeing what family members have bought. Transparency is active because customers must sign in to the service to see the data. It is also intrinsic because customers do not consider benefits, such as savings, but instead seek the feeling of transparency. In line with these characteristics, transparency as value reflects ethics (Gallarza *et al.*, 2017).

Transparency can be either positive or negative. When transparency was considered positive, it was seen as fair to return the data to customers. Given that the company was collecting the data anyway, sharing the data with customers was seen as a benevolent act of transparency. Customers want both companies and the data to be transparent. Some customers even wanted as much data as possible to use for themselves. Transparency had a negative value for customers when it was connected with troublesome situations, such as when all family members could see the information that was collected. Transparency can be uncomfortable for people who presume that no one else knows what they have bought. Some relevant comments included the following:

> *Of course, S-Group uses the service for their own company, but it is great that the shopping information is also available to consumers. As long as the consumer data is not spread out to outsiders.*
>
> (female, aged 25–34)

> *It is fair that I can look at my own shopping when the statistics are compiled anyway, such as for marketing.*
>
> (female, aged 45–59)

During the survey, data were collected from the Omat ostot service via S-cards but not from collateral family member card owners. In the responses, transparency was considered from this perspective, but there were contradictory goals among the respondents. The service was sometimes considered useful and sometimes not when the entire household's information was given. The latter opinion was connected with controlling their data and preventing other family members from seeing it. Some respondents even wanted to delete the data. In these cases, transparency was a debilitating factor and included the potential for conflicts and discord, which could lead to avoiding authentication or keeping the data secret if possible.

Conclusion and discussion

This chapter introduced the customers' perspective of MyData that was collected in grocery stores to illustrate their shopping behaviour. Until now, how data serve customers' interests has been poorly understood. The findings gathered several insights into the value of these data and raised important questions that must be answered when customer data are collected and published for customer use. More broadly, this is a case

of how technology can be designed to serve customers and how customers experience the value of it.

Customer value of MyData is created interactively when customers use the data. The service provider facilitates this value creation, but customers subjectively contemplate the data. Value created is relative, that is, different customers form different subjective value experiences such as benefits, uselessness, privacy and transparency. These experiences imply underlying value types efficiency, excellence, aesthetics and ethics (Gallarza *et al.*, 2017). Importantly, customer value of MyData also reflects preferences, as strong feelings and opinions were expressed when contemplating the data. Consequently, value experiences can indicate behavioural intentions. This study can help identify a strategy for the development of data services that facilitate positive value experiences for customers.

This study has a number of limitations. We utilised data collected in the pilot phase of launching the Omat ostot service. Therefore, the customers who participated in the study had only limited experience of using the data in their everyday lives. Future studies could examine the evolving value experiences after customers have accumulated experiences of MyData.

Key lessons for future research

- Customers' use of MyData allows creation of subjective experiential value.
- Value is idiosyncratic to each customer, and it can be positive (empowering) for consumers, while it can also be negative (value destruction) and reduce customers' well-being.
- Future research should explore the behavioural consequences of MyData services. For example, how does the incorporation of the local ingredients or the carbon footprint affect data value and purchasing behaviour?
- Further research could examine how service providers utilise the customer data. Is there any added value that can be utilised in sales promotion or when designing selections of, for example, environmentally friendly products?
- This study did not address the usability and the physical and aesthetic aspects of the system; future studies could examine how the MyData service system design influences customer value.

Disclaimer

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