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Christian Bala and Wolfgang Schuldzinski (eds.):



# **The 21st Century Consumer: Vulnerable, Responsible, Transparent?**

Proceedings of the International Conference on  
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# Science for a good consumer policy

CECORE and ICCR – A North Rhine-Westphalian initiative

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## Consumer Research on the ascendant

At the beginning of the new Millennium, the Danish consumer researcher Folke Ölander who passed away in 2013, complained about the static character of consumer research: It had no identity, missing capacities and it lacked legitimacy. But there was no reason for him to despair. Instead, he asked how “research relevant consumer policy could be intensified” (Ölander 2005, 26). His suggestion was to found a competence center for “collection and communication” to combine and connect the research activities “of many universities” (Ölander 2005, 27). Such a competence center would foster ties between science, consumer interests and policies and, if designed accordingly, could establish certain focal points and promote projects.

Precisely these strengths were one of the reasons why the Competence Center of Consumer Research North Rhine-Westphalia—CECORE NRW (*Kompetenzzentrum Verbraucherforschung NRW*) was founded as a cooperation project of the Ministry for Consumer Affairs (*Verbraucherschutzministerium*), the Ministry of Science (*Wissenschaftsministerium*) of the German Federal State of North Rhine-Westphalia and the Consumer Association of North Rhine-Westphalia (*Verbraucherzentrale Nordrhein-Westfalen e. V.*) in 2011.

To bolster consumer research’s position as an interdisciplinary subject, young scientists are supported by CECORE and awareness for research activities of North Rhine-Westphalian scientists is raised on the national, european and international level. Finally, CECORE optimizes knowledge transfers through publications and communicating research results.

The Consumer Research Network NRW (*Netzwerk Verbraucherforschung NRW*) established by CECORE already has 290 members who support consumer research as a joint, inter- and transdisciplinary subject. It has succeeded in winning over scientists who may work on consumer-related topics, but are not in touch with consumer research.

Over 740 people follow CECORE on Twitter and its newsletter has 360 subscribers. Since 2011, nine workshops and one expert forum with a total of 540

participants have been conducted. The results of the workshops have been documented in seven volumes of the series “Contributions to Consumer Research”<sup>1</sup> and an anthology published in cooperation with the State Center for Political Education (Bala and Müller 2015). The majority of publications were successfully published via Open Access.

Through the means provided by the Ministry of Science for CECORE, it was possible to begin expanding our capacities: From 2012 to 2017, twenty young scientists were awarded through the means of the Ministry of Science. 28 project proposals were sponsored whose findings were made publicly available via Open-Access.

But the changes to consumer research are more profound than the numbers suggest. Significant is that consumer research has gained prominence and identity since CECORE and its joints engagements spawned further initiatives: On federal level, the Consumer Research Network and the Council on Consumer Affairs (*Sachverständigenrat für Verbraucherfragen*) were founded. In Baden-Württemberg, the research center Consumer, Market and Politics (*Verbraucher, Markt und Politik*) was established and, since 2015, Austria has been promoting networking through the forum “Konsum neu denken” (see Fridrich et al. 2017). This is accompanied by a lively debate about the focus and theoretical construction of consumer research, something that is needed to ensure the quality of scientific research.

These examples show that a change occurred in the thinking of “consumer administrations” and “consumer organizations” since Ölander made his appeal. These institutions no longer merely display their past “polite interest in research” (Ölander 2005, 27). While a market for commissioned research may have existed, who, asked Ölander, “stands up for research which aims at having public exchange and debate being regarded as equally important and legitimate as research with clearly defined customers?” (Ölander 2005, 24)

Consumer research is supported by specialist departments. This is right and important. But, until now, consumer research has only been regarded as a joint

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1 <http://www.verbraucherzentrale.nrw/kvfbzv>.

topic of *consumer and research policy* in North Rhine-Westphalia where independent funding is provided. This shows that this field can grow if it is not just seen as a specialist or commissioned subject, but as one that also promotes science. The equal support of applied research and basic research by both ministries for CECORE is an important factor for the success of the project as part of the sustainability and research strategy of the state government which wants to further technical and social change processes.

These change processes are not only being debated in North Rhine-Westphalia or Germany, but by an international community of scientists: If we want to implement sustainable consumption, do we mean an efficient green economy or sufficiency strategies of post-growth societies? Do we need more privacy protection or are consumers migrating towards a post-privacy society? Is the sharing economy a socially innovative form of consumption or does it tend towards a platform economy? Does increasing social inequality require new consumer policies? Should politicians influence consumer behaviour through nudges? Do we need more experimental studies or do we need to be more practical?

These questions and the surrounding debates brought the 135 participants from 18 countries to the International Conference on Consumer Research (ICCR) in Bonn on 26 and 27 September 2016. This is the second conference of its kind since 2014 which aims to turn CECORE and the ICCR into a perpetual forum for international and interdisciplinary exchange. Minister Svenja Schulze whose Ministry of Science which supports the ICCR 2016 also hinted at this:

“It should not be taken for granted that the International Conference on Consumer Research is being held in Bonn for the second time today. After all, two years ago, this event was intended to be a one-time occurrence. But due to its success and positive feedback, we recognized early that this would not be a one-time occurrence. Therefore the issue at this stage is too relevant and debates are topical. And as we like to say in the Rhineland, ‘Once is never, but what happens twice is a tradition; and what happens thrice is a custom!’ (Minister Svenja Schulze on 26 September 2016 in her opening speech at the ICCR 2016).”

The ICCR provides an opportunity for empirical studies to be presented, but is also supposed to further the establishment of the theoretical foundations for consumer research advocated by Ölander. This volume collects selected contributions to the Conference initiated by the chairpersons of the individual sessions. The number, variety and quality of the contributions demonstrates the dynamic developments of consumer research over the past years.

The North Rhine-Westphalian state government wants to continue to accompany this positive development, as the Minister for Consumer Affairs, Johannes Rimmel, stressed when he announced that CECORE would become a permanent institution as part of the Consumer Association of North Rhine-Westphalia:

“CECORE ‘provides our state with an indispensable knowledge base for reasonable consumer and economic policy measures. Examining consumer research findings gives us an opportunity to base political action on current consumer needs more accurately than ever before. Consumer policies will move closer to the citizens and will, thereby, become more effective. ... It therefore seems reasonable to put the work of the Competence Center on a firm and permanent basis.’ (Minister Johannes Rimmel on 26 September 2016 in his opening speech at the ICCR 2016).

## Shaping the Future

New independent, critical and top-notch consumer research is needed for consumer policies, as CECORE’s partners agree. This can help shape the future. And this why the motto of the ICCR 2016 was “The 21st Century Consumer: Vulnerable, Responsible, Transparent?”

However, as a redeemed trend researcher once put it, the only future that can be studied is “the future that has already happened.” (Peter Drucker as quoted in Rust 2009, 86) We know a number of social and economic transformation processes that have already started and that will shape the consumer of the

21st century—globalization, demographic change, ecological consequences of consumption, social inequality or the digital economy—, but we can only begin to anticipate what impact they will have and to what extent we may have to rethink the actions and assessments of which we have grown fond. Good consumer policies are characterized by their ability to learn.

The information-based consumer protection model will continue to be important, but its previous foundations—the guiding principle of the responsible consumer, the simple information model following the principle “value for money”—will be questioned for good reason. Consumer research has shown that we need differentiated consumer typologies and that more information is not always better information. Instead, we have to focus on the question of how to communicate information. The addition of social and ecological costs to the quality and price of a product is no recent development.

There may be no crystal balls that can show us the future and offer options for action, but we can already see the challenges ahead for consumer policies or, as mathematician and computer pioneer Alan Turing said, “We can only see a short distance ahead, but we can see plenty there that needs to be done.” (Turing 1950, 60)

We only have to take a look at the newspapers to realize this. For example, electronic price tags are set to be introduced into retailing. These tags will not only be able to communicate with customers’ smartphones and make purchasing suggestions, but—as with online retailing—will also help adjust prices to demand. In the past, spying on users was something only large Internet companies did. But now, your supermarket around the corner will also acquire individual shopping profiles. How will we react to this challenge? Of course, measures will be taken against the gravest violations once they are discovered. But how can consumers be protected if they freely give up the privacy they say they value? This requires us to look deeper: Why do consumers do this? What will the economic and social consequences be? How can regulations be implemented to better protect one’s privacy?

As another example, we often hear voices to eliminate cash for economic and security reasons. But what would this mean for consumers? Would transactions be centralized among large companies, such as if Apple Pay, the an-

nounced uniform payment system via near field communication (NFC), were to prevail? And what would the consequences be for vulnerable consumers?

But privacy and marketing based on it are only some of the many challenges: We can already witness transformations products, distribution and consumption as the lines are blurred. The sharing economy and prosuming have acquired positive connotations and stand for a more sustainable, social and creative consumer culture. But this raises more questions than it answers: Will these forms of consumption remain niches or will they have far-reaching economic consequences, such as those feared by critics of the transportation service Uber? Will new business models destroy old structures through dumping prices? How will these transformation processes change the relationship between companies and customers? Will sharing and prosuming lead to a communization or merely to a commercialization of life?

Even only scratching the surface of transformation processes raises numerous questions for which we do not yet have answers. Nor will science always find them. But by—in addition to other focal points—investigating critically how social consumption changes can be initiated and accompanied and how social and cultural changes are viewed in practice, science has the ability to ask questions conscientiously and to not just follow a single technical-economic innovation paradigm. Or, as astrophysicist Carl Sagan said in his last interview, “Science is more than a body of knowledge. It is a way of thinking; a way of skeptically interrogating the universe with a fine understanding of human fallibility.” (Sagan 1996)

This volume seeks to contribute to this. We would especially like to thank the authors, colleagues and funders who made the publication of this volume possible. We would especially like to thank our longstanding colleague Silvia Strater who not only bravely planned and implemented the ICCR 2016 by herself, but provided decisive support to the publication of this volume. A documentation of the ICCR 2016 is also online available. The session reports give you a glimpse into all keynotes and lectures.<sup>2</sup>

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2 <http://www.verbraucherzentrale.nrw/iccr-2016>.

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# The road to the twenty-first-century consumer

A historical perspective

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# 1 Introduction

‘The nineteenth century has been the century of producers,’ Charles Gide, the French political economist and champion of the cooperatives, told students in 1898. ‘Let us hope that the twentieth century will be that of consumers. May their kingdom come!’ (Gide 1900, 227) Did his hope come true? This chapter provides a historical perspective on the figure of the consumer, which is, once again, attracting public and policy interest in debates ranging from climate change to sustainability.

Humans, of course, consumed things and resources long before Gide made this announcement. The ancient Greeks and Romans warned of the evils of luxurious living, as did the Christian fathers. Waste is a good indicator of the items in circulation in societies in the past. The first landfills, in Knossos, date back to 3000 BCE, and we know from archaeologists that the Mayans in Belize in 900 CE threw away perfectly good items (Rathje and Murphy 1992). It was, however, between the fifteenth and eighteenth centuries that consumption saw an unprecedented surge, reaching an entirely new qualitative, as well as quantitative, level of importance.

A new culture emerged that prized private comfort and the pursuit of new things. Possessions, refinement and comfort were already on the rise in Renaissance Italy and late Ming China. In 1475, for example, the Florentine banker Filippo Strozzi ordered 400 glass beakers from Murano. Sixteenth-century China was awash with books, porcelain cups and embroideries. At the same time, consumption here continued to face obstacles to expansion. In Italy, big spending was fine as long as it demonstrated one’s civic virtue, but it remained suspect if it was for private pleasure. In late Ming China, by contrast, the most cherished items were antiques, not novelties or new products. It was in the Netherlands and Britain that a new, more positive attitude spread that was more welcoming to things, and which prized dynamism, growth and innovation. The Dutch and British craved exotic things from distant places. Tobacco, tea, cotton and porcelain changed how the Dutch and Britons ate and drank, smelled and felt. By the late eighteenth century, cotton gowns and tea-kettles had even found their way into the homes of the urban poor. This wave of

new goods spread more easily through these two countries, unimpeded by the restrictions and customs that stood in the way elsewhere. In Germany, by contrast, goods faced a maze of customs barriers, guilds and suspicion by the male elite: women sporting fashionable neckerchiefs were fined, imprisoned and ostracised (Ogilvie 2003).

Above all, these commercial societies changed the way they looked at things in relation to people. In ancient times, things had been accused of corrupting the soul and estranging the individual from his or her true self, the life of the spirit. Between the seventeenth and nineteenth centuries a new outlook gained hold: things came to be appreciated as part of a 'material self', enriching individuals and nations. 'Greedy appetites', the great scientist Robert Boyle declared in 1655, were not bad (Boyle 1663). Rather, they made people inquisitive and enterprising. And the pursuit of goods, he wrote, even made them admire the work of God more. In the mid-eighteenth century, the enlightenment thinker David Hume rallied to the defence of 'modest luxuries' for creating new business, jobs and knowledge, for bringing people together in cities and clubs, and for sponsoring national growth and strength. Instead of something that needed to be suppressed or punished, consuming could be upheld as a force of civilisation and progress (Hume 1741). It was then, in 1776, that Adam Smith confidently announced in *The Wealth of Nations* that 'consumption is the sole end and purpose of all production' (Smith [1776] 1979, book IV, Chapter 8, 179).

## 2 The apotheosis of the consumer

By the late eighteenth century, there were in circulation many of the material and moral ingredients of a modern consumer culture. However, very few writers or people yet thought of themselves as 'consumers', let alone agitated under that name. The people who, in 1773, threw chests of tea into Boston harbour in protest against imperial taxes on imported goods—the original Boston tea party and forerunner of today's consumer boycotts—rallied together as 'patriots', and not as 'consumers'. Here and elsewhere, people went shopping, ate food,

drank beverages and accumulated a growing number of mirrors, wardrobes, clothes, clocks and many other items, but they did so as burghers, workers, husbands and mothers, Englishmen or Italians. They had no sense of a shared identity or interest as ‘consumers’.

Consumers found their way onto the historical stage via two connected paths in the nineteenth century. First, consumers appeared as objects of inquiry and interest in social investigation, policy and economics. As workers started to benefit from greater discretionary spending, the attention of social reformers began to turn from the wage question to that of ‘the standard of living’. This new concept launched thousands of investigations into household budgets, from Boston to Berlin and Bombay. The central idea behind these inquiries was that the welfare and happiness of a household were determined by its spending habits, and not just its earnings. A better understanding of how money was spent assisted social reformers in teaching the art of prudent budgeting. In France in the 1840s, Frédéric Le Play compiled 36 volumes on the budgets of European workers. In the next generation, his student Ernst Engel took the method to Saxony and Prussia, where he professionalised the study of social statistics. He fathered Engel’s law, which held that the greater a family’s income, the smaller the proportion was spent on food. For contemporaries who worried about revolutions and socialism there was hope: people could be trained to be wiser consumers, which would make them better citizens. Less spending on food translated into more money for personal improvement and social peace. Almost simultaneously, economists such as William Jevons and Carl Menger—the so-called marginalists—turned economic wisdom upside down, when they transformed the theory of value. Instead of reflecting the cost of land and labour, as conventional wisdom had it, the value of a good was created by the consumer.

Just as significant was a second, parallel process, which saw people discover their own voice as consumers and organise as active subjects under that new label. The *fin de siècle* is now remembered for its cathedrals of consumption epitomised by the Bon Marché in Paris and Selfridges in London. These commercial temples were certainly important in widening the public profile and spaces for shoppers, especially for women. Intriguingly, though, it was not here in the glitzy galleries but literally underground, through the new material networks of gas and water, that people first came together collectively as

consumers. A Water Consumers' Association was launched in Sheffield in 1871 in protest against water taxes. In addition, needs and wants themselves were changing, and this expanded notions of entitlements and rights. In England, middle-class residents at this time were becoming accustomed to having a bath and refused to pay the 'extra' charges for their extra water. A bath was a necessity, not a luxury, they argued, and they organised a consumer boycott.

The years before the First World War turned into the golden years of consumer politics. Flannel weavers had opened a cooperative store in Rochdale, England, in 1844. By 1910, most working-class families and every fourth household in the country was a member of a consumer cooperative. In Germany and France they counted over a million members. In Britain, the Woman's Cooperative Guild was the largest women's movement at the time. Organising as consumers gave women a new public voice and visibility. After all, it was the 'women with the baskets' who did the shopping. And it was women who marched in the vanguard of ethical consumerism. Consumer leagues sprang up in New York, Paris, Antwerp, Rome and Berlin. In the United States, the league grew into a national federation with 15,000 activists, headed by Florence Kelley, whose Quaker aunt had campaigned against slave-grown goods. These middle-class consumers used the power of their purse to target sweatshops and reward businesses that offered decent working conditions and a minimum wage. 'The consumer', the German reformer Elisabeth von Knebel-Doeberitz explained, 'is the clock which regulates the relationship between employer and employee.' If the clock were driven by 'selfishness, self-interest, thoughtlessness, greed and avarice, thousands of our fellow beings [would] have to live in misery and depression' (von Knebel-Doeberitz 1907, 39, my translation). If, on the other hand, consumers thought about the workers behind the product, they would advance social welfare and harmony. Consumers, in other words, were asked to be citizens. For women, this new role as civic-minded consumers became a powerful weapon in the battle for the vote. This call on the 'citizen-consumer' reached its apotheosis in Britain on the eve of the First World War in the popular campaigns for Free Trade when millions rallied in defence of the consumer interest as the public interest.

### 3 Historic victories and fresh challenges

Looking back from the early twenty-first century, it would be foolish not to recognise the enormous gains in consumer welfare and consumer protection that have taken place in the course of the last century, epitomised by John F. Kennedy's Consumer Bill of Rights in 1962. Cars no longer explode on impact. Food scandals and frauds continue but are a far cry from the endemic scandals of adulteration that scarred the Victorians. Economists continue to debate whether people adjust their consumption over time to get the most out of life (Franco Modigliani's lifecycle hypothesis), whether they spend depending on what they expect to earn in the future (Milton Friedman with his permanent-income hypothesis) or whether their spending is determined more by the position of their income relative to that of others (James Duesenberry's relative-income hypothesis). Still, consumption is an integral component of the curriculum, not just in economics and business schools but also in sociology, anthropology and history, although the latter tend to stress culture, social customs and habits rather than choice and a utility-maximising individual. Today, companies and marketers follow consumers as much as they direct them. Grand critiques of '*Konsumterror*', or 'consumerism', as stupefying, dehumanising or alienating, still an essential part of the intellectual furniture of the 1960s, have had their wings clipped by a recognition of how products and fashions give us identities, hybridity and pleasure. Rather than being passive, the consumer is now celebrated for being a 'prosumer' who actively adds value and meaning to media and products.

And yet, in other respects, we are a long way from Gide's kingdom of consumers. Consumer associations and activism continue, but with the proliferation of lifestyles and causes they have become dispersed between so many issues and no longer carry the punch of the social reform campaigns of the early twentieth century; today there is, for example, ethical shopping for dog food, as well as for slow, organic, fair trade and many more. In hard times, like the First and Second World War, some countries introduced consumer councils and ministries—but that was because states had a temporary interest in organising their purchasing power for the war effort and recruiting them in the fight against profiteering and inflation. When peace, markets and vocal

business lobbies returned, such bodies were just as quickly wound up again. In the affluent West, welfare states and social services have taken over many of the causes for which consumer leagues fought a century ago. Today, the urban poor or cheap, exploited labour in seasonal agriculture rarely attract attention from ethical consumers, although a campaign started in 2015 against companies that avoid paying taxes.<sup>1</sup> In general, however, since the 1970s most of the attention of caring consumers has been increasingly directed towards producers in distant lands, especially through the fair trade movement. In the developing world, India has a small Ministry of Consumer Affairs, but its primary role is to raise awareness and fight unfair practices. The richest societies are tellingly also the same societies where consumers have little or no organised political voice and representation. Markets, choice and competition are now largely seen as the consumer's best friend. Consumers are simultaneously more powerful and powerless today than Gide foresaw.

If he lived today, Gide might highlight three challenges that confront a new generation of consumers. The first is austerity amid growing inequality. This can be understood as the rolling back of some of the welfare gains of the post-45 era. Of course, public social spending on unemployment benefits, state pensions, public housing and child allowances and much else remains at a level today—the OECD average stands at 21 per cent of the GDP—that was inconceivable in Gide's days. Still, cutbacks in social spending, along with stagnant and falling wages amid a greater concentration of wealth by the few, raise the possibility of a major crisis that was already agitating Gide's contemporaries, such as the radical writer J. A. Hobson: the spectre of 'under-consumption' (Hobson 1902). With the reform or retreat of the welfare state, it may well redirect consumer activists' attention to the plight of workers at home. Since, as Hobson pointed out, under-consumption at home also leads the rich to search for investment opportunities and business adventures abroad, it also raises the potential for international tension. Hobson drew a straight line between under-consumption at home and imperialist adventures abroad. The European empires are now gone, but his point about the connections between

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1 See the 'Ethical Consumer' movement for a 'Fair Tax Mark' and the boycotts of Starbucks and other companies. <http://www.ethicalconsumer.org/ethicalcampaigns/taxjusticecampaign/fairtaxmark.aspx>, accessed 23 March 2017.

under-consumption, over-saving and the search for overseas opportunities and frictions remains one for serious consideration.

A second challenge comes from new technologies of consumption, especially digital products and the so-called ‘Internet of things’. Their diffusion has, so far, circumvented many of the historic gains of consumer protection. Thus, the United Nations Guidelines of Consumer Protection do not deal with the issues around consumer products that are governed by intellectual property (IP) law. Under the 1995 World Trade Organisation Agreement on Intellectual Property (TRIPS), software is protected, just like books under the Berne Convention of 1971. Digital products thus pose a major challenge to the very idea of what is a consumer’s property and how it will be protected. The growing centrality of software—and its legal defence under copyright law—effectively means that consumers no longer ‘own’ the digital products they may think they own. As the recent *Manual on Consumer Protection* by the United Nations Conference on Trade and Development (UNCTAD) emphasises, this means that ‘IP rights-holders are protected in terms of the defence of their copyright, while the defences of consumers that also exist in IP law might not be invoked’ (UNCTAD 2016, 24).<sup>2</sup> Digital communication calls for an entirely new form of consumer politics.

Finally, and most formidable, there is climate change. The future role of consumption is increasingly uncertain from an environmental perspective. The 1990s gave birth to the idea of ‘sustainable consumption’, a commitment championed by the United Nations in Rio de Janeiro in 1992. Price incentives and more efficient technologies, it was hoped, would enable consumers to lighten the material footprint of their lifestyles (Chappells and Trentmann 2015, 51–70). Since then, there have been many prophecies and headlines that predict ‘peak stuff’ and the end of consumerism. People in affluent societies, they say, have become bored with owning lots of stuff. They prefer experiences or are happy sharing. Dematerialisation will follow. Such sightings sound nice but they fail to stand up to scrutiny. After all, much consumption in the past was also driven by experiences, such as the delights of pleasure gardens, bazaars and amusement parks. In the world economy today, services

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2 With thanks for further discussion to Robin Simpson, who revised the *Manual*.



might be growing faster than goods, but that does not mean the number of containers is declining. Far from it. And let us not forget that services are not virtual but require material resources too. In France, in 2014, people drove 52 billion kilometres to do their shopping, which involves a lot of rubber, tarmac and gas (Fourcroy, Gallouj, and Decellas 2012). Digital computing and Wi-Fi absorbs a growing share of electricity. Sharing platforms like Airbnb have increased frequent travel and flights, not reduced them. People may say they feel overwhelmed or depressed by their possessions but in most cases this has not converted them to ‘simple living’. Nor is this a peculiarly American or Anglo-Saxon problem. In 2011 the people of Stockholm bought three times as much clothing and appliances as they did 20 years earlier (Kalmykova, Yuliya, and Patrício 2015). How—indeed whether—consumers can adapt to a world of climate change remains the big question for the twenty-first century.

## 4 Looking back to see ahead

A historical perspective on the changing identity and outlook of the consumer helps us to understand how we got to where we are. But it also helps us to look ahead. History is a lived laboratory of rich and often unexpected experiments and outcomes. It reminds us of ideas, values and practices that have disappeared from what today counts as conventional wisdom. And it alerts us to the never-ceasing potential for change. Today, the consumer is mainly treated as a shopper and a creature of the market. As this chapter has shown, this was not always the case. The consumer’s persona has a history and has evolved over time. For much of its life, the consumer had moral, social and political, as well as commercial, characteristics. Writing in 1929, Hazel Kyrk, one of the pioneers of home economics in the United States, argued that people were consumers as well as customers. As a customer, a person was engaged in the art of buying, evaluating the price and quality of goods and then making decisions about their purchase. By contrast, consuming, she wrote, involved more than getting a good deal: it raised ‘questions of motives, of values, [and] of ends’ (Kyrk 1929, 396). For Kyrk and many of her contemporaries, consuming was a way of teaching people to live better lives and become better citizens. The con-

sumer stood at the centre of civic ethics. We would do well to remember that rich past.

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# Part 1

## Consumer Behaviour

Introduction

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## Introduction

Consumers are free to make their choices. This freedom of choice is central to market economies as it gives sovereignty to the consumers. However, the influences of market actors—producers and consumers—are complex and contingent: Consumers are influenced by others. They might be able to judge the quality of products and services, but also refrain or lack it. They might be able to anticipate the consequences of consumption, but also ignore or miss it. These contingencies are decisive for consumer behaviour and its effects. Psychological research and behavioural economics try to find out how rational and irrational boundaries affect decisions. Acknowledging that, we consider that a) consumers' rationality is restricted and b) a huge variety of individual and institutional factors influence consumer's decisions. The need to decide faces an oversupply of goods and services that challenges consumers:

- **Transparency:** If producers are forced to give transparent information, decisions can be made on a broader informational basis. But this can also entail the risk of information overload. Since all information about consumers is a valuable asset for suppliers, the consumer needs to take care of his or her data and regulators need to establish effective data protection.
- **Individual effects:** How consumers decide can influence their health and their social security. These side effects regularly appear against people's better judgement since they do not only act rationally, but also emotionally. They do not always decide planned, but also act spontaneously and habit driven. Marketing strategies trigger that behaviour.
- **External effects:** Consumers themselves influence the market. Their choices have an impact on future products and services. Thus, consumers can actually influence the market: They can boycott or intensively prefer specific products or services (boycott) for example due to environmental issues or questions of working conditions.
- **Time consumption:** Making appropriate choices takes a lot of time, which is the scarcest resource in modern societies.

Hence, consumer behaviour bases on the freedom to choose, but is also intertwined with political issues, especially if public goods are considered. Even if political actors declare their concept of “good” choice (whatever that means), their regulatory measures affect the freedom of consumers or constrain their options. How can political decisions and instruments positively affect external effects and counterbalance information asymmetries? To what extent do behavioural sciences play a role if (new) strategies to channel negative market effects or steer people’s consumptive behaviour are needed?

In his contribution Ulrich Greveler asks “how open data can be used to make behavioural governance work both ways”. Greveler argues that citizens could “nudge” their (local) government. The author starts with a broad concept of “nudging” but concentrates on strategies based on disclosing administrative behaviour and its effects. In doing so, he describes a changed relationship between citizens and local administration.

Ginnie Guillen-Hanson also concentrates on participatory elements. She aims at identifying relevant factors that promote sustainable social innovation to enable sustainable lifestyles. The chapter focuses on the needful connection between local and global levels and stresses initiatives that focus on all involved stakeholders.

As Ulrike Danier shows, consumer education is offered from primary to secondary schools and tries to support many different skills: budgeting in households to prevent over-indebtedness, creating resistance against the influence of merchandizing, enabling for consumer’s rights and caring for one’s own future wealth. Danier criticizes the shortcomings of competence models based on general economic roles which ignore socioeconomic heterogeneity.

Helping to avoid over-indebtedness consumer education is also linked to financial education, which is shown by a big study of Gianni Nicolini. He focuses on financial vulnerability in Italy, Sweden and Spain. The study points out how the individual financial fragility corresponds with underdeveloped financial literacy and mistaken ways of measuring.

“Consumer education” is not a distinct school subject. What aims can actually be reached? How can different and heterogeneous groups of students (see

Danier, Nicolini) not only be enabled to follow rules, but also be motivated to change rules. What strategies do not only nudge people, but also empower them to judge or create nudges themselves (see Guillén-Hanson, Greveler)?

Food for thought can be found in this chapter and shall encourage all readers to carry on the dialogue that was started at the “International Conference on Consumer Research” 2016.



# Nudging the government

How open data can be used to make behavioural governance work both ways

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# 1 Introduction

Data-driven regulation has become a new type of governance. Identifying number plates and human faces using computer vision, and tracking the position of consumer devices deploying sensors in the public space, are facilitating new master plans for the smart country and its smart cities, where government services are provided only to those who need them (Hodgkinson 2011). Politics are struggling to keep pace and include available data and newly identified threats in the development of new policies. Behavioural governance is helping to utilise data collection in order to influence consumers and citizens without the need to enact strict penalties for unwanted behaviour and without the requirement to enforce regulations with huge bureaucratic overheads. The computer industry's default answer to the how of politics is what could be called 'solutionism': problems are to be dealt with via apps, sensors and feedback loops—all provided by start-ups (Morozov 2014). Google's Eric Schmidt was even more optimistic in 2014: IT start-ups would provide the solution to economic inequality.

In our work we aim to analyse the potential of *open data* and *freed data* as a transparency safeguard employable by citizens and consumers in order to check the necessity and efficiency of government-induced, data-driven regulation and to represent a new level of transparency: data can facilitate government accountability, transparency and citizen participation.

Open data preferably includes non-textual data such as map coordinates, sensor data, figures from public records and any collected data on citizens, as long as it is not related to individuals so that the privacy of citizens is not jeopardised. While open data can come from any source, the data issued by government agencies and the municipal sector has the highest potential for citizens and researchers, as well as application developers, to engage. By encouraging public organisations to make non-sensitive data discoverable via public networks, citizens are empowered to harness it and combine it in new ways so that public decision-making becomes more accountable.

With the aid of concrete example data sets based on current ongoing projects and open data portals, we illustrate how citizens can contribute to a full *read–write society*, observe and influence public decision-making processes and contribute to it in an effective way. This may include very different data sets such as car parking in the inner city, traffic counts, citizen self-service Web portals, as well as e-government online security and teacher resources, just to give an impression of the vast aspects covered by public open data and the chances that computer science, among other disciplines, may offer to nudge public decision-makers.

## 2 Nudging

The concept of nudging has caught the attention of the media, scholars and public policy-makers as a way of altering citizens' behaviour in a predictable way without prohibiting any choices or implementing economic incentives or disincentives for unwanted behaviour. Nudges are explicitly designed to uphold full freedom of choice (Sunstein 2015).

Prominent examples of nudge concept exploration are the *UK Behavioural Insights Team* and the *US White House Social and Behavioural Sciences Team* (BIT 2012). Regarding public policies, the following nudges are frequently considered: *default rules* (e.g. opting out of default organ donor programmes instead of distributing consent forms), *the use of social norms* (e.g. 'most people do not use plastic bags' campaigns), *an increase in convenience* (e.g. displaying park and ride signs to avoid inner-city traffic) and *disclosure* (e.g. 'How much does our city pay for waste management?').

The advent of digitalisation and connected databases enables the government to help inform citizens' personal decisions: government data mining, for instance, could notify users of the relevant health risks, useful government programmes for which they qualify and neighbourhood crime—such personalised information can be particularly effective in nudging citizens to make socially beneficial choices (Linders 2012).

In this paper we aim to apply nudging to (mainly local) public decision-making, requiring that the potentially unfortunate behavioural process or decision-making pattern is identified as the result of cognitive boundaries or habits and could be nudged towards a better option: a well-informed, accountable way of reaching decisions based on data that could be inspected by anyone having a stake in the decision.

### 3 Open data and open government

Open data and open government have gained much awareness recently, both from academia and the public sector itself. Since 2009 governments worldwide have been developing *Open Government Data* programmes, with the US and the UK being the two leading countries in this sector (Peled and Nahon, 2015).

The low cost of digital data publication puts governments in a position to create the information obtained while delivering governmental services that are accessible to the general public. The preferred result from a data user's point of view is the publication of open data. Open data is data that anyone can access, analyse, visualise, use for any purpose and share with others. One purpose of a government open data publication is to advance the long-term transparency of government actions, but also to enable the use of open data for business creation, as companies may use open data as a key aspect of their services (Stamova 2016). The data can help citizens to improve their day-to-day productivity and foster informed decision-making as open government initiatives promise to 'open up' government operations to citizens (Clarke and Margetts 2014). The data can also help bring data start-ups to the surface; in other words, small enterprises are created explicitly to take advantage of the value of open data, for example, city planning, education, creative industry, location-based services, neighbourhood risk evaluation, delivering access to public sector contracts or creating transport-related products (Seibel 2016).

However, data publication itself may not be sufficient in many cases, as the usefulness of the data is heavily dependent on discoverability by search engines, formats, granularity and respective metadata. From a citizen's perspective, the major obstacles are access to proper data sets and the adequate use of data sets (Zuiderwijk et al. 2013), while data set fragmentation across websites makes them difficult to find (Boulton, Rawlins, Vallance, and Walport 2011; McLaren and Waters 2011). Sufficient metadata is a key element of successful data exploitation (Zuiderwijk, Jeffery, and Janssen 2012).

## 4 Local public decision-making processes and data processing

Local autonomy of cities, municipalities and districts is a building block of many constitutional states. It preserves the decision-making processes at the local level and maintains a decentralised separation of powers. The case examples in this paper are located in the state of North Rhine-Westphalia in Germany. In this state, checks and balances to the mayor and local government staff are provided by local parliament structures, for example, city councils (*Stadträte*) being elected by the city's population. The council is the main body of the city's autonomy. The elected council members are not full-time professionals; in other words, they carry out their duties after work in the late hours of the day. In order to be able to perform their major tasks—in particular, passing the local government's proposed revenues and spending for the upcoming financial year—council members need to be informed and educated on local matters by local government staff. They also need access to municipal data sources and adequate data aggregation and visualisation. Another major source of information is the constituents who contact their elected officials and provide background information on pressing issues and current challenges.

There is an inherent conflict of interest regarding the information provided by local staff to council members: exercising the council's rights to check and balance the executive powers can make the staff's jobs more difficult since

they need to publicly justify work results and might receive unpleasant criticism from council members who represent their constituents and relay citizens' complaints. Hence, local government staff can be tempted to withhold information or present information in such a way that makes it difficult for recipients to spot certain details hidden behind the statistics.

With the help of accessible government data, citizens, media, as well as elected officials, are enabled to analyse data on their own and to foster transparency of government actions. The public is then able to review and scrutinise policies without being dependent on the offered rationales and accumulated data by the decision-makers.

Regarding the multidisciplinary nature of the topic of government data analysis and state transparency, we want to highlight technical methods that are naturally provided by the communities of computer scientists or data scientists: opening up raw data sets that are not published but which can be generated from harvesting online services or digital documents; the automated collection of data by scanning or crawling websites, digital interfaces or networked services; parsing machine-readable data; and computer vision and natural language processing in order to generate machine-readable data for further data-driven analysis. Data-driven science itself employs methods and theories drawn from mathematics, statistics and computer science.

In real-world scenarios raw data is often hidden behind online accessible services but can be freed by using robots (sometimes called crawlers and spiders) or scripts (little pieces of software automating the execution of recurring tasks) that automatically traverse the website and database content and output it to a comprehensive file. Note that this automatic extraction of data must not be confused with 'hacking into a database' (e.g. cracking weak passwords to gain unauthorised access), as the latter is considered illegal in most countries, while automatically crawling web pages is the underlying technology of many web search engines. However, it should be noted that the automated extraction of files can lead to the discovery of data that was obviously not intended to be published but is technically accessible as a result of negligent system configuration. In these cases a code of ethics and professional conduct should be applied: confidential data should be excluded and site owners informed.

## 5 Case examples

We present four cases from our ongoing research of 2016 and 2017. Note that in two cases the data was provided by the local authorities on open data portals, while in the other two we acquired or liberated the data by technical means on our own.

### 5.1 Case: non-moving traffic notices

Raw data on non-moving traffic notices (“Strafzettel”) in several cities of North Rhine-Westphalia, Germany, has been made public as open data or retrieved from the local government by exercising freedom of information laws. The available raw data is stripped of personal information (i.e. number plates, names of vehicle owners) before publication.

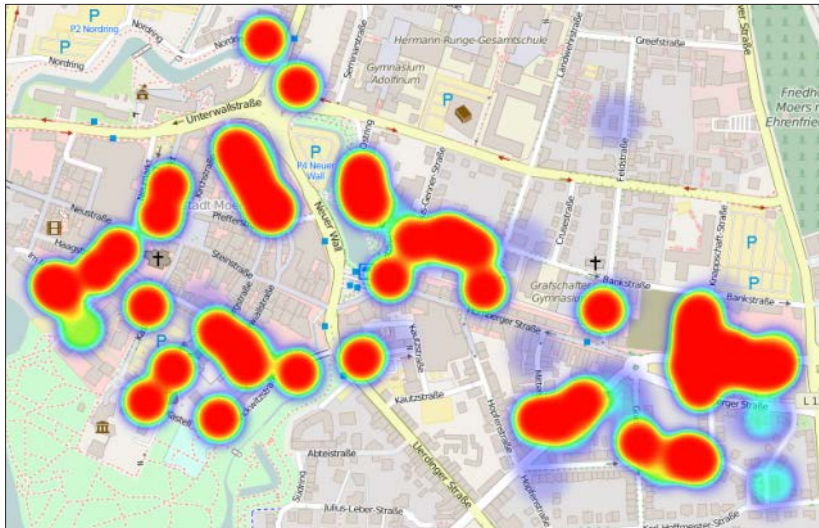


Figure 1a: Heat map visualisation in the city of Moers

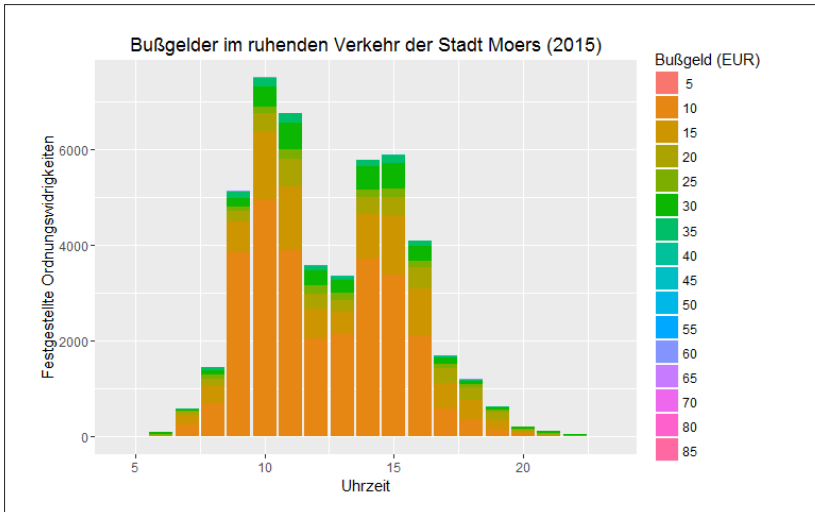


Figure 1b: Daytime charts of non-moving traffic fines in the city of Moers

Some visualisation of the 2015 data is depicted in Figure 1. It becomes visible where the notices were issued and at what time of day fines were issued (between 10 a.m. and 11 a.m. the detected traffic delinquency is most prevalent, which might also reflect the typical working and lunch hours of the assistant police force).

Possible nudge effects: disclosure of inner-city regions where many or few notices are issued. (Fines are issued at certain hotspots that do not necessarily reflect areas with high levels of false parking observation.) Heat maps could be used for informed urban development planning or real estate development. Individual city staff members might work inside hotspots: suspected favouritism can be ruled out by data analysis.



## 5.2 Case: waiting for administrative appointments

The city of Essen (North Rhine-Westphalia, Germany) offers a service to its citizens to reserve online dates for administrative appointments (e.g. relocation registration, applying for a new ID card, vehicle registration). A citizen selects the desired task in a web interface and is issued the next available date and time (and office location) for the visit.

There has been some public outrage, reported in local newspapers, as the waiting period has been up to fifty days for some citizens. City officials blamed the administrative burden of refugee management as a major factor for the staff work overload (Wandt 2016). The respective data was not made public. In order to make the data available, however, a script was programmed by M. Schurig (Open Knowledge Lab, Ruhrgebiet), which every morning simulates a citizen request to obtain an appointment reservation via the web page. The issued date was logged and the request was discarded afterwards, so no interference with actual administrative business took place. Visualisation of the collected data can be seen in Figure 2. It becomes apparent that at certain regularly occurring intervals the waiting time drops to almost zero, although on the previous day citizens were issued dates that were more than forty days in the future.

Possible nudge effects: disclosure of a gradual positive long-run development. No correlation to events connected with refugee administration is apparent, so the release of wrongful information is discouraged. Informed decisions by citizens lead to shorter waiting periods (e.g. repeat request the next day).

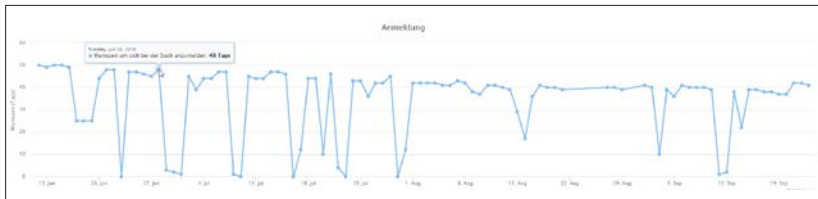


Figure 2: Waiting period in days for administrative appointments, city of Essen

### 5.3 Case: counting traffic

Traffic counting data provides street-level traffic data for junction-to-junction links. It plays a pivotal role in the decision-making processes of municipal authorities (speeding, congestion, pollution). Raw data sets have become open data for some cities. The data sets include individual occurrences of vehicles, together with a time stamp and vehicle size information (see Figure 3).

28.10.14	11:53:03;00;031;01;0
28.10.14	11:54:08;00;037;01;1
28.10.14	11:54:57;00;028;01;1
28.10.14	11:55:28;00;025;01;0
28.10.14	11:57:35;00;021;01;0
28.10.14	12:00:38;00;026;02;0
28.10.14	12:01:33;00;022;01;1
28.10.14	12:02:05;00;028;01;0
28.10.14	12:02:18;00;023;01;1
28.10.14	12:03:25;00;030;01;1
28.10.14	12:03:33;00;038;01;0

**Figure 3: Traffic count raw data clipping example, city of Moers, Vinner Straße, 2014.**

Analysis of traffic count data shows that official traffic count statistics may neglect certain aspects in particular cases:

- Big timeline gaps in the raw data show that something blocked the traffic or the sensor altogether and rendered the count useless for that particular day.
- Truck traffic may be a phenomenon at specific times of day, or a constant imposition.

These results cannot be derived from the statistical traffic count data usually provided to the public and to decision-makers.

Possible nudge effects: detection of erroneous data counts can prevent council members from making decisions on inaccurate data or help to find the causes of ineffective street construction measures of the past. Scrutiny regarding data-driven decisions is fostered.

## 5.4 Case: computer science education

In North-Rhine Westphalia computer science was introduced as an elective subject within secondary schools in the early 1970s. As computer science did not become a core or compulsory subject, and because the majority of German students attend public schools, the lack of achieving competencies in information technology and gaining digital literacy became a matter of political debate. In the recent past the subject was mostly taught by in-service teachers who received their initial professional development on computer science topics but lacked deep knowledge and pedagogical content knowledge (Knobelsdorf et al. 2015).

The Ministry of Education publishes statistics on curriculum development and teaching hours (detailing subjects and types of school) on a yearly basis. However, the bulky 255-page PDF-formatted document (MSW 2016) consisting of printed tables does not meet open data standards, making it a gruelling task to retrieve numbers and metadata from the tables with the aim of analysing and visualising the included data. For this reason, a comparison of taught hours between federal states, or of the volume of computer science education to other subjects (both easily leading to heated political discussions), is difficult.

With the help of semi-automated data-extraction techniques, individual machine-readable data sets were mined from the PDF file.

The bar chart visualisation in Figure 4 shows that taught computer science hours (left bar) represent only a small fraction of the hours taught for other major subjects. Moreover, the analysis showed that a ratio of approximately ten biology teachers per one computer science teacher could be determined.

Possible nudge effects: the disclosure of unbalanced resources in regard to curricula puts pressure on elected officials to strengthen possibly neglected

subjects (such as computer science). Decision-makers might demand data in a form that enables them to conduct their own analysis or call for issuing open data.

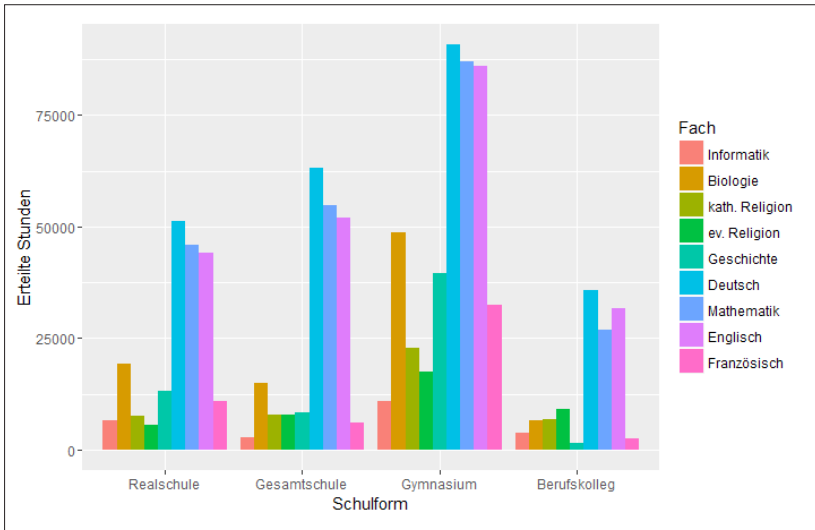


Figure 4: Taught hours per subject and school type in NRW (2015/16)

## 6 Conclusions

In our work we analyse the potential of open government data as a transparency safeguard that is employable by citizens, as well as decision-makers, in order to check the necessity and efficiency of government-induced, data-driven regulations and to promote public sector accountability. Several cases have illustrated the potential to nudge local decision-makers towards a better-informed, accountable way of reaching decisions based on data.

With the aid of concrete example data sets based on current ongoing projects and open data portals, we have demonstrated how knowledgeable citizens and elected officials can be informed about public decision-making processes and contribute to them in an effective way. Open data can enable the public to understand and reproduce the public decision-making process so that decision-makers are motivated (i.e. *nudged*) to highlight areas of poor decision performance and investigate data-driven methods of improving that performance. With the help of open data, individuals can grow their capacity to participate in society and take responsibility for their local political environment.

The case studies show that computer-scientific methods and techniques can be used to generate, enhance or liberate available data. The multidisciplinary nature of public data analysis for informed decision-making processes and respective controls can be enriched by these methods.

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# Exploring consumers' financial fragility in Europe

Over-indebtedness, rainy day funds and the role of financial literacy

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# 1 Introduction

Financial fragility can be defined as a financial status whereby a subject is exposed to a risk that it is not prepared to afford and which could have negative consequences. It differs from financial troubles or financial difficulties in the sense that it is not related to an objective difficulty status—such as lack of payments on mortgages or bankruptcy—and refers to people at (high) risk of financial difficulties. Insufficient savings to cover an unexpected expense (e.g. a medical treatment, the need to repair a car after a car crash) or the extreme use of debt to make ends meet, which cause people to struggle to repay their obligations, are examples of the status of financial fragility. In the meantime, financial fragility involves psychological issues. People that do not show evidence of financial troubles (e.g. lack or delay of payments on monthly bills, foreclosures) can feel stressed anyway and suffer from anxiety because of the awareness of being on the verge of a personal financial crisis.

If the last global financial crisis represented an incentive to study consumers' financial behaviour, most of the research interest was dedicated to financial difficulties, in order to explain the causes of these phenomena and understand how to prevent them in future. Anyway, the study of individuals that have been in financial trouble risks telling only a part of the story, because even people that are not officially in trouble, but have had to rescale their living standards or got very close to bankruptcy, must be taken into account in order to see the bigger picture of consumer protection in finance and to determine how to improve it.

The aim of this study is to analyse consumers' financial fragility in Europe, stressing the role of consumers' financial literacy in explaining over-indebtedness and a lack of funds for 'rainy days'.



## 2 Literature review

An analysis of the literature on financial fragility shows how debt represents probably one of the most common sources of anxiety and potential financial troubles for people. Brown and Taylor (2008) analysed data from three different countries (Germany, the UK and the US) to identify which households are potentially vulnerable to adverse changes in the economic environment, paying attention mainly to debt-related measures. Faruqui (2008) used data from Canada to assess the vulnerability of households to adverse economic shocks, referring uniquely to a debt-related measure; in another study on Canadian data, Djoudad (2011) proposed a similar approach, also referring to the debt-to-income ratio. Keese (2009), in a study based on a sample of more than 11,000 German households, investigated whether severe household indebtedness is driven by trigger events such as unemployment, childbirth, divorce or the death of a partner, and even in this case (over)indebtedness is considered to be the main cause of financial difficulties. Kida (2009) used different waves<sup>1</sup> of a national representative survey in New Zealand (the Household Economic Surveys) to study the financial vulnerability of households, referring to financial vulnerability as a risk for the mortgage-indebted household. The attitude of referring to debt as the main source of financial fragility is present even in the study of Georgarakos et al. (2010), which analysed data from the European Community Household Panel survey (ECHP) with the aim of investigating households' attitudes towards mortgage indebtedness. In their study the authors refer to a concept of financial distress that is uniquely related to debt. More recently, Jappelli et al. (2013) tried to assess the sensitivity of household arrears and insolvencies to macroeconomic shocks, and defined financial fragility merely as the 'inability to repay financial debt'. Similarly, Cuhna et al. (2013) analysed a sample of 5,179 Dutch households between 1992 and 2005 to study the determinants of the outstanding mortgage loan-to-value (LTV) ratio in The Netherlands, stressing how these high levels of indebtedness can be a source of financial difficulty in debt repayment and generate the over-indebtedness phenomena.

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1 Data from the 2001, 2004 and 2007 waves of the survey.

If several studies have stressed the role of debt in explaining financial fragility, there are indeed authors that have tried to approach the issue of financial fragility from a broader perspective. Worthington (2006) studied a sample of 3,268 Australians<sup>2</sup> and highlighted how financial stress is defined, among other things, in terms of financial reasons for being unable to have a holiday, to have meals with family and friends, to engage in hobbies and other leisure activities, and general money management. These kinds of deprivation represent a source of (financial) stress, even if they are not necessarily related to the use of debt. The need to extend the concept of financial fragility from over-indebtedness to other sources of financial difficulty is even clearer in Brunetti et al. (2012). In their paper the authors stress how an individual could be free of any debt and be able to pay his/her bills regularly (in case income is sufficient to cover expected expenses), but even in this case a status of financial fragility could arise. The vulnerability of the individual is represented by the chance that an unexpected expense could put him/her in trouble in terms of a lack of available resources to cope with the negative occurred event. The ability to face this lack of available resources is addressed by Brunetti et al. (2012) through an analysis of the role of asset liquidity. For the authors an analysis of financial fragility should be extended from a cost-income perspective to a research framework that takes into account the ability to cope with contingent needs of cash by a decumulation of savings that could be stored in assets with different degrees of liquidity. For the authors, the liquidity risk of some investment options (e.g. real estate properties or OTC trade securities) could represent a source of financial fragility, even for people free of debt. The authors consider as financially fragile not just those that are over-indebted, but also households who are able to afford anticipated expenses but do not have a sufficient liquidity buffer to face unexpected events. The lack of available resources for 'rainy days' was even analysed by Lusardi and De Bassa Scheresberg (2016) in a study of pre-retired Americans. Using data from a sub-group of approximately 5,000 observations extracted from the 2012 National Finance Capability Study (NFCS) and made by individuals aged between 51 and 61, the authors addressed the financial fragility of Americans by asking how confident they were to come up with \$2,000 in the case of an unexpected need arising within the next month. In this case, the chance to cash part of their available

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2 The data came from the Australian Bureau of Statistics' Household Expenditure Survey (2002) and was collected between 1998 and 1999.

assets was just one of several options, which included the opportunity to borrow, to receive financial support from relatives and friends, and to use pawn shops or some other alternative financial services (e.g. payday loans, auto title loans). West and Mottola (2016) followed the same conceptual framework and, using data from the US,<sup>3</sup> tried to stress how the difficulty of coming up with \$2,000 in 30 days in the event of unforeseen need could represent a measure of financial fragility, and highlighted how this latent financial issue could be more likely to come true for renters than homeowners. If previous studies in most cases analysed non-European countries, this study seeks to fill this gap by using data from three European countries. At the same time different measures of financial literacy are used to check how testing financial knowledge on different topics can lead to different conclusions about the relevance of financial literacy on consumer behaviour.

### 3 Data and methodology

In order to analyse financial fragility in Europe and assess the role of financial literacy in avoiding financial difficulties, this study used data from a survey conducted in 2015 by the Consumer Finance Research Center (CFRC). This survey is part of a research project on the measurement of financial literacy and financial behaviour in Europe, and represents a unique source of data for researchers who are interested in testing different measures of financial literacy and their effect on several types of financial behaviour.<sup>4</sup> While several other databases measure financial literacy using 3 to 5 items, the questionnaire of the CFRC Financial Literacy Survey has 50 items, organised in order to test different areas of knowledge (e.g. payments, debt, investment, retirement), with the questions designed to involve different levels of difficulty. This study analyses financial fragility using two measures: the debt-to-income ratio, and

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3 Data came from the 2012 National Financial Capability Study (NFCS), managed by the FINRA Foundation.

4 More information about the survey is available at the following link: [www.consumer-finance.org](http://www.consumer-finance.org)

a lack of savings for the cover of three months of living expenses. The logic of the CFRC research project is to propose the same questionnaire to individuals from different countries, in order to develop different national modules of the database, to be used together or as a standalone database. In this study data from Italy, Sweden and Spain was analysed.

The analysis is based on different regression models. Financial fragility represented the dependent variable and was measured using two items related to: (1) over-indebtedness; and (2) a lack of savings for rainy days. In both cases, the variable is a dummy variable that is equal to one if (1) the debt-to-income ratio of the respondent was greater than five (over-indebtedness), and equal to one if (2) the respondent declared him/herself not to have sufficient savings to cover three months of living expenses (a lack of rainy day funds). Financial literacy has been measured by the sum of correct answers to a set of questions. Two sets of questions were used. The first included answers to five questions on debt and borrowing products. The second was made up of 50 questions on 10 different financial topics (payments, investment, retirement, banking, insurance). The use of these two measures allowed researchers to test the hypothesis that people with more knowledge about finance are less likely to be financially fragile, and the hypothesis that financial fragility is mainly related to the misuse of debt. Therefore, it is not financial literacy in general terms that matters but debt literacy related to financial fragility. A set of control variables included data about age, gender, income, education, marital status and the job status of respondents.

The descriptive statistics of the data for the three countries are summarised in Table 1.

	Italy	Sweden	Spain
Variables	%	%	%
Age1 (18–24)	9.8%	14.2%	5.4%
Age2 (25–30)	9.0%	13.4%	6.8%
Age3 (31–35)	8.6%	11.2%	15.6%
Age4 (36–40)	9.8%	9.3%	17.7%
Age5 (41–45)	11.0%	11.3%	12.9%
Age6 (46–50)	11.2%	10.7%	5.4%
Age7 (51–55)	10.0%	11.2%	12.9%
Age8 (56–60)	10.0%	6.8%	7.5%
Age9 (61–65)	8.2%	7.1%	7.5%
Age10 (65+)	12.7%	0.6%	8.2%
Age (Do not know, or Prefer not to say)	–	4.4%	–
Gender (Male)	49.2%	46.5%	57.8%
Gender (Female)	50.8%	48.0%	42.2%
Gender (Do not know, or Prefer not to say)	–	5.5%	–
Income1 (< 500€)	12.9%	14.0%	10.1%
Income2 (500–749€)	5.0%	10.7%	2.9%
Income3 (750–999€)	8.4%	6.6%	6.5%
Income4 (1,000–1,499€)	21.5%	13.1%	20.9%
Income5 (1,500–1,999€)	16.7%	20.6%	20.9%
Income6 (2,000–2,999€)	12.9%	13.1%	24.5%
Income7 (3,000–3,999€)	0.2%	3.0%	11.5%
Income8 (4,000€+)	7.8%	3.9%	2.9%

	Italy	Sweden	Spain
Variables	%	%	%
Income (Do not know, or Prefer not to say)	14.5%	15.1%	–
Education1 (Primary school or less)	0.4%	0.5%	2.7%
Education2 (Middle school)	11.6%	9.4%	3.4%
Education3 (High school)	42.0%	43.2%	9.6%
Education4 (Some college)	15.9%	13.4%	7.5%
Education5 (University degree)	22.3%	27.5%	48.6%
Education6 (Postgraduate degree)	7.6%	n.a.	28.1%
Education (Do not know, or Prefer not to say)	0.2%	6.0%	–
Marital Status – Single	24.7%	33.3%	22.1%
Marital Status – Cohabitant	11.2%	25.9%	15.9%
Marital Status – Married	56.6%	28.1%	53.8%
Marital Status – Separated	2.0%	3.1%	1.4%
Marital Status – Divorced	3.2%	2.5%	4.8%
Marital Status – Widow	1.2%	0.5%	0.7%
Marital Status (Do not know, or Prefer not to say)	1.2%	6.4%	1.4%
Job – Self-employed	14.7%	4.7%	8.3%
Job – Full-time employee	34.9%	41.0%	53.8%
Job – Part-time employee	6.8%	12.1%	5.5%
Job – Housekeeper	15.3%	1.9%	0.0%
Job – Full-time student	7.4%	11.6%	4.8%
Job – Permanent sick	0.6%	7.7%	0.0%
Job – Unemployed	0.0%	9.0%	9.7%

	Italy	Sweden	Spain
Variables	%	%	%
Job – Retired	15.3%	5.2%	12.4%
Job (Do not know, or Prefer not to say)	5.0%	6.8%	–
Mortgage – Yes	22.9%	42.0%	62.2%
Mortgage – No	76.9%	46.5%	31.8%
Mortgage (Do not know, or Prefer not to say)	0.2%	11.5%	6.1%
Debt1 (No debts)	49.2%	39.2%	60.8%
Debt2 (Less than 3 times monthly income)	21.8%	14.0%	13.5%
Debt3 (3-to-6 times monthly income)	8.0%	7.2%	6.8%
Debt4 (6-to-12 times monthly income)	5.6%	6.9%	2.7%
Debt5 (1-to-5 times annual income)	2.8%	8.3%	6.1%
Debt6 (More than 5 times annual income)	0.8%	4.4%	2.0%
Debt (Do not know, or Prefer not to say)	11.8%	20.0%	8.1%
FinLit_Debts – ‘0 on 5’	14.9%	18.1%	8.8%
FinLit_Debts – ‘1 on 5’	14.7%	24.2%	8.1%
FinLit_Debts – ‘2 on 5’	23.9%	23.7%	20.9%
FinLit_Debts – ‘3 on 5’	29.1%	21.1%	26.4%
FinLit_Debts – ‘4 on 5’	14.1%	10.4%	25.0%
FinLit_Debts – ‘5 on 5’	3.2%	2.5%	10.8%
FinLit_Total – [0–10] on 50	0.0%	23.7%	3.4%
FinLit_Total – [11–20] on 50	2.4%	36.0%	14.2%
FinLit_Total – [21–30] on 50	12.4%	29.6%	32.4%

	Italy	Sweden	Spain
Variables	%	%	%
FinLit_Total – [31–40] on 50	39.8%	10.5%	45.9%
FinLit_Total – [41–50] on 50	45.4%	0.2%	4.1%
	# Obs.	# Obs.	# Obs.
	502	636	148

**Table 1: Descriptive statistics of the data**

Both dependent variables are dichotomous; hence, a logistic regression model was used.

$$\text{logit}(\mathbb{E}[Y_i | x_{1,i}, \dots, x_{m,i}]) = \text{logit}(p_i) = \ln\left(\frac{p_i}{1-p_i}\right) = \beta_0 + \beta_1 x_{1,i} + \dots + \beta_m x_{m,i}$$

For each of the two dependent variables (over-indebtedness, lack of emergency funds), two different specifications of the model were used. The main difference between the two sets of variables is the measure of financial literacy. In the first model financial literacy was measured by the number of correct answers to 50 questions on different topics. In the second model it was the number of correct answers to five questions about debt that were taken into account.



## 4 Results

The results of the empirical analysis are reported in the following tables (Tables 2 (*Over-indebtedness – results of the logistic regression*, [http://www.verbraucherzentrale.nrw/978-3-86336-918-7\\_5\\_table2](http://www.verbraucherzentrale.nrw/978-3-86336-918-7_5_table2)) and 3 (*Lack of emergency funds – results of the logistic regression*, [http://www.verbraucherzentrale.nrw/978-3-86336-918-7\\_5\\_table3](http://www.verbraucherzentrale.nrw/978-3-86336-918-7_5_table3)).

Table 2 presents the results on over-indebtedness, measured by the debt-to-income ratio. People are considered to be over-indebted if the ratio is more than five.

The results from Italy, Sweden and Spain show how some differences between countries exist. Financial literacy seems to play a relevant role in explaining over-indebtedness only in Sweden. The two measures, FinLit-Debt (which takes into account only knowledge about debt) and FinLit-Total (which represents broader measures and involves knowledge on 10 topics), are statistically relevant and suggest that the more knowledgeable people are, the less they are at risk of over-indebtedness. This result confirms the hypothesis of the paper and is coherent with previous studies. What is interesting is that financial literacy has a strong explanatory power when measured by financial knowledge that refers only to debt (FinLit-Debt  $-.45$ ), and if we compare this financial literacy measure with one that involves different topics (FinLit-Total  $-.08$ ), it is evident how financial knowledge about debt is related more to over-indebtedness than to general measures. The fact that the two measures are based on different scales (the range of possible values are 0–5 for FinLit-Debt, and 0–50 for FinLit-Total) does not affect the core of this result, especially if we consider that the 5 questions about debt are included in the 50 questions used in the second financial literacy measure. The data from Italy and Spain does not support the hypothesis that financial literacy is relevant in explaining over-indebtedness. In the case of Spain, the small sample size is possibly the reason behind the non-statistical significance of the results, while in Italy it seems that the decision to take on debt is driven by other variables. In any case, the signs of the coefficient for financial literacy measures in Italy are negative—as in Sweden—even if the results are not statistically significant.

Looking at the control variables, education seems to be related to over-indebtedness. Both in Italy and Sweden an increase in education increases the likelihood of being over-indebted. This result, which seems to be counterintuitive, could be explained by differences in access to credit. One possible explanation is that lower-educated people are less prone to take on debt or less likely to receive credit, with the consequence of not being over-indebted. In any case, further analysis could be done to support this hypothesis. Regarding income, it is clear that people with high incomes are less likely to be over-indebted. The results are not always statistically significant, but people with high incomes seem to be much less likely to have an over-indebted status. Another socio-demographic variable that is related to over-indebtedness is age. Again, the data from Sweden demonstrates this more clearly than the data from Italy and Spain. The results from Sweden show how, in particular, respondents aged over 60 and over 65 are more likely to be over-indebted than others. The fact that having a mortgage increases the chance of being over-indebted only in Italy provides further evidence that differences between the three countries exist. The fact that people in Italy tend to be more likely to be over-indebted when they have a mortgage can be interpreted as a different attitude to taking on debt, which in Italy is strongly related to the desire to be homeowners.

Table 3 reports the results from regressions when the dependent variable is the lack of savings for at least three months of living expenses.

The evidence about financial literacy matters explaining consumers' financial behaviour is widely confirmed by the results for the lack of savings for 'rainy days'. In five of the six regressions financial literacy is a significant variable. The evidence shows that the more people know about finance, the less they lack savings for emergencies. The hypothesis that financial literacy is more relevant when measured by items that are logically related to the financial behaviour investigated is also confirmed. Knowledge about debt is relevant in two cases out of three and, in the case of Sweden, the coefficient for the FL-Debt (-0.43) is much larger than the coefficient of FL-Total (-.05). In this case, the greater explanatory power of the debt-related measure remains even after taking into account the different scales (FinLit-Debt 0-5, FinLit-Total 0-50).

The presence of debt is another variable that is relevant when explaining the lack of emergency funds. The more that people are in debt, the higher the

chance that they will not be able to afford three months of living expenses in the case of an emergency. The fact that the presence of mortgages is not relevant confirms the different nature of this kind of indebtedness to other sources of debt. What seems to emerge is that the use of mortgages and other loans is driven by different criteria, and only the use of debt is related to the lack of emergency funds.

The results for the control variables show how an increase in income decreases the chances of not having emergency funds. This result is coherent with the hypothesis that a more generous income gives more flexibility to people when planning their spending and managing their savings. The lack of savings seems to be equally distributed across people with different educations, with only a few exceptions in Spain. The last difference between countries is a gender effect in Italy, where males are more likely not to be ready for emergencies than females (male coeff. .53, and .71).

## 5 Conclusions

Using data from three European countries (Italy, Sweden and Spain), this study analysed the role of financial literacy in explaining two statuses of financial fragility: over-indebtedness, and a lack of emergency funds. The results confirm the hypothesis that people with more knowledge about finance are less likely to become over-indebted, and less likely to lack savings for emergencies. Moreover, the results highlight how measures of financial literacy that use a small number of items, but which take into account financial knowledge that has a logical connection to the financial behaviour analysed (e.g. knowledge about debt in the analysis of over-indebtedness), work as well as broader measures that include more items that concern knowledge of different financial topics (e.g. knowledge about investment and insurance in the analysis of a lack of rainy day funds). The results from this study confirm the chance to prevent financial fragility and other critical financial behaviours by increasing consumers' financial literacy, which can be seen as a pivotal consumer protection tool.

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# Identifying the strategic conditions to develop and strengthen sustainable social innovations as enablers of sustainable living through participatory processes

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# 1 Introduction

Current consumer behaviour, actions and policy decisions symbiotically interact with the vision that well-being equals unlimited capacity for material consumption, defining a relationship of mutual dependency and bringing about serious negative environmental, social and economic impacts derived from the present development model (WWI 2010).

Societies must *reinvent themselves* without falling into the social trap of progress that depends on the self-reinforcing cycle of novelty and anxiety (Jackson 2009, 147) that sees consumers—individuals that demand and act according to their aspirations—choosing their lifestyles, as key actors of change.

Since lifestyles ‘are framed by factors that range from the personal situation, through broader external socio-technical conditions, to physical and natural boundaries’ (Vergragt et al. 2016), they constitute a key aspect of the transition to sustainable development, comprising a multitude of everyday activities that are deeply rooted in consumption and production patterns, being intricately linked to people’s irrational choices and practices (SPREAD 2011, 9). Innovative activities that enable more sustainable living are emerging across nations and can play a fundamental role in the process of building a new vision of success based on sustainable lifestyles (SL) and paving the way towards such a vision. Hence, two questions arise:

- In what ways could social innovations drive the transition to future societies that support SL?
- How can sustainable, social innovations be activated, communicated and understood in different contexts worldwide?

To answer these questions, four propositions were drafted following studies of social innovation dynamics, conversations with innovators (both social and technological), studies of human-centred design (HCD) interactions with experts on the topics of sustainable consumption and production (SCP), systems thinking, design thinking, SL and education.

HCD is a non-linear process based on the belief that all problems, ‘even the seemingly intractable ones like poverty, gender equality, etc., are solvable. The people who face those problems every day are the ones who hold the key to their answer’ (Ideo.org, 2015 – A field guide to HCD).

The four propositions are as follows:

1. The intention to find new social orders capable of shifting consumption-driven individual lifestyles to more sustainable ones comes from systemic approaches to understanding social transformations.
2. The co-creative processes of transition that enable the rise and growth of social innovations are the ones that educate individuals and societies into understanding sustainable living.
3. Education on SL is the result of co-created stories that appeal to individuals’ (consumers’) principles and values and offer an overview of the possible impacts that changing current choices may have.
4. Social innovations, when designed as sustainable, systemic interventions, are capable of addressing the issues of complexity inherent in social dynamics. The HCD approach helps decision-making processes at all levels.

Social challenges are part of a system where innovation plays a fundamental role in enabling transformations towards new ways of interaction and living, creating a new order. The *System Innovation: Synthesis Report* emphasises that *actions are to be taken across national borders; technological, economic and social structures and boundaries* are often hampered by ‘over reliance on single market failure rationales, short-term political processes [...] System innovation is not just an economic, technological or managerial process, but also a *political and cultural project that will require leadership, inclusiveness and a shared social vision to drive it*’ (OECD 2015, 7).

Social innovations (SI) are among the most notorious examples of why the status quo, and understanding relationships between individuals and their environment, must be questioned through *the design and development of new narratives*, widening the system and yet being able to identify the unique

characteristics of every element within. SI, as *narratives of change*, are ‘sets of ideas, concepts, metaphors, discourses or storylines about change and innovation [...] they reveal, ideas about why the world has to change, who has the power to do so and how this can be done’ (Wittmayer, et al. 2015). These, complemented by the understanding of sustainable living as a framework for a new order, represent an opportunity to address the challenges posed by increasing individual consumption patterns.

## 2 Social innovations and practices for SCP

### 2.1 Baseline study

The notion that SI brings about different relationships between individuals and institutions as ‘new forms of cooperation and collaboration’ (Murray et al. 2010), being ‘any initiative, product, process, program, project or platform that challenges and over time changes the defining routines, resources and authority flows of beliefs of the broader social system in which it is introduced [...] successful ones have durability, scale and transformative impact’ (Westley 2013). The systemic aspect implies ‘an irreversible, persistent adjustment in societal values, imaginaries, and behaviours. Processes that co-evolve with and co-produce social transformation...’ (Bauler et al. upcoming). An early study outlined the background of SI initiatives, and one of the outcomes was the ‘Sustainable Social Innovations’ Framework (SSI), which included details such as length and type of initiative, the definition of sustainability, originality and proved impact (Guillen 2012).

Methodology	Elements of systemic change	Ripple Effect	Actors Involved	Action Scope
inclusive inspiring creative access to communities open information	pervasive customizable causal allow pattern disruptive identifies leverage potholes replicable measurable	teachable scalable multi stakeholder dialogue interactive policy makers	CSO foundations social entrepreneurs academia businesses investor's individuals cities	social cohesion housing mobility food lifestyles ppp capacity building social entrepreneurship health education knowledge creation knowledge dissemination networking funding environmental education

Figure 1: The SSI qualitative framework (checklist). Source: Guillen 2014.



Sponsored by the German Ministry for Economic Cooperation and Development (BMZ), the *Budding Ideas Glocally for 2050* (BIG2050) project began in 2012. It aimed to identify ways to support efforts towards SL, addressing the questions: What does SL look like, and what types of mechanism support and/or drive them? How can sustainable, social innovations be activated, communicated and understood in different contexts worldwide? The project consisted of desktop research, participatory processes and findings-validation activities within these two processes.

The study comprised five countries: China, Colombia, Germany, Ghana and the Philippines.

## 2.2 Desktop research

This section illustrates the process of determining the *DRIVERS of social change* (which have enabled the development and spread of social innovations) in different geographies, including the analysis of promising social innovations; it zooms into the development of a *consumer-centred* reference framework built on the Human Scale Development (Max-Neef 2009) and the identification of consumption *hotspots* based on current patterns of consumption and consumer aspirations.

### 2.2.1 Promising practices

Using a reviewed SSI checklist as a reference, over 200 practices were collected and classified as *promising* as social innovations on the basis that they met at least 35 of the points of the checklist. The highest-scoring practices were chosen for a consultation activity that yielded a total of 19 answers. Most of them focused on knowledge creation, education and empowerment, circular business models and living in cities.

Quick facts about the promising practices shortlisted for in-depth analysis (out of 35)

Geographical distribution of practices: 5 Africa, 10 America, 8 Asia, 11 Europe, 1 Oceania

Skype interviews: 11

Online questionnaire: 7

Email with case study: 5 (two partially filled)

Causes of no contact include lack of a valid email address or phone number, unanswered online contact forms and language barriers.

When revisited in 2016, almost all of these practices (13) were still ongoing, and most of them (8) had the status of a small business.

Scoring system of the SSI checklist: the highest weight (3 points) was given to the aspects of 'methodology', 'elements of systemic change' and 'ripple effect', and the value for each of the elements within 'actors involved' and 'action scope' was 1.

Some of the questions were an exploration of motivation and expected impacts (box 4). The answers were very personal and only a few innovators mentioned the topic of sustainability as a concept, with the majority focusing on social well-being or environmental preservation. The economic aspects appeared more as a consideration than an objective, with the exception of the initiatives planned as business.

Community support, ICT, legislation, social media channels, better supply chains, openness from users, 'luck' and 'the robust business case' were among the identified enablers for innovations to appear and spread.

#### Questions for innovators

- What would the activity look like in 2015, 2025 and 2050?
- Which challenges/opportunities were they intending to address when starting their solutions, and what kind of impact were they willing to generate?
- What kind of existing tools, laws, mechanisms, frameworks and partners enabled the development of their solution (and which ones were blunders)?
- Which existing practices/business models did they take inspiration from?
- If they were to start over, what would they tell themselves to do/ not do?

The findings of the promising practise analysis provided a first draft of the *DRIVERS of SSI*: policy tools, access to finance (including new products such as microfinance), technological innovation, supply chains, focus on value chains and social responsibility, new business models and changes in the markets' demands, infrastructure, social stability (security) and, to a large extent, behavioural change, where notions such as environmental awareness, open-mindedness, open innovation, rethinking our actions, learning from others, returning to our roots and new respect for traditional practices came across as strong motivators or supporting elements for the innovation to gain interest from the communities in which they were introduced.

The identified drivers have the potential to intervene in various levels of a system (Meadows 2004) and were later used as discussion topics with stakeholders during the events held locally.

### 2.2.2 The Human (Consumer)-Centred Framework

'The notion of sustainable lifestyles acknowledges the interconnection (and even the blurring of boundaries) between gainful and household work, civic interests and leisure, and recognizes the importance of social norms and values that enable, support and normalize sustainable everyday practices and

lifestyles' (Mont et al., 2014). In order to address the global challenge of shifting current lifestyles (and aspirations) into sustainable ones, it is important to understand that there is no single sustainable lifestyle, rather many ways to live sustainably depending on individual conditions that vary from personal values and beliefs to geographical contexts and traditions; it is also important to recognise the uniqueness within every society and individual. Hence, to have a human-centred perspective we need to depart from the notion that current *need satisfaction* is guided by the vision of continuous economic growth and increased consumption as an end. The question is, from the perspective of consumers, how to approach the concept of *needs* in a way that fulfils its mandate of enabling quality of life in harmony with the environment and with others in the long term.

*Needs* are currently defined as part of the dominant model of production and consumption of goods (Max-Neef 1991). People's behaviour, choices and everyday activities are encouraged to be directed towards material possessions, when actually most human needs cannot be fulfilled through material goods. The Human (Consumer)-Centred Framework explores the notion of differing human needs through the consideration of sustainable living as the vision of success. The Human Development Scale theory (Max-Neef 1991) defines human needs as the 'innate requirements that must be satisfied in order for people to remain physically, mentally and socially healthy' (Robèrt et al. 2010). These needs (such as participation and creativity) are translated into aspirations that work as a compass for individual lifestyle choices and are interrelated and interactive, weaving the social tissue where global challenges to sustainable living can be met through social innovations.

Clearly understanding this dynamic nature of aspirations and human needs—systematically interacting between them, with others and with the environment—facilitated the detection of the *satisfiers* required to support the process of building a vision for sustainable living influenced by the previously identified drivers.

The impacts on/of lifestyles or satisfiers are: education and skills development, employment and work conditions, governance, nutrition (diets), health, leisure, energy, use of natural resources, communication, housing, mobility and urban/rural development.

These satisfiers are *glocal*, meaning that they conceive of sustainable living as a dialectic two-way road: on the one hand, global concepts, opportunities and cooperation forces are tailored to the different local realities and aspirations, with creativity and respect for diversity; and, on the other, local practices, knowledge and models are shared and incorporated globally, in different levels of action, improving global opportunities and fostering a continuous learning process towards sustainable living.

This systematic dynamic between the lifestyle satisfiers and innovation drivers enables the context for sustainable social innovations to emerge.

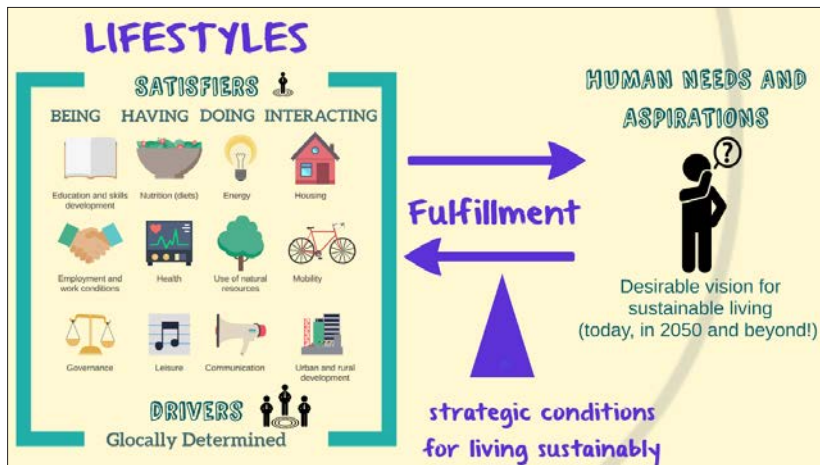


Figure 2: The Human (Consumer)-Centred Framework to identify the strategic conditions for living sustainably. Source: Guillen 2014.

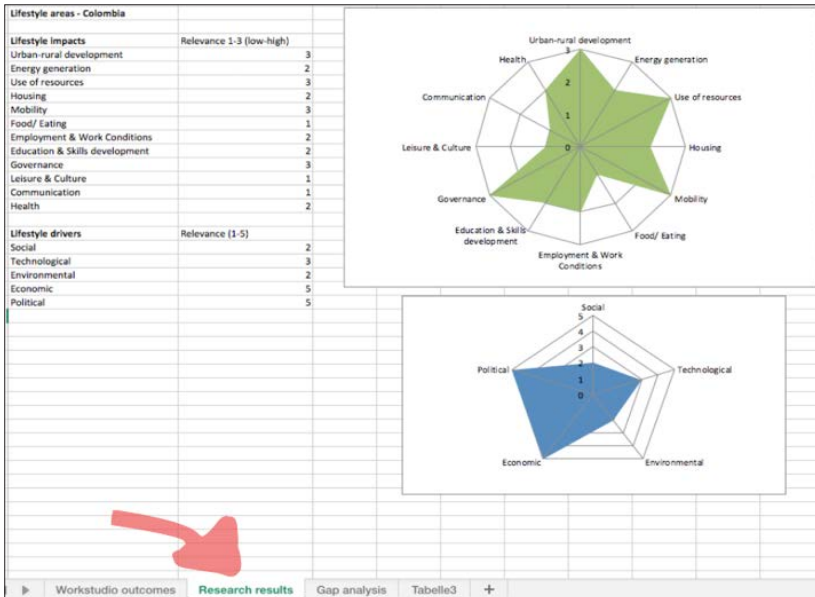


Figure 3: Visualisation of hotspots and drivers. Source: Guillen 2014.

### 2.2.3 Consumption hotspots

Having determined the theoretical frameworks, a qualitative assessment was carried out in terms of the potential impact and uncertainty that current and future trends for lifestyle satisfiers in the BIG 2050 countries represented for leading sustainable lifestyles; the higher the uncertainty and level of impact, the clearer the *hotspot*. A PEEST analysis enabled the types of driver that were most likely to trigger the creations of SI to be seen, in order to address the *hotspots*.

### About the Workstudios

The Workstudios consist of a 1 or 1.5 day event. The agenda comprises keynotes from local experts, hosted roundtable discussions, group work and individual reflections. Each Workstudio gathered around thirty to forty national stakeholders – policy-makers, businesses of all sizes, academia and organised civil society.

A report was created after each work studio, specifying both the research and the work studio findings. These reports are available at the Global Network for Sustainable Lifestyles (GNSL), [www.vision2050.net](http://www.vision2050.net)

This online community brings together work studio participants with people interested in the topic of sustainable lifestyles, and facilitates the follow-up of the processes begun, as well as serving as the main communication platform.

During the work studios, it was possible to compare the hypotheses derived from the baseline research with participants' perceptions, presenting strategic problem orientation. A role-playing session, where participants stepped into the shoes of local consumers in 2050, created a future vision of local sustainable lifestyles.

## 2.3 Participatory processes

BIG2050 engaged different actors in a bottom-up participatory process to craft local scenarios of sustainable living, opened several discussions about the most important consumption hotspots and drivers for systemic lifestyle changes, and created action roadmaps to enable the processes, partnerships and social innovations needed to live sustainably by 2050. These dialogues provided the basis for the strategic conditions for SI to support SL.

### 2.3.1 Participatory backcasting and the work studios

Backcasting, or *looking back from the future*, is an approach that allows a process of critically rethinking the vision of consumption and using creativity to reach beyond existing mindsets and paradigms to build and realise a new (desirable) vision (Quist 2007). The participatory backcasting experiments con-

sisted of a series of multi-stakeholder workshops, called *Workstudios*, which took place in the BIG2050 countries.

The Workstudios followed the five steps of Quist's methodological framework for participatory backcasting experiments, and had two building blocks: participation and learning. In relation to the first, they brought together different contributions and perceptions for envisioning and attaining sustainable lifestyles, creating an interdisciplinary and legitimate planning process towards sustainable living.

Quist's methodological framework's five steps (2007: 28–29, 2011)

1. Strategic problem orientation
2. Develop future vision
3. Backcasting analysis
4. Elaborate future alternative and define follow-up agenda
5. Embed results and agenda and stimulate follow-up

There are two types of learning process: 1) internal or local, as the Workstudios constitute unique opportunities to facilitate dialogue among different social sectors, giving participants the chance to learn about one another's activities and to identify synergies among them for future cooperation for sustainable living; and 2) an external learning process, which takes place when communicating the Workstudio's results.

The backcasting analysis entailed the assessment of current consumption trends and sharing existing promising practices to tap into alternative consumption niches (*hopeful niches*); and facilitated discussions to identify current actions, opportunities and challenges, as well as local needs and offers to support bridging the gap between the desired 2050 and today. Participants elaborated on the above from the perspective of the system drivers and as citizens, creating an agenda with recommendations for different stakeholders, including ongoing practices that can support sustainable living in their countries.





**Figure 4: Selection of hotspots to be addressed today for enabling sustainable lifestyles by 2050.** Source: Guillen 2014.

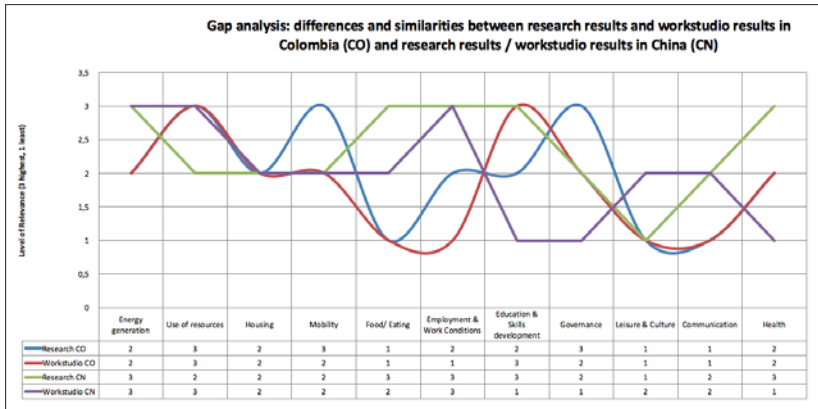
The Workstudios provided common notions that are relevant to enabling the emergence and growth of SI towards SL:

- Policy-makers play a pivotal role in supporting innovators and entrepreneurs in the development of solutions that address local issues such as poverty, literacy and health.
- Successful solutions require robust knowledge-transfer and local tailoring: going *glocal* enables inclusive, consumer-oriented, value-generating social innovations.

- Understanding the success factors of solutions that worked in other contexts is as important as understanding local factors that need to be taken into consideration in the implementation of similar solutions on a different country/region/community.
- The development of *ecological intelligence* allows a better understanding of the environment and its preservation. It also helps to shift aspirations and access to opportunities to change behaviour.
- Learning from the perspective of a consumer helps to coordinate efforts from all stakeholders to rethink consumption and understand the relevance of sufficiency. This takes the discussion from efficient production to responsible consumption.



Figure 5: Qualitative analysis of the work studio discussion outcomes, together with the desktop research results. Source: Guillen 2014.



**Figure 6: Gap analysis: differences and similarities between research and Workstudio results in two countries. The peaks are areas where sustainable social innovations could have a greater impact on shifting current lifestyles to more sustainable ones.**  
 Source: Guillen 2014.

### 3 Strategic conditions for sustainable living (SCSL)

‘Innovation is not only an economic mechanism or a technical process [...] The purpose, impact and framework conditions of innovation are closely connected to the social climate in which they arise’ (Muldur 1998:16). Thus, the parameters to define the strategic framework that enable the creation, diffusion and transformation of societies through sustainable social innovations consider the following conditions:

- They are applicable from individual to community levels, and they support decision-making processes and behaviour change towards more sustainable ways of living.

- They enable opportunities for systemic change through co-creation based on empowerment and sustainable value generation.
- They can be fulfilled through partnerships and collaboration among all social stakeholders (they are inclusive and complementary).

To present a clearer scope of action for different drivers of change, the conditions were drafted following an expert validation workshop and promising practices that exemplify the ways in which social innovations are meeting these conditions.

### **1. Brand sustainable living as an aspirational and affordable purpose**

Living sustainably should become aspirational, yet realistic and accessible. This condition depends on a mixture of policies, innovations and business models that drive the reduction of consumption levels, while exploring opportunities for new personal recognition schemes and increased consumption quality.

### **2. Participatory governance: decentralise decisions and actions enabling local empowerment**

The participation of stakeholders and consequent coordination of their actions should take place across different levels of social structure, from the global to the most local, and across different areas. Decentralisation enables reinvestment, allowing further social engagement and accountability, increasing the relevance and resilience of policies, while avoiding overlap and/or stagnation from a lack of actions.

### **3. Make the business case for sustainable consumption and production (SCP)**

More sustainable consumption presents many product, service, infrastructure and new market opportunities. Countries can support and incentivise business development based on multi-sectorial risk assessment input.

#### **4. Build knowledge, skills and capacity for future consumers**

Experience-based education and research require going beyond access to information, by enabling the development of knowledge and skills that allow critical thinking, reconsidering the responsible fulfilment of human needs.

#### **5. Facilitate transparency for trust-building**

Reliable and consistent information-generation, coherent agendas and open sharing are required to build long-term-oriented joint actions that enable SL through mutual trust and cooperation.

## **4 Conclusions and the way forward**

This section presents some general conclusions that validate the research's propositions, the key learnings regarding the role of an educated consumer and the proposed next steps for this study.

### **4.1 Conclusions**

The *glocal* foundation of the strategic conditions for living sustainably in 2050 enables a system that proves a process of mutual learning and improvement between the local and the global levels. Promising practices and alternative consumption niches, when communicated and scaled up, help to bridge the gap that separates the current reality from the common desirable vision of SL.

#### Key conclusion regarding the strategic conditions for sustainable living (SCSL)

The SCSL is not meant to be an absolute truth about the coming transition towards more sustainable ways of living, but a starting point across different social levels, to perceive a more balanced and long-term relationship with the environment in which humans are equally and fairly treated. Changes in the conditions are expected to be the reflection of a dynamic process that pertains to a truly sustainable development.

Sustainable social innovations enable the existence of the SCSL, which, in turn, allow the development of more SSI by mainstreaming actions and solutions, constructing bridges between different undertakings and activating partnerships that strengthen practices of resilience, accountability, equity and citizenship. This is needed in order for SI to generate *added value* for consumers, and the pursuit of this value is what will enable the creation of solutions to adopt more sustainable consumption practices.

#### 4.1.1 About the participatory processes

New partnerships have the purpose of deepening the understanding of the satisfiers (aspirations) of the needs and the best ways to address them. These activities could comprise undertakings, such as:

- Performing impact studies that consolidate and analyse the current research on each country's consumption patterns, household lifestyle segments and possible drivers (i.e. aspirations, infrastructure), and linking them to social and environmental impact areas.
- Widening the exploration of SI and building on the knowledge gained through in-depth research of the potential innovations and stakeholder engagement workshops, where social innovation networks and academic incubators will help to identify existing innovations for SL, mapping a landscape of promising local social and technological innovations for sustainable living, including recommendations to scale up and develop more opportunities for innovation.

- Development of regional and local visions, scenarios and roadmaps that connect with other areas and contribute to the creation of more detailed action plans that all stakeholders can use for their own projects.
- Capacity-building and skills development towards the promotion and scaling up of sustainable innovations by developing and/or tailoring existing training aimed at supporting youth in the development of sustainable initiatives.

The SCSL could be a powerful ally for stakeholders aiming to achieve the Sustainable Development Goals, because the participatory processes that led to the definition of the SCSL presented key actions needed to shape sustainable lifestyle choices and scale up transformative practices. This provides important knowledge from which to begin further research.

#### 4.1.2 Chances and limits to consumer education through bottom-up approaches

During the process of identifying the conditions, the learning accrued showed many aspects of how the role of the consumer is understood and even valued by different stakeholders, and therefore the need to appeal to all social stakeholders as consumers themselves rather than representatives of the sector they work in. This is particularly relevant because topics such as *sufficiency* and *empowered consumer* still make many people uncomfortable and are rarely spoken about. *Education on SL for consumers has to be the result of the participation of all actors and a systemic, holistic process that builds on itself.* For this reason, collaborative, human-centred approaches, such as participatory backcasting, help to overcome the issues of mistrust, hidden agendas and dependency from *the top*, enabling the emergence of transformative, sustainable social innovations.

#### Main learning about consumer education

It is important to note that an educated consumer does not necessarily mean a responsible consumer that lives more sustainably. Communication, from awareness-raising to free access to information for individual choices, plays a crucial role in activating the consumer. Many initiatives fail to bring cohesion because of a lack of understanding of the ways in which knowledge generates value for the consumer, falling short in the provision of motivation for changing behaviours. It is our responsibility to be able to provide PERSONAL, CREDIBLE, REALISTIC, INSPIRATIONAL and ACCESSIBLE answers to these everyday challenges that our lifestyles pose.

## 4.2 The Strategic conditions for sustainable living (SCSL) as an analytical framework

Given the nature of the research process, the SCSL needs more scientific robustness in order to prove its relevance and potential to support the development and implementation of sustainable social innovations to systematically lead transformations towards more sustainable lifestyles. To this end, phase 2 analyses the underpinnings of complex systemic interventions (Rousseau 2016), examining the drivers, the conditions and their application through the Practice-Oriented Design methodology (Shove et al. 2012; Scott et al. 2012) and the Dynamics of Innovation Systems (Hekkert et al. 2011). Under these two lenses, the SCSL will be used as an analytical framework in various workshops focusing on the relationship between well-being and lifestyles.

Subsequent phases will consist of testing and consolidation of consumer-centred guidelines for designing and implementing sustainable, social innovations that enable transformations towards sustainable living.



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# Socio-economic heterogeneity as a challenge for consumer education in general education schools

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# 1 Introduction

For several decades schools in Germany have been faced with the challenge of integrating socially relevant educational fields into their school profiles and also teaching. In the 1980s environmental and peace education were in focus. With the Agenda 21 and the UN World Decade, education for sustainable development (ESD) has become an important issue. Nutrition and health education and media literacy have also become increasingly important because of the pace of technological progress. Since the financial crisis, financial education has also been an important topic of discussion in international educational policy and scientific research. Thus, on the one hand, there exist relevant social key problems in society, such as climate change related to the high consumption of resources. On the other hand, rapid social change and the current reconstruction of the welfare state bring many challenges for everyday life and life planning.

The reform of nutritional and consumer education was a research project in home economics, with the aim of modernisation of nutritional and consumer education for general education schools in Germany between 2003 and 2005. The final report of REVIS (2005) pointed out that lesson-related offers for consumer education do not take into account specific sociocultural demands and do not reduce the sociocultural barriers to education. The authors emphasised that there is a significant need for research to identify sociocultural barriers to understanding. More than ten years later empirical research about pupils' conceptions is increasing, but their beliefs about consumption remain a blind spot in research (Kirchner 2016), as well as social background as an important learning condition (Berg 2016). Bala and Müller (2014) mentioned that the same challenge faces consumer policy. They pointed out a middle-class bias for consumer protection and instruments in consumer law, which do not take into account the specific needs of so-called vulnerable consumers (Bala and Müller 2014, 9). Thus, we know if we are reaching the pupils who need it most.

In this article the author first gives a short overview of consumer education in general education schools in Germany. Then, equal educational opportunities as one premise of modern society and the importance of social background

for consumer education are discussed. Finally, the author points out theoretical approaches to dealing with socio-economic heterogeneity in the field of consumer education.

## 2 The challenge of socio-economic heterogeneity in economic education and consumer education

Children and young adults, particularly those from difficult social backgrounds, are often confronted with the experience of social exclusion because consumption is related to societal participation (Bala and Müller 2014). Nevertheless, they develop abilities and practical knowledge, which creates the involvement of a certain cultural milieu (Sturm 2013). Empirical research, especially on economic behaviour and financial knowledge, has pointed out that one of the most important influences on economic behaviour is social background and therefore it is one of the most important learning conditions (Berg 2016).

### 2.1 Consumer education in general education schools

Consumer education is still not a subject in most federal states in Germany. In the context of claims to promote everyday competencies in general education schools in 2013 the conference of education ministers (KMK) published a paper with the intention of strengthening consumer education in general education schools. For teachers this means implementing content fields such as finance, market, consumer law, nutrition and health, media and information, sustainable consumption and globalisation in their subjects. Economic education is also integrated into other subjects such as social sciences, and is a separate subject only in a few federal states in Germany. In economic education 'household and consumption' is a main content field in primary and second-

ary schools. Furthermore, typical purchase situations or other economically shaped situations of everyday life are often used as an introduction leading to more abstract economic topics.

Schlegel-Matthies (2011), an expert in nutritional and consumer education, emphasises that consumer education is more than nutritional education, health education, education for sustainable development or economic education, but it has several overlaps. For her, the characteristic of consumer education is a multi-perspective point of view about consumption from different subjects (Schlegel-Matthies 2011). She points out that consumer education considers the perspectives and needs of consumers, in particular, and it is considered the context of everyday life.

## **2.2 The complex relationship between socio-economic background and unequal opportunities**

General education schools in Germany are oriented towards the premise of equal opportunities independent of social background. Socio-economic heterogeneity or inequality refers to differences among pupils in their access to resources, which depends on family background. So heterogeneity as a characteristic of pupils is relative to time, to others or to external standards (Sturm 2013). The question of heterogeneity in general education schools always implies the question of whether there are patterns of disadvantages. Thus, in Germany social background is still an important reason for educational success and life chances.

Two interconnected aspects are discussed:

### **1. Macro-level: permeability of the German school system**

One idea behind the German tripartite school system was to create homogeneous learning groups. Traditionally, the assumption of homogeneity refers to factors such as intelligence, cognition and motivation. In the German school system class-specific boundaries are often interpreted as boundaries of abilities, so that the early tracking system still represents the structure of social classes in Germany (Hiller 2012; Sturm 2013). Berg (2016) pointed out that



social background ‘does in fact determine access or not to education and permeability of the school system’ (Berg 2016, 409).

## **2. Micro-level: The lack of cultural fit between pupils and teachers**

Middle-class bias: Teachers in all types of general education school are more or less confronted with pupils from different social backgrounds, while teachers usually belong to the middle or upper class (Berg 2017). Thus, the different linguistic habitus can cause forms of non-successful communication, which teachers interpret as a lack of ability.

# **3 Theoretical approaches to dealing with socio-economic heterogeneity in economic and consumer education**

Steffens (1980) emphasises that consumption is a topic that touches non-formal contexts, such as spending leisure time and the practices of private life. He also indicates that this could increase resistance to learning. For example, to train in competencies for resource management, pupils often have to make a spending plan about their pocket money. In the case of sustainable consumption they have to find out in which country the brands of their clothes are produced. These ‘ice-breaking-activities’ follow the principle of life orientation. A general problem is that teachers run the risk of blaming pupils who are less privileged than others in terms of resources.

## **3.1 Life orientation in economic education theory**

Berg (2016) pointed out that life orientation is a core element of economic education theories. She describes a kind of didactics where ‘teachers initiate a learning setting which corresponds to the daily life of the learners to lead

them into a learning process' (Berg 2016, 416). Thus, Berg summarises that 'the theory of didactics of economics requires teachers to orient themselves to the lives of the pupils in everyday situations. On the other hand the role and relevance of economic socialization in teaching and learning is rarely discussed' (Berg 2016, 416).

One answer to heterogeneity was the suggestion to develop different domain-specific types of learning outcome standard at high, intermediate and comparable levels (Klieme 2007), but this is still an open claim. The description of competencies can follow different accesses: since PISA, the individual perspective with internal requirements has been in focus. Another perspective is on the situational conditions, while a third is on the performance itself. Retzmann et al. (2009) developed a competence model for economic education. In the context of life-oriented didactic theory, the authors try to differentiate 'economically shaped' life situations using the term of economic roles: consumer, money investor, borrower and policy-holder.

Regarding financial education, Retzmann and Seeber (2016) differ on consumer, earner and economic citizen. The main goal of the authors is to 'generate homogeneous classes of economically shaped life situations for which certain competences are needed' (Retzmann and Seeber 2016, 14). Furthermore, the role of the consumer is differentiated in the life situations of buyers, savers and investors, debtors and insurance holders (Retzmann and Seeber 2016, 19). To deal with economic roles is one way to derive and justify homogeneous areas of activity. In the context of socio-economic heterogeneity, it involves the risk of exclusion of the social and biographical context of life practices. Hedtke (2011) pointed out that economically shaped life situations can be very different within a society and that this could be a reason for not defining homogeneous economic roles. Furthermore, the term 'role' is used in role theory. In socialisation theory social roles are connected to a system of expectations. Thinking in economic roles runs the risk of training pupils only for adaption to the objective social living conditions, thereby neglecting creative possibilities for action or change.

### 3.2 Culture sociological-based didactics

Children with special needs are mostly separated into so-called special needs schools and therefore are not part of the ordinary and tripartite school system. Hiller (2012), a professor of pedagogy in the field of learning disabilities, takes the view that educational content and curricula in schools need a complete critical overview regarding their suitability for special target groups. With reference to Bourdieu's theory formation, he developed an educational programme, which refers to the habitus of pupils and which has several overlaps with consumer education.

He argues that special programmes are needed, which refer to the difficult life circumstances of pupils with low socio-economic status. Hiller's 'culture sociological-based didactics' represents a functional view of education, which can also be called a life-oriented didactic theory. However, Sturm (2013) pointed out that one difference between pupils who are privileged with resources and those who are less privileged is their understanding of learning in school. For pupils who are privileged, content is important, whereas underprivileged pupils emphasise the function and activities of learning. Thus, special target programmes run the risk of replicating the historically grown logic of the tripartite school system with its institutionalised production of differences. Nevertheless, Hiller claims that examining educational offers with regard to a middle-class bias and the life practices of children and young adults with risky life circumstances is also important in terms of handling socio-economic heterogeneity in consumer education.

Instead of creating educational programmes for special target groups in consumer education, the description of competencies under consideration of different life practices is another way of dealing with socio-economic heterogeneity. Tschapka (2012), who works in the field of environmental education, developed a competence model, which also refers to habitus and life practices as key terms. Practice theory is an interdisciplinary movement or a field of research in sociology and cultural studies. There are many different types, but they all have in common that practice is the basic theoretical category. While the field of behavioural sciences is often only interested in single activities, practice theory is interested in the social context of practices and its relation to other practices. Practices include everything we do and say and feel, which

we share with others. A second basic category of practice theory is knowledge. People in different social environments have various types of experience. When pupils grow up they obtain different types of cultural knowledge. This doing knowledge depends on everyday practices and routines. Furthermore, Tschapka (2012) pointed out that learning with the aim of increasing pupils' scopes of action requires knowledge of these everyday practices and routines, such as 'going shopping'. Moreover, pupils have practical knowledge of 'going shopping'. If teachers act like researchers in examining the life practices of pupils and reflect upon their own, they can use this knowledge by dealing with socio-economic heterogeneity. Teachers today have more freedom to create school-specific curricula. Jank and Meyer (2014) describe the practice of creating school-specific curricula as a process of communication between the subject teachers. If teachers are trained to use the scientific findings of cultural–sociological studies to describe and reflect competencies and specific situations for consumer education, this could help in considering aspects of socio-economic heterogeneity in consumer education and avoiding patterns of disadvantage.

## 4 Conclusions

Life orientation in economic education theories has a long tradition and also offers a theoretical foundation for consumer education. For the handling of socio-economic heterogeneity, scientific insights from cultural sociology are a useful addition. Practice theory accented access has the advantage that it underlines the fact that pupils still have practical knowledge that fits their special living environment, meaning that pupils are not described as people with deficit characteristics.

One main aim of teaching is to increase the scope of action. Teachers and researchers can describe the scopes of action of their pupils in their special living environment when they know more their everyday practices. Teachers can learn to be reflexive about middle-class bias in curricula, learning arrangements and educational material. Furthermore, more empirical research

is needed that is interested in the consumptive life practices of children and young adults from difficult social backgrounds. This could also help promotion of the practical implementations of the life-orientation principle in economic and consumer education.

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# Part 2

## Consumer Data

Introduction

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*'And that', put in the Director sententiously, 'that is the secret of happiness and virtue—liking what you've got to do. All conditioning aims at that: making people like their inescapable social destiny.'*

(Aldous Huxley 1932/1998. *Brave New World*, p. 16, New York: Harper.)

The obvious issue of consumer data in the context of consumer policy is the mass of data that consumers voluntarily or involuntarily produce and diffuse. Thereby, consumers run the risk that their data is not only being used to their benefit, but also being abused. This is particularly the case with personal and sensitive data that can clearly lead to serious harm for consumers, if this data falls into the wrong hands. Typically, in an open market economy there are commercial interests, seeking new, technical ways to access consumer data for the sake of profit maximisation. The contributions to this part show that this is an important field to be addressed by consumer policy.

Noting the socio-technical innovations of digitisation, big data and the Internet of things, Peissl and Krieger-Lamina anticipate the steady advance of scoring systems and their commercial use. Their contribution, 'The scored consumer: privacy and big data', pinpoints a lack of transparency and awareness as a major threat to consumers, since they are unable to respond to wrongful data and are ignorant to the algorithms of scoring systems; thus, scored consumers are vulnerable to intrusions into their individual privacy and automated decisions to their disadvantage. While (as stated by the authors) consumers must have the opportunity to know their scores and should be enabled to act on this knowledge, it is also pointed out that it remains debatable whether consumers should feel pressured to make decisions driven by scoring, for example, moving to another part of a city in order to get a better deal on interest rates for real estate mortgages. Observing that there are strikingly few empirical investigations from the social sciences on this subject, the demand for further research in this area is both submitted and justified.

Providing supervision over consumer scoring will most likely be a vibrant, ongoing and future discussion in the domain of law-making and administrative regulation. Scoring systems have a powerful appeal—their automatism provide the impression of precision and neutrality. However, they can also restrict people's chances in discriminatory ways. Politics and society will continue to debate ways to protect consumers from these effects.

The following contributions point specifically to intricate problems that lie beyond the antagonism between consumers and producers. Stefan Selke in his contribution, ‘Precious people. How digital alchemy transforms us into vulnerable consumers’, takes a sociological perspective. He shows that not only is the trend for self-quantification, for attaching numbers to our lives, manipulative, but also that consumers thereby lose their abilities and individuality. Still, consumers desire self-quantification, which makes them particularly vulnerable, because, as Selke concludes, ‘*You cannot save people from something they desire.*’

Similarly, Maier-Rigaud and Böning in their contribution, ‘Nudging towards a healthier life? Conceptualising the role of health apps and wearables between empowerment and manipulation’, address the question of whether consumers are their own worst enemies. Based on the concept of nudges, they show that health apps can be viewed as tools, potentially empowering users to lead a more self-determined life. Beyond this self-nudging, fitness apps ‘nudge by comparison’, which means that in a playful and competitive way values are compared and thereby self-quantification generates new norms. This creates consumer protection needs, particularly for ‘other-directed’ (Riesman) consumers who not only are prone to manipulative commercial interests, but who also seem to freely contribute to the emergence of new social norms, without a scientific evidence base or inquiring about potential further implications. This is clearly a dystopian outlook mirrored by the above quote from *Brave New World*: the most serious risk associated with consumer data lies in the subtle manipulation of consumers in order to align the desires of consumers with other hidden commercial or state interests.



# The scored consumer

Privacy and big data

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# 1 Introduction

The ‘scored consumer’ is just one example of many generic developments in and around big data, entailing potential conflicts with the fundamental right to privacy. In this paper, we will discuss the relation between elements of the big data debate and the issue of privacy, and we will exemplify the challenges arising by looking into the details of credit scoring. The current challenges originate predominantly from socio-technical developments during recent decades, which will continue to unfold over the coming years. Three of these socio-technical and techno-economic-driven developments are digitisation, big data and the Internet of things. These developments are very relevant to all of us, as they are supposed to change—and have already changed—our lives profoundly.

First and foremost, we see a broad wave of digitisation. Digitisation as a socio-technical phenomenon is not new in itself. Since the 1970s we have witnessed an ever-increasing diffusion of digital applications. From the professional use of information and communication technologies (ICT) in large organisations, offices and factories alone, initially using central computers, we saw the widespread adoption of personal computers in the late 1980s and early 1990s and the digital doll that is currently in our children’s nurseries. Nowadays, we use digital equipment in almost every area or dimension of our daily lives, and we are constantly producing data. The inherent and technically necessary production of data by digital systems represents a fundamental difference compared to older analogous systems. The data produced is readily available and it seems an obvious choice to use it. Thus, measurement and control have become central paradigms. In contrast to analogous systems, data does not vanish in digital systems, having been produced. For instance, in old analogous telephone systems, after an actual call, no traces of the call could be found in the system. If, for example, the law enforcement authorities wanted to interfere or eavesdrop, they had to catch the actual conversation ‘on the fly’. In general, data such as caller ID, time and duration of call are produced and saved in digital systems and would have to be actively erased. Most are stored for an indefinite period of time and can be used later.

Today, most people use digital equipment and services in their everyday lives, such as smartphones, debit and credit card payments, different self-tracking devices and wearables, which may give rise to the phenomenon of self-tracking and self-optimisation, known under the header of the ‘quantified self’ (Selke 2016). There have also been digital developments in caregiving, such as Paro the robot. In the domain of health care, we are increasingly obliged to use digital applications for administrative use (e.g. patient cards), as well as for individual monitoring. A field of ample use of ICT is the security sector. Security issues have dominated political debate for more than fifteen years. The so-called securitisation of societies (Buzan, Wæver and de Wilde 1998) smoothes the way for heavy (digital) surveillance all over the world. Digitisation promises to deliver efficiency gains and to bring about new products and services. At the same time, problems from power and market imbalances are becoming more acute.

A second phenomenon is big data—a hype and a buzzword. Big data is an overarching term for new developments in ICT to exploit the huge and unstructured data that is generated every second by different systems. Experts often refer to the 5 Vs of big data: volume, velocity, variety, veracity and value (Demchenko, Ngo, and Membrey 2013). Volume refers to the vast amount of data generated every second. Velocity refers to the speed at which new data is generated and the speed at which data moves around. Variety refers to the different types of data that can be used now. And veracity refers to the messiness or (lack of) trustworthiness of the data. These 4 Vs basically refer to increasing technical potential. The fifth V directly points at a very important trigger: ‘But all the volumes of fast-moving data of different variety and veracity have to be turned into value! This is why value is the one V of big data that matters the most. ...Value refers to our ability to turn our data into value. It is important that businesses make a case for any attempt to collect and leverage big data’ (Marr 2015). From a consumers’ point of view, we have to ask who will be paying for the profits of the companies using this data, and what are the mechanisms of turning data into gold.

Another vision that seems to be slowly materialising is the Internet of things: ‘IoT refers to the networked interconnection of everyday objects, which are often equipped with ubiquitous intelligence. IoT will increase the ubiquity of the Internet by integrating every object for interaction via embedded systems,

which leads to a highly distributed network of devices communicating with human beings as well as other devices' (Xia et al. 2012). This means that almost everything will become interconnected; every single object will have an identifying number, and these objects will constitute (or be equipped with) embedded systems. The 'smart' components will enable independent communication and decision-making by the systems and all interconnected objects will be potential tracking devices.

The developments from digitisation, big data and the Internet of things may lead, on the one hand, to the 'automation' of society (Helbing 2015). On the other hand, we do have strong legal reasons to govern innovation. One of them, although often attacked and endangered, is the fundamental right to privacy.

## 2 Privacy—a fundamental right and a prerequisite of democratic societies

There are good reasons for the existence of fundamental legal barriers to the abundant use of all the data generated. One of them is privacy—a fundamental right and a prerequisite of a democratic society (see: Peissl 2014; Pauer-Studer 2003; Wiederin 2003; Bennett 2003). But what is privacy? In short, privacy goes back to a famous article by Warren and Brandeis (1890), where they invented and argued for a 'right to be let alone'. Interestingly, the case was based on the application of a new technology that was already in place. It was the time when personal photography was becoming available, street photography was evolving and pictures were being published in the newspapers. Second, there was a very influential court ruling (BVerfGE 1983) by the German Bundesverfassungsgericht (Federal Constitutional Court) on informational self-determination, which means that every individual should have the right to control who knows what about him- or herself. The Bundesverfassungsgericht interlinked control over the information flow with the free will of autonomous citizens as the basis for democratic societies. Hence, the discussion about privacy is not



only about individual and fundamental rights. It is also about the philosophy of autonomy and freedom, and thus about the pillars of liberal democracy (Rössler 2001; Pauer-Studer 2003). Following Rössler (2001, 25), privacy may be defined as the possibility to control the access of others to oneself. It can be split into three dimensions: first, the dimension of private decisions and actions ('dezesionale Privatheit'), which means that the individual retains control over his/her own decisions and is (relatively) free of heteronomy. The second dimension is called local privacy ('lokale Privatheit'), which means that the individual has control over rooms and spaces such as his or her own home. Information privacy ('informationelle Privatheit') is the third dimension and relates to the knowledge and control of information about oneself. Transgressing this 'privacy paradigm' (Bennett and Raab 2003), we can observe a tendency towards a 'surveillance society' (David Murakami Wood (ed.) et al. 2006) that entails other threats to individuals, such as categorisation and social sorting (Lyon 2003).

The new technological means mentioned earlier create an extreme challenge for information privacy, as well as for the sphere of private decisions and actions. Meanwhile, even local privacy is under pressure: the consumer's voice 'controls' the smart TV in the living room, the smart doll in the nursery, as well as smart speaker-like devices all around the apartment, which means they have to have an 'open ear' to the consumer's wishes. In particular, 'smart TVs' that react to gestures and voice commands and 'smart speakers' such as the Amazon Echo or the Google Home exemplify the strong push towards greater convenience and comfort at the cost of personal data. All the virtual assistants, such as Google Now, Apple's Siri, Amazon's Alexa and Microsoft's Cortana, are intruding on our privacy. Too many consumers are not aware of the implications and therefore happily trade their privacy for a much-valued 'modern' way of living. This goes hand-in-hand with immense societal developments induced and intensified by social media. Billions of people worldwide use social media, sharing details of their lives and those of others, such as their children. We have observed a tremendous impact on the understanding of individual privacy.

### 3 Potential impacts of consumer mass surveillance

Highly influential political developments accompany these socio-technical changes: in particular, security measures and the political debate over the ‘war on terror’ have held sway for more than fifteen years and are now paving the way for massive surveillance. Is this the end of privacy (Enserink and Chin 2015)? Are we living in the post-privacy era (Heller 2011)? Or do we have good reason to try to live up to the existing rules while helping people to maintain their private lives? In the following section, we will give a short overview of the potential impacts of the mass surveillance of consumers.

By knowing their customers, enterprises want to improve their goods and services in order to enhance turnover and profit. Therefore, the predictability of consumer behaviour is a major aim. Allegedly, the more data a system has at its disposition, the more it will be able to predict what will happen. As soon as their behaviour becomes predictable, consumers turn into economically exploitable entities and individuals into manageable risk factors. This is a dramatic change in the way we think about human beings.

Another challenge is the process of social sorting (Lyon 2003), which means that people are put into categories based on their virtual ‘data double’. In a sense, the virtual data double invades, mimics and eventually determines the real lives of people.

A third issue is mainstreaming: as soon as we know that there is surveillance around, this reduces our privacy, and a loss of diversity results—in other words, there is a strong mainstreaming effect. Under surveillance (and under manipulation through unequal hierarchical communication) people no longer use their full autonomy and decide what they think others might expect from them. In this way, with decisions prepared and guided by systems, we actually do not know what accompanies our daily lives. It may serve the short-term interests of enterprises, which can optimise logistics and raise profits. In the long term, however, this could be dangerous for our societies. Restricting var-

iation and avoiding what some would deem deviation may do away with any ‘driving momentum’ in societal, cultural and economic terms. Only diversity in behaviour—even if ambivalent—carries the potential for change. Deviant behaviour is the driver of progress. So there could be a long-term impact on our societies’ ability to innovate (see: Peissl 2003).

## 4 Credit scoring—a challenge for consumers

In the context of big data, privacy and consumer mass surveillance, credit scoring is a perfect example of the mechanisms described. Almost nobody in Austria knows anything about credit scoring; not even the mere existence of such a system is publicly known (Rothmann, Sterbik-Lamina, and Peissl 2014). At the same time, we can observe an increasing number of complaints over financial services filed at consumer-protection organisations regarding the potential discrimination of loan-seekers (VKI and AK 2013). This accompanies the excessive growth of large data collections in the private sector and a grey market for potentially illegal data. Scoring bears hallmarks of surveillance, because many different aspects of consumers’ private lives are being monitored over time. Basically, scoring systems disregard privacy principles such as the limitation principle and the purpose principle (Rothmann, Sterbik-Lamina, and Peissl 2014).

From a historical perspective, scoring procedures initially served to protect creditors and became established in the business-to-business sector only. Very early on, instruments were blacklists of defaulters, which were published regularly. Relatively early on, specialised companies established scoring or blacklist services and, in addition, expanded into more advanced services such as debt collection. A focus on consumers was not noticeable until the 1960s. In the early phases, only personal knowledge of a few criteria such as occupation, salary and known assets served to assess the creditworthiness of consumers.

Scoring today is based on hard facts such as income, loans, open debts and other banking data. Interestingly, ever more soft facts such as socio-economic data, including address, forenames and surnames, family status, social media profiles, as well as smartphone usage, are fed into the systems. Additionally, sector-specific blacklists influence the individual's score. The score—mostly unknown to the customer—determines the availability and pricing of services such as interest rates of loans, mobile phone contracts and payment options in online shopping platforms. If your score is not good enough, you may have prepaid options only, whereas your neighbour from across the street (beyond the 'red line') also has the option to pay by credit card or even after delivery.

As already mentioned, digitisation and minimisation will spread wearables and tracking devices everywhere. Thus, measuring and quantifying all dimensions of life will increase. In the Internet of things data from all the different sources will be used to intensify the interlinking of different data sets. This will lead to more specific profiles. Hence, scoring will be increasingly based on data doubles rather than facts or 'real' behaviour. The more that economic value becomes decisive for assessing customers, the more social sorting (Lyon 2003) and categorisation may become predominant.

As scores become increasingly important for consumers, it may be a relevant new task for them to actually manage their score. In this respect, much more transparency is needed. Consumers must have the chance to know their score to be able to act accordingly. Consumers have to be enabled to maintain their right of access, of correction and of erasure of their data, as stated in several national and international rules, directives and guidelines for data protection (Galetta and de Hert 2014, Österreichischer Nationalrat 1999). Transparency is also needed with regard to the algorithms applied in scoring systems. Nevertheless, it is questionable whether we want to live in a society in which citizens must relocate to pay lower interest rates for their loans.

As scoring services get cheaper (because of digitisation) and also increasingly available for SMEs, we are already observing an imbalance and disproportionality with regard to business volumes. Even in contracts with low or almost no risk, or very little money involved, scoring systems are used. Hence, the customers' rights to privacy are neglected without due cause.

## 5 Conclusions

Observing socio-technical innovations such as digitisation, big data and the Internet of things, we anticipate the further growth of scoring systems and their use by companies in different sectors. Departing from the concepts of equality and fairness, there is a need for a new and more comprehensive regulation of these services. With regard to future developments, a specific scoring law would also have to be considered in Austria.

Foremost, the lack of transparency and awareness should be tackled. As long as consumers do not know that they are subject to scoring, they do not have a chance to react accordingly or to request the correction of wrong data. Transparency also includes the knowledge of the algorithms of scoring systems in order to be able to know what kind of data or behaviour might give rise to a certain score. The various assessment and calculation methods must be not only disclosed but also examined by independent supervisory authorities.

The data limitation principle should be applied and the use of certain data restricted. Only directly relevant data on creditworthiness should be used, such as income situation, assets, loans and expected expenditure. In this context, reference must also be made to the purpose principle of data protection: not all the available data on a person may be used for credit scoring. Certain areas of life and particular types of data should be explicitly excluded.

A threshold regarding the contracted financial risk should be installed, preventing scoring for bagatelle transactions. This also implies that services and products that form part of the basic livelihood in Austria, including renting flats, should be exempted from comprehensive credit assessments. Credit scoring should only be permitted for a very limited extent of business transactions involving material goods that can be procured in the event of a default.

Credit rating data may not be available to all employees of scoring companies at all times. Access to the recorded, archived and analysed personal (creditworthiness) data has to be kept to a minimum and recorded in a revision-proof manner. The control of compliance with the provisions should, in the first in-

stance, be entrusted to a company data protection officer, who should be installed in all companies that use data scoring.

In addition, there are strikingly few empirical investigations from the social sciences on the subject of credit scoring and the credit assessment of natural persons. There are no representative findings on the experiences of, and implications for, the consumers concerned. As in other technology fields, the statistical models and algorithms governing the scoring procedures are (unknowingly) used to incorporate the values of the clients and developers. How this affects the results of the scoring calculations requires further scientific investigation.

Finally, the cultural or philosophical question remains about whether we really want to quantify ourselves to squeeze the multidimensional and rich aspects of our lives into different data sets prepared by scoring schemes that apply largely unknown algorithms.

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# Precious people

How digital alchemy transforms us into vulnerable consumers

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# 1 The expansion of the self-measurement zone

This article primarily focuses on digital self-measurement technologies that have become popular in recent years. The zones of possible self-measurement are undoubtedly expanding (Selke 2016). Most of the propagated prognoses are based on unquestioned promises of salvation: great potential and opportunities accompany digital self-measurement technologies. When *Deutsche Telekom* CEO Timotheus Höttges literally warned us about a ‘fundamental intellectual and cultural pessimism’ at a conference, he was, in principle, right. However, as a sociologist, I am most interested in shifting baselines, meaning slow changes to our common frame of reference (Rost 2014). The baseline that is currently changing is the manner in which we, as ‘quantifiable consumers’, regard something as normal. My sociology, therefore, is first and foremost non-affirmative and critical. Second, my approach is informed by a position of scepticism. It is based on the assumption that nothing comes for free in this world and that there cannot only be winners in a game. In other words: I am interested in the hidden costs and losers of the game.

# 2 The return to the alchemistic principle and the discovery of the human as an over-efficient subject

Digital self-measurement is nothing more than a modern-day return to the alchemistic principle. This is a supposition that will require some clarification. I will go back in time a little in order to illustrate the fundamental principle: Johannes Amos Comenius is considered to be the founder of modern-day schools. In his book *Didactica Magna* he explains the advantages of compulso-

ry education in order to make educational achievements both measurable and comparable. Comenius was an early theorist of the standardised perception of the world. Not uncommon at the time, Comenius was also known as an alchemist. He supported the idea that it was possible to turn common substances into precious ones with the help of certain conversions. The superficial goal of his educational programme was education as such. The hidden goal was the search for an alchemistic process of the social to form a better—meaning an optimised—more efficient human using ‘scientific’ magic. The idea of measurable educational goals came about from the division of the educational process into standardised grades, classes and the ability to evaluate pupils with marks. This system produced winners and losers, and continues to do so today. In his critique of the educational system, Ivan Illich said that ‘he who has climbed the educational ladder knows the point at which he has failed and knows how uneducated he is’ (Illich 1975: 39).

Transferring this example to digital self-measurement, let us look at the motto of the *Quantified Self* movement—‘self-knowledge through numbers’. The starting point is always the ‘common’ person, the human who is not yet fully developed, or the human who represents a risk or a source of error or disturbance for society. For those of us who choose to believe Gerry Wolf, the founder of the *QS* movement, people need ‘help from machines’ (Wolf 2010). With the help of quantification, one’s lifestyle is said to become more rational. And in accordance with social standards, ‘common’ people should be transformed into ‘precious’ people. Therefore, digital self-measurement can be considered a contemporary version of the alchemistic principle. This principle entails transforming the ‘common’ into something supposedly ‘precious’ according to normative standards. The alchemistic principle is therefore a game that produces winners *and* losers, regardless of how it is performed.

I would like to look back at another point in time. The Darmstadt Dialogues took place in the late 1950s and were, at the time, a meeting place for the intellectual elite. In 1958 the guiding question was: Are humans measurable? Back then, intelligence and personality tests were very fashionable. So, historically speaking, measuring humans is nothing new; it just continues to take on new shapes. In Darmstadt, this intellectual elite discussed the pros and cons of new psychological tests. The chair of the Darmstadt Dialogues, Erich Franzen,

summarised as follows: 'I believe the greatest benefit [of these tests] is that one can make comparisons between people' (Franzen 1959: 18).

There has been a return to the alchemistic principle in the digital age. Data collection and data analysis are used to transform the 'common' essence of humans into an optimised, 'precious' essence. However, the methods used only make sense if they are used to make social *comparisons*. But with that, the rhetoric saying that everything is getting better and that everyone can profit from it has become absurd. The game of alchemistic optimisation *inevitably* produces losers.

To put this all in more sociological terms: measuring humans has always been an expression of rationalisation tendencies that have social implications. Over time, these tendencies have led to a new image of humanity, which is currently experiencing an *update*. The modern image of society is characterised by the translation of concrete objects and complex qualitative processes into abstract quantities. Self-measurement technologies have proven themselves to be an outstanding medium for that. They represent a new form of the capitalistic passion for repetitive order. They mark the transition from the organisation of social life *by rituals* to the organisation of time and life *by processes of control and accountability*. Every measured achievement (like IQ) requires a concept of the highest achievement. There would be no fitness tracking without a pre-defined ideal step count, for example. There even seems to be a definable optimum for life quality, moods and other qualitative characteristics. This image of humanity is therefore essentially characterised by the subtle loss of any resistance to rationalisation whatsoever. One tends to see the human being as a source of energy that is supposed to perform in the most efficient and failure-free way, be it professional performance, in personal relationships or as a consumer.

### 3 Convivial tools

For Ivan Illich, *manipulative* technologies are the very opposite of *convivial* tools. The concept of conviviality explains when technology serves us humans and when exactly the opposite is the case. Convivial technologies are progressive; they challenge us to learn. According to the psychoanalyst Wolfgang Schmidbauer (Schmidbauer 2015), convenient technologies do the opposite; they promote the de-skilling or unlearning of basic human abilities. Manipulative technologies are regressive. This means that they increase people's dependency on experts who make decisions for us about what is 'right' and 'wrong'. More and more often, *their* standards or measurements substitute our own knowledge of appropriateness, reasonability or responsibility.

Digital technologies translate qualitative life events into abstract quantities. However, the sociological point of this assertion is that it is not machines or tools that are conditioning human beings. These machines and tools themselves are based on social programmes that we call ideologies. Manipulative tools are ideological because they force external ideas and expectations upon us, and these tell us what is supposedly 'right' and 'wrong'. The alchemistic game is concerned with efficiency, which is measured according to normative standards. We should therefore be concerned about the character of the creators of these (smart) ideologies. But we should also be concerned about the changes in character of the users of these manipulative tools. The quantified consumer is primarily the forced consumer of social programmes.

The alchemistic programme may make people 'precious'. However, the loss of individuality is the price of its success. These 'precious' people are becoming increasingly similar to one another. However, if we take a closer look, we can see a contradiction here: the promise of a unique modern individuality ends in collectively enforced conformity. Life becomes a copy of other lives. This 'precious' existence comes at the loss of one's uniqueness, which is the exact opposite of a socially inclusive society. Comparing people serves to stimulate not diversity but similarity. Using dystopic words: within this programme one could possibly see the breeding of a certain kind of human using the pressure to conform.

This pressure to conform has underlying roots. Self-quantification seems to be a belated technocratic reaction to elementary identity and complexity crises in modern exhausted societies. Everyone is having his or her own personal crisis. The collective awareness of crises is avoided, which is an explanation for the increasing individualisation of crisis management. Not only have individual lives become more easily measurable by using measurement technology such as gadgets, smartphones and apps. There is also an increased *desire* for objective self-awareness and therefore a rational lifestyle in times of crisis. Step by step, complex reality is said to become organised and systematised ‘in order for it to become predictable and manageable’ (Loo/Reijen 1997, 34). In other words: it is about ‘calculability in a world that cannot be calculated’ (Nassehi 2015, 169). Which is why the demands for self-improvement are growing in our secular culture. There is increasing pressure to produce results with an increasing amount of effort put into breaking down dangers or threats into calculable risks and expected security. This is where digital self-quantification comes into play: data suggests that the world can be controlled in a way that was previously not possible. That is a widespread and highly effective illusion. People have the desire for active self-control and positive experiences of self-efficacy in the form of self-quantification.

## 4 Between numerical differentiation and rational discrimination

Data collections, however, not only serve to increase objectivity and rationality. Instead, they have created new tools for making a difference. On the one hand, high-resolution data collections open the door to new possibilities of differentiation. This is how individual consumer profiles are created. This ‘explosion of diversity’ (Kucklick 2014, 12) initially leads to different deconstruction processes. Social institutions (such as law, education, data protection, the health-care system) are overwhelmed by the complexity that comes with the subtle differences in types of data. On the other hand, there is a need for the creation of new categories of definition and social roles because society

would be unimaginable without these categories. Self-observation based on digital data is not just becoming more *exact*; it is also becoming increasingly *divisive*. The counter term to *rational differentiation* is, therefore, *rational discrimination*.

I refer to rational discrimination when not only are differences made, but also when these differences entail social implications. More and more interconnections of data and social chances result from rational discrimination. Being socially assessable is becoming increasingly tied to economic exploitability. Economic exploitability has created the new social role of the consumer who devoutly lets his or her own data guide him/her. This *devout consumer* subordinates him/herself to his/her data. Data is given an authoritative power over him/her. Data is the key for the alchemistic conversion of people.

We begin to perceive ourselves differently when we observe one another based on data. *Descriptive* data becomes *normative* data. Normative data expresses, for example, social expectations of 'correct' behaviour, 'correct' appearance or 'correct' performance in the form of numbers. With that, normative data demands a certain socially desirable behaviour. So, little by little, an organisational principle of the social that is focused on differences and deficits is established. There is a constant search for mistakes, decreased tolerance of errors and an increased sensitivity to deviation regarding ourselves and others. In capitalism, the only thing that is counted as acceptable performance is whatever appears to be measurable and calculable (Distelhorst 2014). Rational observation represents an act of abstraction that alienates people from themselves and from others. Rational discrimination may be based on supposedly objective and rational measurement methods. However, methods of measurement produce digital winners and losers. It causes a *division* between things that create costs and money savers, as well as between 'useful' and 'dispensable' people. Above all, we have arrived at a renaissance of pre-modern appeals of 'culpability' in the guise of talk about 'personal responsibility'.

## 5 Greedy institutions and pre-programmed life plans

Ivan Illich suggests that powerful tools promote processes of the centralisation of power (Illich 2009, 70). He spoke of how *over-efficient* tools help to create radical monopolies that ruin the balance between things that humans can (still) do themselves and the things they are simply supplied with (Illich 2009, 82). Radical monopolies make people *compulsory consumers* and limit their autonomy, which is why they are to be seen as a specific form of social control. The sociologist Lewis A. Coser goes on to explain the development of compulsory consumerism and the forms of social control it results in. The rediscovery of the concept of *greedy institutions* (Coser 2015) is suitable for understanding the beautiful new digital world on a meta-level. Greedy institutions vicariously reduce complexity. They ‘promise to end the fragmentedness of the modern human’s existence’ (Egger de Campo 2015, 166). They offer exclusive access to scarce, valuable resources, for example, truth, inspiration and self-awareness. For that, they demand access to the entire human existence and take over entire personalities. There is a reason that Coser sees religious sects as a perfect example of greedy institutions. ‘Greedy institutions are always exclusive’ (Coser 2015, 17). They offer a complete life world, including the idea of wholeness and security. Greedy institutions are the solution to the recurring problem of combining human energy and personal loyalty. The trick is to get people with different interests and role requirements on the same meta-programme and to at least simulate a collective consciousness. At the same time, this can lead to the loss of features that characterise the private individual as an autonomously acting person (Coser 2015, 27). Applying this to sociology, we can say that greedy institutions dominate their members, and the members of the institutions more or less voluntarily forgo their privileges, such as privacy, autonomy or the opportunity to make decisions.

Insecure, exhausted and in some cases uprooted individuals are trying to perform privatised contingency reduction by gathering data. They are retreating to controllable scales of measure. They are supported by greedy institutions, whose instrument of domination are algorithms that promise to reduce com-



plexity with prescribed standardised life programmes. Part of the manipulative character of greedy institutions is maintaining the appearance of voluntary action. But in fact, behind this voluntary front end there lies a great dependency at the back end, which is to some extent irreversible. Greedy institutions are characterised not only by completely absorbing their members, but also by the asymmetry of power relations. By gathering data, greedy institutions hold the key resource: total control over data. However, according to the German Advisory Council for Consumer Affairs (Sachverständigenrat für Verbraucherfragen), ‘there has been a great systematic and long-lasting advance in knowledge on the part of the provider regarding data (...) if this is the new currency in the digital world, then this is not indicative of a level playing field for both sides of the market. In fact, the information and power asymmetry with regards to key resources seems to be growing’ (SVRV 2016, 18).

Google can be used to illustrate modern greedy institutions. The company symbolically stands for the new, person-centred data economy that is constituted by a network of data-gathering and data-processing companies. In their manifest-like book *The New Digital Age*, Eric Schmidt and Jared Cohen of Google clearly state how far greedy institutions can go (and what changes are in store for the consumer). They request nothing other than the consumer’s voluntary submission: ‘As in a social contract, users will voluntarily relinquish things they value in the physical world—privacy, security, personal data—in order to gain the benefits that come with being connected to the virtual world’ (Schmidt/Cohen 2013, 257). And when Google claims that being connected to the virtual world and technology are the best way ‘to improve the lives of everyone’ then we have to remember the decisive question: *Who* is even making the decisions regarding what is considered ‘normal’?

## 6 On our way to an assisted life?

Digitalisation is in full swing. And the digital gurus agree that it is irreversible. This leads to various concerns. The digital transformation can be metaphorically illustrated by comparing libraries and fitness studios (or gyms). No one

can actually calculate the utility of a library, for it has an effect on so many different unseen qualitative dimensions. Libraries can be regarded as tools for a convivial society. They contribute a certain value to the common good, even if it is impossible to put a number on it. Gyms, on the other hand, are places designed to reduce complexity. People who go to the gym define a personal objective, such as weight loss or increased muscle mass, and put together the corresponding training plan using the right instruments. Gyms follow the logic of maximal individual utility maximisation—and responsibility. We have come to treat all spheres of society, such as work, health and relationships, as if they were designed like a gym. The fallacy here is that many areas of life are more like a library: no one knows exactly how cause and effect are connected. We let manipulative tools instead of convivial instruments assist us in reaching our goals, and sometimes even allow the means to become an end in itself. So are we on our way to becoming a completely assisted society that cannot live without the aid of manipulative tools, greedy institutions and algorithm-based, decision-making engines? Are we at the mercy of the alchemistic principle?

## 7 The desire for a copied existence and the desire for vulnerability

Before I come to my conclusion, I would first like to mention an expected counter-movement. The omnipresent pressure to be perfect has also led to discontent. The premise of the corresponding counter-movement has been brought to a head by Jens Jessen in the outcry *Ruin your Bodies*, an article that addresses the underbelly of the new, data-driven consciousness, being the increasing *morally charged* lifestyle, the ‘emergence of a culture of prohibition, a propensity to patronisation and incapacitation, other people’s shameless involvement in one’s life plan’.

The most important job of consumer protection is therefore the *demoralisation* of the debate. This means a looser link between data regarding individual lifestyles and economic calculations of costs.

My concluding assertion from the perspective of consumer protection is rather sobering: *You cannot save people from something that they desire*. I will explain this by summarising my arguments. When taking a closer look, digital self-measurement appears to be a contemporary return to the alchemistic principle in the guise of algorithmic domination. Hereby, qualities are increasingly being transformed into quantities. The price we pay for this are the new social distinctions that are currently being shaped. But we have to be careful: if data is linked to social opportunities, the result will be rational discrimination. This can be understood as the increased sensitivity to differences and deficits. Rational discrimination leads to changes, not only in how people see themselves and others, but also in how they treat themselves and others. Modern societies are competitive and promote social sorting. The more we rely on data to be our ‘mirror of the self’, the more vulnerable we will be to the propositions and appeals of greedy institutions and their social meta-programmes.

All of these processes support each other mutually: the over-efficient person becomes a ‘voluntary’ consumer of over-efficient and manipulative tools that are coupled with pre-programmed life plans by over-efficient institutions. These life plans are highly attractive and welcome, even if no one would actually admit it. The alchemistic principle, the use of over-efficient and manipulative tools and the acceptance of pre-programmed life plans result in ‘reproduced existences’. As the sociologist Niklas Luhmann (Luhmann 1991) postulated, the principle of reproduction is as much a simple strategy as it is an effective one to reduce complexity.

In the context of consumer research, this principle can be called *desired vulnerability*. The desire for convenient technology is greater than any reservations one might have about negative consequences. The will to follow social user manuals is stronger than the knowledge we have of the implications these actions can have. However, life is about more than just following a user manual. Even if there is no all-encompassing solution, I do not want to end on a pessimistic note. So what *should* we do if humans cannot be saved from something that they desire? A far-reaching answer would be to change our desires. Consumer protection should take social, moral and ethical standards into account—and begin working at the level of a new *utopian* thinking. I do not consider this to be completely impossible. After all, we not only eat and drink. We have also come to *desire* healthy eating habits and fair trade products.

This baseline could serve as an alternative frame of reference for the digital consumer in the twenty-first century.

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# Nudging towards a healthier life?

Conceptualising the role of health apps and wearables  
between empowerment and manipulation

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*What once has been thought, cannot be taken back.*

(Friedrich Dürrenmatt, *The Physicists*)

In Dürrenmatt's play, the physicist Möbius has discovered the world formula and is afraid of its destructive potential, which poses a threat to global security. In order to ensure that his dismal discovery will not become harmful, he checks into a lunatic asylum. Tragically, his plan fails and his discovery falls into the wrong hands, which leads him to resignation and to the above-quoted insight. The lesson to be drawn from this play is that technological innovations have a huge influence on individual and social behaviour and that we cannot stop new technology from being used. However, we have the possibility to establish forms of public governance, ensuring that innovation works for the individual and common good. Health apps and wearables may appear to be a comparatively minor innovation, but they have the potential to change our society significantly, and the widespread use of this technology reminds us that it is high-time to analyse its potential, ranging from empowerment to the manipulation of users.

Starting from the interpretation that health apps are nudges that change the contexts in which users make health-related decisions, we address the question of whether consumers feel in control of these nudges. Are health apps controlling consumers according to underlying economic interests, or are apps empowering users by providing a self-correction tool promoting human agency and genuine freedom of lifestyle choice (Sunstein 2015)? Are they appropriate tools for nudging users towards healthier lifestyles, or is a differential consumer protection strategy required?



# 1 Libertarian paternalism: nudging consumers through health apps?

## 1.1 Defining libertarian paternalism

Economic theory acknowledges that the homo oeconomicus, or rational actor model, with the underlying assumptions of rationality, stable preferences and utility maximisation, is only a reference model for analytical purposes. Real human behaviour is different in many respects, as social psychology and sociology shows in different contexts. Moreover, empirical evidence of systematic divergence from the homo oeconomicus is provided by behavioural economics (for example: Shafir 2013; Schulz/Thöni 2013). The policy implications of these insights are new forms of governance that take real human behaviour into account. The most influential behaviourally informed approach to the regulation of human behaviour is libertarian paternalism. Paternalism, because it is based on behavioural insights, concludes that humans need more guidance than the rational actor model would prescribe. Still, this approach is libertarian in the sense that it endorses normative individualism. Ultimately, the individual should still be in the driver's seat, making decisions. Libertarian paternalism only alters the context of decision-making; it builds entire choice architectures in order to steer those individuals who lack time, information or cognitive capacity towards making good choices. In the words of the fathers of this new movement of libertarian paternalism, choice architects are 'self-consciously attempting to move people in directions that will make their lives better' (Thaler and Sunstein 2008, 6). To this end, they use nudges, which they define as 'any aspect of the choice architecture that alters people's behaviour in a predictable way without forbidding any options or significantly changing their economic incentives' (Thaler and Sunstein 2008, 6). This defines nudging as a type of regulation by contrasting it with other forms of regulation that are coercive, such as laws prohibiting drugs or involving financial (dis-)incentives, for example, getting a parking ticket. These latter forms of regulation are not nudges, but they are frequently discussed in the context of nudges, because they constitute regulatory alternatives. Regulation is not necessarily public

regulation. The private and the public sector can use nudging, and frequently decisions are made against the background of various overlapping or simultaneous nudges that are in place.

A prominent, highly relevant example of a choice architecture in the context of consumer protection is the revised EU tobacco directive, according to which the harmful effects of smoking have to be visualised on the cigarette packs according to standardised formats (Böning and Maier-Rigaud 2016, 253–254). Hence, libertarian paternalism uses expert knowledge to build choice architectures that make individual consumer choices easier, allowing for shortcuts that relieve individuals from complex information-gathering and decision-making processes, but ultimately retaining individual freedom of choice. This is achieved by a mere alteration of choice contexts, instead of addressing choices directly. Therefore, this kind of intervention is also described as soft paternalism, contrasting the concept with traditional paternalism based on commands and prohibition.

## 1.2 Critical aspects of the nudging controversy

The general discussion about nudging and libertarian paternalism is extremely controversial, not least because of the important public policy implications it carries. Two pivotal aspects are, whether nudges are manipulative and who is legitimately allowed to nudge.

Despite the labelling of nudging as a softer form of paternalism, some authors see a danger that nudges intentionally manipulate decision-making in a non-transparent fashion (e.g. Schnellenbach 2014, 781), and they therefore prefer classic forms of paternalism. Ultimately, the issue of manipulation is contingent upon the definition of manipulation (Drerup and Dessauer 2016, 374). Transparency is certainly a key element of democratic public governance; however, it is also clear that there is no such thing as a real world choice without any choice architecture or institutional arrangements structuring or nudging individual behaviour (Sunstein 2014, 584; Drerup and Dessauer 2016, 377). Rather, the real world is characterised by an omnipresence of forms of hard paternalism that should be viewed as a reference point when discussing regulatory interventions (Funk 2014, 791). Against this background, we can conclude that there is certainly a continuum of more or less manipulative

nudges (Drerup and Dessauer 2016, 391), and that nudges, like any regulatory intervention, require transparent justification. This leads to the second main criticism discussing the legitimacy of choice architects.

A fundamental critique of nudging relates to the question of who the legitimate choice architects are and how they know what is best for consumers. In the context of health, this is particularly controversial, as medical evidence and social norms both play an important role. Ultimately, it is not a viable solution to refrain from building public choice architectures, because this would simply strengthen the status quo (Schmidt 2014, 344). Indeed, as mentioned above, the structuration of our decision-making environment is omnipresent and partly manipulative if we think, for example, about marketing strategies. The private sector is much less hesitant about using nudges. Referring to the public choice literature, one could argue that nudges should not be used by the state, because public institutions may not use them in a benevolent way (Rebonato 2014, 389–390). However, abuse is always a risk that comes with governance tools and not an argument against the tools per se; rather, it is an argument for the division of power and a carefully designed democratic political system. Furthermore, as Drerup and Dessauer (2016, 377–379) point out, a problematic double standard is applied by many critics of nudging, showing more confidence in nudges used by a profit-oriented private sector than in nudges used by public policy. This contrasts with the attitudes of consumers towards nudging in the realm of health behaviour: there is a consensus among consumers to approve nudges that promote the health and well-being of consumers and balancing opposed efforts by profit-oriented companies (Junghans, Cheung, and De Ridder 2015, 10).

## 2 Nudging through health apps

### 2.1 Promoting health and well-being through health apps

One possibility in terms of promoting health and well-being are health apps—software applications for smartphones and tablets changing those small devices into special tools for health, wellness, fitness and medical purposes (Albrecht 2016, 15). Offering features such as self-tracking and displaying of health outcomes, they change the context in which users make health-related decisions, probably motivating them to improve the outcomes displayed by their app.

Health apps belong to the ‘mHealth’ (mobile health) field, which is a—not yet clearly defined—component of eHealth and can be understood as ‘medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices’ (Albrecht 2016, 14; Kay, Santos, and Takane 2011, 6). To define health apps, Albrecht et al. (2015) consult the WHO’s definition of health as ‘a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity’ (WHO, 1946). According to this definition, apps intending to positively influence physical, mental and social well-being can be defined as ‘health apps’. Health apps that specifically intend diagnostic or therapeutic purposes, and thereby ‘cover key areas of medicine’, should, however, be categorised as ‘medical apps’ (Albrecht, Pramann, and von Jan 2015, en8).

Thus, health apps are supposed to address healthy users to support a healthy lifestyle—while patients and professionals would probably rather use medical apps, for example, to cope with a chronic disease or for clinical decision support. App stores also distinguish between the two categories ‘health and fitness’ and ‘medicine’, but since the manufacturer decides which category the app is offered in, this does not necessarily correspond to the objective classification of the app (Kramer 2016; Free et al. 2010, 1).

## 2.2 Applying the concept of nudging to health apps

Manipulative purposes and a lack of transparency are extremely important issues to be addressed when discussing the role of health apps in society. Thus, applying the concept of nudging to health apps requires a concretisation: nudging can take place on three levels.

First, using a health app is a kind of self-nudging: individuals use technology in order to lead a more self-determined and healthy life. This kind of self-nudging is different from other strategies such as self-binding behaviour, because self-binding is not liberty-preserving. Since it constitutes a commitment to a certain behaviour in the future, self-binding strategies trade future freedom of choice for certainty about one's future behaviour.

By contrast, nudging is essentially defined through its libertarian element to retain individual freedom of choice. So, even in the case of self-nudging, the individual changes the choice architecture for future decisions but still decides in the future. If I use an app to remind me to go running, I can still decline every time I receive a reminder, but it probably helps me to go running more frequently and regularly. In this sense, a health app is a tool like a GPS that helps consumers to make good and efficient choices without undermining human agency (Sunstein 2015, 207). However, the two strategies have a common aim, namely to self-impose the attainment of higher order or meta-preferences and to defend oneself against human weaknesses of the will. Thus, health app users are becoming their own choice architect by choosing and personalising the health apps they use.

Second, as outlined below, health apps are private, largely unregulated goods that potentially influence users' behaviour. Beyond self-nudging by a health app that reminds you to drink water, go running or take a medication, the app is used, but not developed, by the user. The supplied health apps differ in many respects, but there is a common feature, which is that they use the fact that we are social beings and nudge us by making comparisons with our previous health results or with the results of our peers. Health apps and, in particular, fitness apps nudge by comparison. This comparison is presented in a playful and competitive way. They have the potential to generate physical norms without a sound and transparent evidence base. Therefore, self-track-

ing through the use of health apps, and self-quantification more generally, constitute a modern form of behavioural norm generated by individual health data (Kuhn 2014, 58) and based on commercially defined parameters and user surfaces. Thus, nudging in the context of apps is about nudging by commercial interests of the private sector selling specific apps to users. Those principally differing interests between those selling apps and those buying and using apps are not necessarily reconciled through market forces alone. As in many other areas where the invisible hand of the market is supposed to rule, there are attempts to regulate.

Protecting consumers against the commercial use of nudges constitutes a potential third level for nudging (Bruttel and Stolley 2014, 771): besides traditional forms of regulation such as prohibition or financial (dis-)incentives, public regulation could set defaults for the use of apps, such as labels signalling important differences between apps to consumers and also differentiating between health apps and lifestyle apps. This would potentially constitute an important choice architecture for consumers.

## 3 Consumer protection

### 3.1 Status quo of health app market

The market for health apps is growing rapidly, including 231,000 apps in 2016 within the categories ‘health and fitness’ and ‘medicine’ from the two leading app stores of iOS and Android, with a worldwide market revenue that reached approximately 12.5 billion US\$ in 2016. Health apps predominantly focus on the chronically ill, persons interested in health and fitness, and physicians. The main revenue sources are services such as remote diagnosis based on submitted photos, and hardware sales such as specific medical devices designed to be used with the app. In 2013 one-third of health apps were fitness apps tracking fitness or guiding exercises. The second and third largest groups, each accounting for around 16 per cent, were apps providing medical

information and advice, for example, about symptoms, and wellness apps that give yoga instructions, for example. Nutrition apps that help to track diets or provide information about nutrition facts, and medical condition management apps represented the next largest groups of health app, each with a share of around 7 per cent. Medical condition management apps track and display health parameters or drug intake. In 2016 one-third of app manufacturers presumed that such apps would offer the greatest market potential over the next five years, along with diagnostic apps and remote monitoring apps (research2guidance 2014, 7–17; research2guidance 2016, 11–26).

Health apps offered by health insurance are of special interest. In a study of the Hannover Medical School from 2016, 60 health apps were identified, offered by 29 of 127 different German statutory health insurers or their associations. Here, apps for health promotion and prevention—potentially nudging users towards a healthy lifestyle—formed the second largest group (20 apps). The authors only found one app that collected data within a bonus program. However, according to a survey of health insurance, which formed part of the study, three apps providing incentives within bonus programs were planned at this time. Only for one other app was it mentioned that the entered data was collected (Aumann, Pramann, and Frank 2016, 248–256).

### 3.2 Legal framework

Data use and protection is a particularly critical issue associated with health apps. According to § 284 of the Social Code Book V (SGB V), statutory health insurers have limited possibilities to survey and save the personal data of their insurees, and they are not allowed to create risk profiles of individual insurees. Thus, when offering health apps, they actually need an intermediary who analyses and anonymises the collected data of an app for the health insurance. In general, data protection provisions of the Federal Data Protection Act (BDSG) have to be respected. Furthermore, apps that include fee-based services are also subject to the Telemedia Act (TMG), which determines the information obligations of the manufacturer, for example, in the form of an imprint (Pramann 2016, 230–231).

Moreover, in Germany medical apps are subject to the Act on Medical Devices (MPG) if they are medical products based on the legal preconditions described in § 3 (1) MPG. According to this provision, the manufacturer decides about the intended purpose of an app and thereby on its potential status as a medical product. Medical purposes are, for example, diagnosis, treatment of diseases, or investigation of a physical process—which could be realised by app features such as calculation of dosing of medicines, or monitoring patients and collecting data, for example, using measurements. In other words, ‘any type of interference with data or information by the stand alone software is indicative of a classification as a medical device’ (BfArM 2015).

In case a medical purpose exists—according to the labelling, the instructions for use or the promotional material—a certification is mandatory in order to place them on the market and into operation. However, non-professional manufacturers are not always conscious of developing a medical product, and thus, do not always comply with the requirements. Apparently, the market for certified medical apps so far is small: in March 2016 HealthOn e.V. counted 10 certified medical devices among German-language apps in the Google play store (Kramer 2016). However, the number of uncertified apps is probably high as a result of the unawareness and probably unwillingness of app manufacturers. The *Guidance on Medical Apps* published by the Federal Institute for Drugs and Medical Devices wants to provide orientation for manufacturers in terms of the clear classification of apps and with respect to the resulting legal consequences (Pramann 2016, 228–230; BfArM 2015).

### 3.3 Potential consumer protection measures

Obviously, health apps can be divided roughly in two groups, depending on whether or not they serve medical purposes. Consequently, this has to be taken into account regarding the future need of consumer protection measures. With respect to medical apps, the real figures need to be explored, and accordingly, the manufacturer’s compliance with respective laws and regulations. However, their risk classification also needs to be verified on the basis of an app’s security and its harm potential, such as false diagnoses (Pramann 2016, 242; Albrecht, Pramann, and von Jan 2015, en8f).



So far, the barrier to using health apps seems to have been low: most people use smartphones, the choice of apps is large, and the monetary and non-monetary costs (such as installation and usability) are generally low. Hence, usage is intensifying and spreading, becoming a central aspect of contemporary social change. However, users are most likely not aware of the classification of health apps and the underlying conditions. The intended effects of the app use are important for them, but the unintended and maybe implicit effects are also relevant for consumer protection. Both medical and health apps pose a danger to the privacy and integrity of health-related data. Thus, any interference with the data indicating the use of a medical device, as well as any form of choice architecture indicating the intention of nudging, should be visualised for consumers.

Unfortunately, user information enabling the evaluation of the personal benefits and risks associated with an app is rarely available. Users usually inform themselves solely via user comments in app stores or blog posts, where little information is given on the reliability of the sources. The same applies to certificates that can be obtained from private initiatives. Moreover, the existing laws and regulations only apply to medical apps. Albrecht, Pramann and von Jan (2015) therefore propose that manufacturers provide information to users in a comprehensive and comprehensible way, for example, in the form of an app synopsis published directly in the app store and on their homepages. Moreover, as an easy usable tool they suggest a structured list with important points that users should take into account, such as the imprint of an app, a description of the intended purpose, the target audience, functionalities and their restrictions and limits (Albrecht, Pramann, and von Jan 2015, en7–10).

Nonetheless, this requires users with a higher degree of health literacy, or rather consumer competence, in order to understand the information provided. Moreover, the need and willingness to make the effort to evaluate an app probably exist for users of medical apps rather than users of health and fitness apps. The latter are designed to positively influence physical, mental and social well-being, and are therefore rather used by healthy people interested in their physical condition and in health promotion. They want to know more about their health parameters and search for motivation to stay on track with their fitness programmes—potential harm is less obvious than for medical apps. Thus, health app users are presumably less likely to search for consum-

er information, although those apps bear at least the same danger as medical apps in terms of the privacy and integrity of the health-related data.

Health and fitness apps, however, pose a more implicit risk. The chance of nudging consumers towards healthy behaviour encompasses the positive side-effect of strengthening self-determination and individual responsibility. However, it also poses the risk of manipulating consumers and externally controlling them, as well as fostering individualisation, in terms of not only increased individual responsibility but also decreased solidarity within the statutory health insurance. A YouGov study showed that 32 per cent of the German population can, in principle, imagine measuring health- and fitness-related data and sharing it with their health insurer in order to receive advantages (YouGov 2015). This is consistent with a study conducted by the Hannover Medical School, which found indications that apps offered by health insurers, especially within bonus programmes, will gain importance (Aumann, Pramann, and Frank 2016). However, advantages for healthy people can in turn be seen as disadvantages for less healthy people who are not able to receive such bonuses. Moreover, bonuses can only be achieved when insurees accept the use of health apps and the sharing of their health data. This might put pressure on insurees to use such technologies. Finally, the use of such technologies facilitates the comparison of health-related data and might increase the social pressure to be healthy, or rather, to prove one is living a healthy lifestyle. However, eHealth literacy, which is defined as ‘the ability to seek, find, understand, and appraise health information from electronic sources and apply the knowledge gained to addressing or solving a health problem’ (Norman and Skinner 2006, 2), is lower for patients with chronic conditions, perhaps because of their older age and lower socio-economic status (Fox 2007; Paige et al. 2017, 320).

## 4 Conclusion

Against this background, providing more and better consumer information is warranted but not sufficient. A broader debate is required, discussing the role of consumers, the government and health insurers in the regulation of health apps. Health apps constitute a nudge. If it is left to commercial nudging, the societal implications are unforeseeable. In order to put consumer interests in the driver's seat of technological progress, we need statutory health insurers and governments to be at the centre of regulation, using conventional instruments and nudges as regulatory tools.

To this end, we need a better empirical understanding of health app user behaviour. Empirical research suggests that whether health apps are viewed as empowering self-nudging tools or as manipulative and controlling consumers depends on the individual consumer (Böning and Maier-Rigaud forthcoming). Based on Riesman's classic distinction between inner-directedness and other-directedness, one hypothesis that needs to be tested is whether we find distinctive user types who need different consumer protection measures in the realm of health apps. Our intuition suggests that in our digital world of social media, smartphones and health apps, the other-directed type of consumer, as described by Riesman (1961/2001, 21) in *The Lonely Crowd*, has become dominant in our society and is highly vulnerable: 'What is common to all the other-directed people is that their contemporaries are the source of direction for the individual—either those known to him or those with whom he is indirectly acquainted, through friends and through the mass media.'

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# Part 3

## Sustainable Consumption

Introduction

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How much is enough? What do we really need in order to live a good life? What does consumerism mean to the quality of life and to society as a whole? Sustainable consumption does not only concern its quality but also includes quantity, scale, sufficiency and modesty.

These terms are of fundamental, even philosophical, importance: Modesty, Sufficiency, Good life. The concept of modesty can be found as early as in antique Greek thinking two and a half thousand years ago, for example at the oracle of Delphi saying: “Of nothing too much”. It can be found in the bible, in the book of psalms, which says: “Lord, give me neither too little nor too much, neither poverty nor affluence”. It is also present in more recent works like “To have or to be” by Erich Fromm, published in 1975, where he shows that consumption beyond a certain level, he calls it consumerism, is no longer an indicator of real wealth but a pathological phenomenon, something that should concern as a society. Here overconsumption is seen as a clear indication of social deficits. Since there is a lack of love, respect, and sense of life, we consume. We try to fill the hole of senselessness with commodities. And we fail and remain unhappy, which is again good for industry, for marketing, for growth. In this logic senselessness and a lack of content and happiness are good for the economy. This point has been taken up by the post growth debate of the last decade. Here consumerism is seen as one of the main causes of non-sustainability.

The term sufficiency also has a long history. One can distinguish two dimensions: the dimension of enoughness and the dimension of adequacy. Here the two questions “How much is enough?” and “What do we really need?” come into the focus. In the sustainability debate of the last one or two decades the sufficiency concept has often been seen as the antonym, the counter-concept to efficiency. Efficiency is about making things better, mainly by better technology. However, in the present debate about green technology, green markets and green growth there is a tendency to leave out of consideration the question of quantities, of lifestyles, of consumerism. This is the reason why we presently face a very hot and controversial dispute between the protagonists of green growth and degrowth.



And finally: The good life. The term was introduced by Aristotle. It is the life you want to live. Ideally in harmony with yourself, with your fellow human beings, with nature. But what does it look like today?

The field of consumption currently shows a lot of positive trends including anti-consumption sentiments showing that common consumer cultures are questioned. Looking into patterns of consumption in private households shows that the consumption of more sustainable products like organic food and clothing in Germany and also the global use of electro-mobility is on the rise. However, simultaneous trends such as the rising number of single households, frequent travelling by plane and the increasing usage of electrical appliances threaten to undo those positive actions. Significant factors such as information, time constraints and infrastructure have to be looked at to understand what reasons lead to deficiencies such as attitude-behaviour gaps and behaviour-impact gaps. The interdisciplinary research on consumption corridors is a promising approach to design the guidelines of a sustainable society (see Fuchs in this Volume).

Do peoples' mindsets even allow for a significant reduction in consumption in today's fast moving society? A representative study (see Nässén in this volume) on anti-consumption beliefs in the general public was carried out in Sweden. It was based on the assumption that people with anti-consumption beliefs engage into alternative and conscious forms of consuming. The study revealed that anti-consumption beliefs are, in fact, rather widespread among those polled. Participants were asked to comment on topics such as the importance of a reduction of consumption for the sake of the environment, the great amounts of time people spend consuming as well as the relevance of consumption for a well-working economy.

For some years now a thriving second-hand sector contributes to more sustainable consumption patterns. The professionalization in the second-hand trade helped establish a more modest and non-excessive type of consumption. Even though people who struggle economically tend to buy second-hand the motivations for buying and selling used products are diverse and by no means simply of financial nature (see Steffen in this volume). However, economic stability proves to be a crucial factor when it comes to pro-environmental behaviour. Drawing on the results from the German socio-economic panel it can be shown

that precarious employment situations result in a negative attitude towards the consumption of organic goods (see Leßmann and Masson in this volume). The growing call for sustainability in the fields of production and consumption therefore might lead to a feeling of being pushed out or overlooked by the mainstream.

Consumption is the most important research field when it comes to resource efficiency on a household level. Individual habits and behavioural patterns need to be at the centre of attention. Interdisciplinary research therefore is vital to find new narratives that close the gap between information and its communication. However, in order for these methods to achieve their aim they need to reflect reality and integrate the consumer.

# Consumption corridors as a means for overcoming trends in (un)sustainable consumption

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When we look at sustainable consumption today, we can see many positive trends. There are clear increases in the consumption of more sustainable products. Purchases of organic food have grown, for example. Sustainable fashion labels are emerging, and energy-efficient household appliances are increasingly becoming the norm. Simultaneously, there has been a noticeable rise in electro-mobility, and increasing numbers of individuals are participating in car-sharing initiatives, for instance. Indeed, we can provide numbers for some of these trends: the turnover in organic food consumption in Germany quadrupled between 2000 and 2015 in terms of billions of euros (see Figure 1). Purchases of electric cars globally increased by more than ten times between 2011 and 2015, interestingly and significantly with China making up a large share of that figure (see Figure 2).

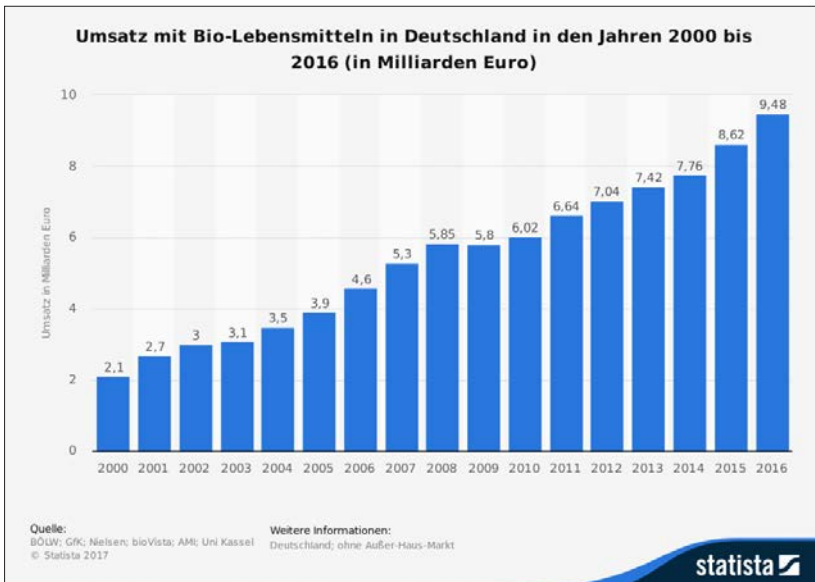
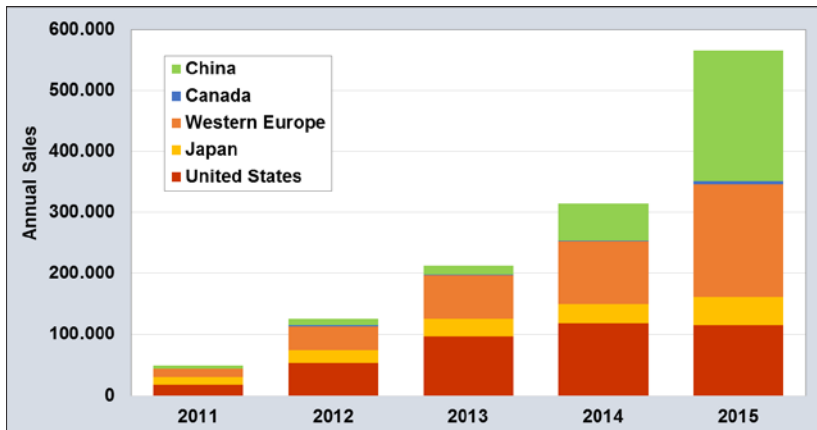


Figure 1: Organic food consumption in Germany (turnover in billion €). Source: Statistika.



**Figure 2: Global sales in electric vehicles.** Source: <http://energy.gov/eere/vehicles/fact-918-march-28-2016-global-plug-light-vehicle-sales-increased-about-80-2015>.

Such numbers correlate well with studies reporting an increasing prominence of environmental attitudes among consumers. When asked about the importance of environmental criteria in their consumption decisions, many consumers say that they are really important (Kollmuss and Agyeman 2002). In addition, scholars are reporting the spread of anti- or post-consumerist sentiments in society (Cohen 2013). Similarly, one can observe an increase in numbers and frequency of newspaper articles questioning whether consumption really makes us happy.

So, looking at these numbers and the changes in values and attitudes, does this mean that everything is okay? Does it mean that we are finally heading towards a brighter future in terms of sustainable consumption? Unfortunately, this is not the case.

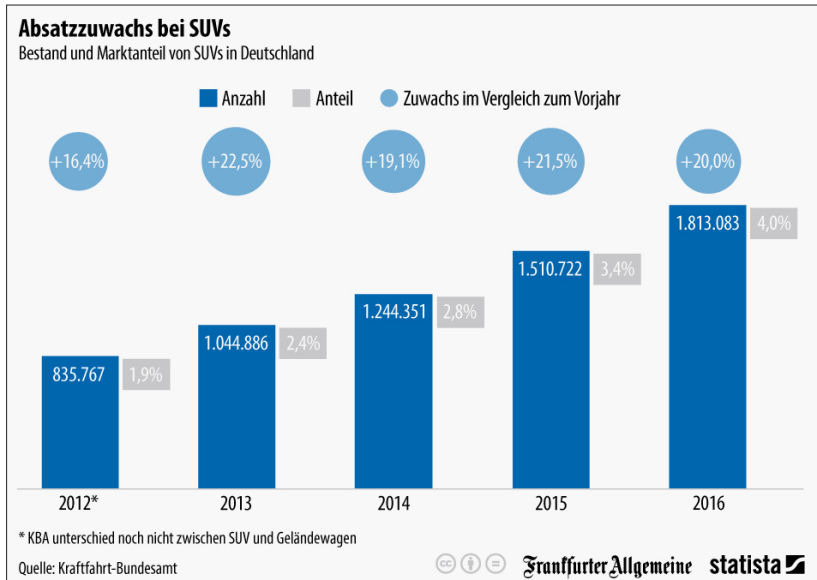
Let us adopt a more differentiated perspective on these developments. First of all, next to these positive trends in sustainable consumption, several simultaneous ones that are not even close to being benign exist. Taking Germany as an example, many such trends can be named (Umweltbundesamt; Statistisches Bundesamt). Since 2000 the number of single households in Germany has increased by 20 per cent; that is, households that are, on average, more inefficient in terms of the use of space and energy, water and other resour-

es. Moreover, studies document not just the spread of the aforementioned energy-efficient appliances, but also the increasing use of electric appliances overall in households. Scholars are observing an increase in the living space used per person and a corresponding rise in expectations regarding house and flat sizes. More generally, the space used for settlement and transport is increasing faster than the size of the population, again reflecting that each individual is using more space. The sales of not just electric vehicles have risen, but also of cars in general, especially diesel cars, which are not known for being particularly clean. We also travel more kilometers per person and more for leisure, which means that we travel by choice and not because we are forced to be mobile for work reasons or other circumstances. Last, but certainly not least, the number of passengers on airplanes boarded in Germany between 2004 and 2015 rose by 50 per cent, and air travel is a huge concern, of course, when it comes to carbon emissions and climate change.

How the negative trends compare with the positive ones can perhaps be illustrated by contrasting the numbers of global sales in electric vehicles shown above with the sales in new SUVs—typically not the most energy-efficient cars—in Germany alone between 2001 and 2012, and expectations regarding sales up to 2020 (see Figure 3). Apparently, (German) consumers love SUVs much more than electric cars.

In addition, a more differentiated look at the positive trends in sustainable consumption highlighted above reveals that the factors driving the purchases of more sustainable products are actually varied. Consumers do not necessarily buy sustainable products because they care about sustainability. Rather, many of these products are purchased for health reasons. It is, of course, not important for the given product if it is bought for sustainability or for health reasons. One could argue that the most important fact is that the more sustainable product is purchased. However, if consumers buy sustainable products not for their general sustainability characteristics but for health reasons, generalised hope for the improved sustainability of consumption across product groups is doomed. Consumers do not attribute potential health effects to all types of product in a similar manner. It is no surprise, therefore, that consumers have tended to turn much more to food than to clothes when it comes to ‘sustainable’ consumption. This is the case even though clothes that touch the skin are really close to consumers. So, products further away, or to which

consumers attribute fewer impacts on their health, will not benefit as much from health concerns as drivers of more sustainable choices.



**Figure 3: New SUVs in Germany.** Source: Statistisches Bundesamt.

In other cases, the consumption of more sustainable products has been driven by price incentives. The sale of energy-efficient appliances mentioned above has been supported by government subsidies, for instance, especially in the case of kitchen appliances. Here, governments deemed such subsidies meaningful, because the technological innovation led to such improvements in energy efficiency that a relatively fast turnover of products (approximately five years in the case of refrigerators) promised significant reductions in household energy use. What does it mean when more sustainable products are purchased because of price incentives rather than consumer interest in their sustainability characteristics, however? Again, one could argue that what matters is that consumers buy the more sustainable product. Yet, if the purchase of a more sustainable product is driven by price incentives, it may mean that consumer choices in terms of product use and selection may end up being unsustainable after all. In the case of refrigerators, studies have reported that

governmental subsidies for energy-efficient refrigerators that were not combined with an obligation to hand in the old fridge, for instance, meant that one fridge would simply be moved to the basement and continue to be used for cooling drinks (Brohmann et al. 2012). Likewise, governmental subsidies for energy-efficient appliances that are not combined with measures to prevent upscaling frequently run the risk of merely supporting households following fashions for larger appliances. Just look at the dramatic increase in screen sizes for TVs but also the diffusion of the American styles of huge refrigerators into European kitchens (op. cit.).

Overall, then, trends in consumption are pointing towards continuing and increasing unsustainability rather than sustainability! Why is this the case after 40 years of discussion on limits to growth, and after 25 years of scholars and politicians talking about sustainable consumption? Why are negative trends still overshadowing the positive ones by far?

Massive existing obstacles to sustainable consumption provide some answers to these questions. Numerous contextual and structural conditions hinder consumers in their efforts to make more sustainable consumption choices. These include, but are not limited to, (too much) information, time constraints, infrastructural lock-ins, as well as consumer culture in general. Let us look at these in turn. Indeed, consumers today probably have too much information about products, including, and in particular, inaccessible, unnecessary and unreliable information. The small print on the back of products is infamous, of course. Likewise, consumers are bombarded with myriad labels telling them that a product is organic, green, local, fair, high quality, made from happy animals, and so on. These labels all have their own selection of more or (frequently) less stringent criteria, and consumers do not have the time or energy to navigate their way through this jungle of labels and investigate them all closely.

Consumers also often simply get the ‘wrong’, or at least not the most important, information, regarding the sustainability of their consumption choices. This is partly due to existing power structures in the global political economy and partly due to assumptions about consumer behaviour. Thus, consumers get a considerable amount of information asking them to shop greener, either in the form of normative demands by governments and NGOs, for example, or in the form of advertising for ‘greener’ products. Even if the latter information



were reliable, however, such promotion of more sustainable products might miss the point. From the perspective of sustainable consumption, asking consumers to shop less rather than just greener is just as important, if not more important. Of course, such a focus on strong sustainable consumption<sup>1</sup> runs counter to the still-dominant growth paradigm, as well as politicians' dependence on business support (Fuchs et al. 2016). Moreover, it does not fit with an economic model built on mass consumption. Furthermore, any communication about consuming less, to the extent that it exists, is dwarfed by the skillful, expansive and extremely pervasive activities of a vast advertising industry telling consumers to shop more.

An additional problem exists in terms of the selection of information about the sustainability of consumption addressed in the public debate. Assuming that consumers are more likely to make tougher choices (in terms of financial resources, effort, loss in convenience...) in the interest of sustainability once they have got used to the easy ones, in the past politicians and NGOs have often focused on 'win-win' situations or simple solutions. For instance, contributing to sustainability with the use of energy-efficient light bulbs was a prominent narrative for a long time. The question, however, is whether dominant cognitive processes really facilitate such spillover from easier to harder steps. Studies have shown that consumers often have a false impression of the sustainability of their consumption as a result of the attention that marginal improvements receive. Having changed the light bulbs, they may have the impression of having significantly improved the sustainability of their consumption and see less need to invest additional efforts and resources in sustainability, especially as they tend to be less aware of the dozens of their (often habitual) consumption decisions that lead in the opposite direction. In this context the question of whether politicians and NGOs really want to flood consumers' brains with information about marginal improvements in the field of sustainable consumption becomes critical. Should the focus rather be exclusively on the big issues (Bilharz 2008)?

Time constraints present an equally significant barrier to sustainable consumption. Even if consumers are inclined to take the sustainability of their

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1 In contrast to weak sustainable consumption, which focuses on improvements in resource efficiency (Fuchs and Lorek 2005).

consumption decisions seriously and give it a relatively high priority, consumers are also constrained today by societal contexts translating into very fast and very complex lives. In many instances, stopping at the supermarket on the way home rather than taking a detour to the organic food store, or replacing a product rather than fixing it, become the choice of the moment. Time matters, in particular, when it comes to mobility, including business and leisure travel. When time is short, we are much more inclined to take the car than the bike or the plane instead of the train in long-distance travel. Notice how such choices start to shift when public transportation by bus or train becomes reliably faster than going by car or plane. Finally, time constraints restrict consumers' abilities to gather and critically reflect on information and to (re)consider consumption choices.

As highlighted above, the existing infrastructure presents another obstacle to improving the sustainability of consumption. In Western consumer societies, the individual is very much locked into certain consumption patterns, certain levels of consumption, energy and resources. Studies have shown that even consumers trying to make serious efforts to reduce their ecological footprint tend to easily run into roadblocks preventing them from achieving substantial reductions. Infrastructural constraints include buildings and their characteristics, mobility systems and urban planning, as well as social services, for example (Csutora 2012).

Perhaps most fundamentally, consumer culture forms a powerful structural force inducing overconsumption. In industrialised (as well as many segments of the BRICS and even the wealthy segments of developing) countries today we live in societies in which we tend to satisfy many of our basic needs through material consumption. Whether it's the need for identity or for belonging, for creativity or for control, we tend to shop for their satisfaction. Consumer culture, thus, also means that consumption is competitive. Using material consumption to express status and identity results in the 'keeping up with the Joneses' effect or 'keeping up with friends', or whatever consumers are watching on TV or Facebook at that time.<sup>2</sup> Rather than just considering the 'negative'

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2 An additional problem with this dynamic is that media representations tend to normalise overconsumption by associating increasingly expensive possessions with the lower-income segments.

drivers of consumption, such as status-seeking, however, it is important to note that material consumption will always also entail positive experiences for consumers. Scholars and practitioners should not underestimate the fun of consumption. Consumers shop not only because they want to keep up with somebody or because they are forced to buy convenience foods as a result of time constraints. They also shop because they like making choices, because material consumption can also meet desires for aesthetical sensations, for creativity and self-improvement. Individuals who do not enjoy shopping for clothes may well enjoy travelling to interesting cultural places, for example. Overcoming the societal inclination to turn to material consumption in search of needs fulfillment is therefore a huge task. An interesting link between the time constraints mentioned above and consumer society exists in this context. The faster society becomes, the less room is left for time-intensive pursuits of creative activities or social relationships that could provide less materially intensive (and some would argue more lasting and intensive) satisfiers of basic needs, and the more likely it becomes again that individuals will turn to more material consumption to satisfy these needs.

Other factors influencing the (un)sustainability of consumption could be named here. What the above discussion demonstrates, however, is that sustainability is at best one of many factors influencing our consumption decisions and impacts, and frequently not the most important one (Ropke 1999). Barriers to sustainable consumption can be summarised in terms of a number of concepts that scholars use to describe and analyse them: the rebound effect, the value–action gap, and the action–impact gap. First, the rebound effect has many forms, but in its most basic and illustrative form, it depicts the dynamic that money not spent on the electricity bill for one product—because a consumer purchased the more efficient one—will tend to be spent in another way, thereby consuming resources again (Hertwich 2005). Second, the value–action (or attitude–behaviour) gap captures that consumers may report that sustainability criteria rank high when they make their consumption decisions but actually make non-corresponding consumption choices (Kollmuss and Agyeman 2002). Third, the action–impact gap arises from an individual's inability to step out of societal structures, technological systems and existing infrastructures, as pointed out above (Csutora 2012).

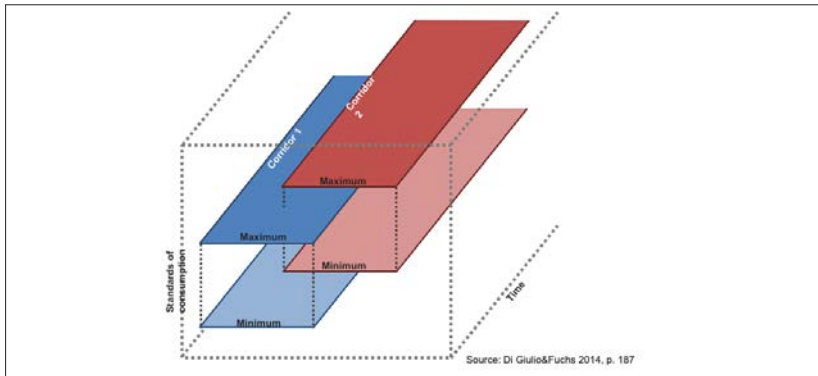
What we know then is that consumers' adoption of more sustainable consumption practices is highly selective and overall superseded by opposing trends. Structural forces locking in overconsumption exist, the recognition of which should put to rest attempts to individualise responsibility for it (Maniates 2001; Sanne 2002). Consequently, we have yet to make real progress in terms of the overall sustainability of consumption. We are still at a point where income is the prime indicator of resource consumption.

For the remainder of the article, therefore, I would like to invite you to join me in taking a different perspective on sustainable consumption. Let us start by assuming that the purpose of consumption is to allow individuals to live a good life (Di Giulio et al. 2012). The purpose of consumption, then, is not to provide growth or to absorb surplus consumption, but to allow individuals to meet their needs. What are the quality and quantity of ecological and social resources that we need in order to be able to consume for this purpose? What quantity and quality of ecological and social resources do we need to live a good life? This perspective also implies that the purpose of consumption is to fulfill every subjective want and desire. The purpose of consumption is to fulfill our objective needs, the fundamental needs that are associated with being human and opportunities for living a good life. From this perspective, consumption is associated with a paradigm of sufficiency (Princen 2005). Being able to fulfill our objective needs, in turn, means that we require a minimum level of consumption.

If we go a step further, we can ask ourselves what it would imply if we wanted such a minimum level of consumption for all individuals, now and in the future? In a world of limited planetary resources, the answer to this question is that we will also have to talk about maximum sustainable consumption levels. Such maximum consumption levels would need to be defined at the point beyond which consumption by one individual or group would hurt other individuals' chances to meet their minimum consumption levels.

The space between the minimum consumption levels required to be able to live a good life and the maximum consumption levels not to be overstepped in order not to hurt other people's chances to live a good life is a sustainable consumption corridor (Blättel-Mink et al. 2013; Di Giulio and Fuchs 2014, see Figure IV). Within this space, sustainable consumption can take place. Within

this space, individuals are free to make their choices and design their lives according to their own preferences, without hurting the lives of members of the present or future generations. A world of sustainable consumption would be defined by many such corridors, perhaps by the resource or consumption sector (see Figure 4).



**Figure 4: Sustainable consumption corridors.** Source: Di Giulio and Fuchs 2014.

The definition and implementation of such sustainable consumption corridors would also therefore improve distributive justice. Distributive justice, in this context, does not mean that everybody has exactly the same, but that everybody is able to achieve at least the minimum consumption level necessary to be able to live a good life. Sustainable consumption corridors thus embody a keen concern for the poor. The definition of sustainable consumption corridors, in turn, depends on participatory justice. Societies need to agree on (a list of) objective needs, as well as the appropriate satisfiers for these needs, in order to allow for their translation into minimum and maximum consumption levels.

Clearly, defining and implementing sustainable consumption corridors will be a complex task. Defining objective needs and satisfiers and translating them into minimum consumption levels is a challenging task and likely to involve considerable debate. Likewise, clearly understanding consumption impacts, which is necessary for the definition of maximum consumption standards, provides a further challenge, albeit probably a smaller one. Ultimately, however,

a world of consumption corridors, in which consumption is intended to allow each and every individual now and in the future to live a good life, would be a sustainable world.

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# Buying green in times of social insecurity

The effects of insecure employment on the purchase of organic food

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# 1 Introduction

The sustainable development goals offer an integrated picture of possible transitions to sustainable development. They include social, economic and ecological goals, as well as goals for countries on various levels of economic development. Thus, they acknowledge that the transition to sustainability is a collective task that must be accomplished by humanity as a whole. They mention both sustainable consumption (SDG 12) and employment conditions (SDG 8). However, the literature linking decent work and behavioural change towards sustainability is still scarce. This paper aims to contribute to filling this gap by looking at the effects of growing employment insecurity on sustainable consumption, as exemplified by the purchase of organic food in the case of Germany.

## 2 Growing employment insecurity

The issue of insecure employment has been a major socio-economic concern since the rise of unemployment beginning in the 1970s. Both unemployment and non-standard employment have increased. The latter comprises temporary or part-time employment, temporary agency work and some newly created instruments of labour market policies such as support for self-employment. Insecurity in employment has triggered a rise in inequality and undermined the participation of those with several spells of unemployment or precarious work. Their impoverishment could initially be alleviated by social security payments and deviations from standard employment. However, it is not just poor and badly educated persons that face these precarious employment conditions. Unemployment has befallen all layers of employee (Castel and Dörre 2009). Thus, the upcoming insecurity has brought insecurity about labour market participation into the midst of society (Burzan 2014). The outstanding effect of precarity is that people in precarious conditions cannot make effective plans for the future (Bourdieu 1979). They miss agency in a fundamental way (Standing 2011).

Empirically this is supported by the negative impact of job insecurity on long-term projects such as buying a home, marrying or having a child (Lozza, Libreri, and Bosio 2013). Employment insecurity has also been shown to be a motivation for precautionary savings—especially with regard to the consumption of durables (Benito 2005; Bowman 2013). Furthermore, there is evidence that subjective insecurity is more important than the objective current employment conditions in orienting daily consumption (Lozza, Libreri, and Bosio 2013). This is in line with the assumption that job insecurity can be compensated by other factors (e.g. the income provided by other household members) and need not lead to precarity of living conditions.

Looking for a measure that indicates precarious living conditions if neither the social network (e.g. other household members) nor the wealth and social security entitlements accumulated through life can compensate for the reduced income, this study uses employment history, measured by the number of unemployment spells and job changes. Employment history has a lasting effect on the subjective employment insecurity and also defines much of what a person becomes entitled to in modern welfare states, and the resulting vulnerability of the person. Furthermore, it does not refer to a specific job, but rather to employment status over a longer period of time.

### 3 The present research

The present research aims to investigate the links between employment insecurity and intentions to purchase organic food (as an example of costly pro-environmental behaviour (Held and Haubach 2017)). Empirical analysis is based on data from the Innovation Sample of the German Socio-Economic Panel (GSOEP-IS). We assume that insecure employment is positively associated with intentions to buy organic food. More specifically, we expect that high levels of insecure employment (i.e. a high number of past unemployment spells, frequent job changes) are accompanied by more anticipated income constraints and thus decrease people's willingness to pay a premium for pro-environmental products. Furthermore, the negative effect of insecure

employment on organic food purchases should remain significant after controlling for participants' current household income and other socio-economic and sociocultural characteristics, including environmental concern, level of education, age or gender. Previous research has found that income is positively correlated with the frequency of organic food purchases (Aertsens et al. 2009; Leßmann and Masson 2015). In contrast, the effects of employment insecurity should be attributable not to changes in the current income situation but rather to uncertainty about future employment opportunities (i.e. precarious employment). Albeit somewhat exploratory, we also aim to identify possible boundary conditions for the effects of employment insecurity (see below) and to investigate the interplay of 'objective' employment insecurity and perceived insecurity (i.e. worries about one's own future). That is, we expect that employment insecurity will have a greater impact upon behavioural intentions when accompanied by high levels of perceived insecurity (Hense 2015).

## 4 Data and measures

The data for this study was retrieved from the 2012 wave of the GSOEP-IS. As a result of our focus on employment insecurity, we restricted the sample to respondents aged between 25 and 65.<sup>1</sup> The final sample included 455 respondents (56.9% female,  $M_{age} = 47.76$  years,  $SD_{age} = 11.62$  years). All data used was cross-sectional. We applied multiple linear regression analysis (with interaction tests) to investigate our assumptions.

Table 1 presents the model variables. The GSOEP-IS contained different indicators of employment insecurity, including the number of unemployment spells in the last 10 years, the number of job changes in the last 10 years, fixed-term contracts and temporary agency work. Yet sufficient data was only available for the number of unemployment spells and jobs during the last 10 years. We

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1 In Germany, the working age of the population usually ranges from 15 to 65 years. However, we adjusted the sample to better fit our measure of employment insecurity (i.e. number of unemployment spells and job changes in the last 10 years).

therefore collapsed both indicators into a combined measure of employment insecurity (see Table 1). Education (low, middle, high) was assessed following the International Standard Classification of Education (ISCED), and equalised disposable income was calculated based on the modified OECD equivalence scale (Hagenaars, Vos, and Zaidi 1994).

Variable	Question	Scale
<b>Organic food purchase</b>		
Intention to purchase organic food (one item)	'How often do you intend to purchase organic food in the future?'	1 'never' – 5 'very often'
Perceived barriers to organic food purchases (three items, Cronbach's $\alpha = .77$ )	'It is difficult for me to purchase organic food because ... [time constraints, no suitable shops available, no suitable products available].'	1 'totally disagree' – 5 'totally agree'
<b>Insecure employment</b>		
Employment insecurity (two items, $r(438) = .57$ )	'How often have you been unemployed during the last 10 years?'	0 = never been unemployed, 1 = one unemployment spell, 2 = two unemployment spells, 3 = three or more unemployment spells
	'How many jobs did you have during the last 10 years?'	1 = one job, 2 = two jobs, 3 = three jobs, 4 = four jobs, 5 = five or more jobs
Worries about own future (one item)	'How much do you worry about your own future?'	1 = 'I don't worry at all' – 3 'I worry to a great extent'

Variable	Question	Scale
Others		
Environmental concern (15 items, Cronbach's $\alpha = .74$ )	Example items: 'We are approaching the limit of the number of people the Earth can support.' 'Plants and animals have as much right as humans to exist.'	1 'totally disagree' – 5 'totally agree'

**Table 1: Model variables**

## 5 Results

We submitted intentions to buy organic food to multiple regression analysis, including employment insecurity, environmental concern, as well as a number of other covariates (education, equivalised income, etc.). The results are presented in Table 2. In line with our expectations, purchase intentions were negatively affected by employment insecurity ( $\beta = -.14, p < .01$ ). Bootstrapping (5,000 bootstrap samples) supported this result. That is, the more often respondents had been unemployed/changed jobs during the last 10 years, the less they intended to buy organic food. Importantly, these effects remained stable after the inclusion of environmental concern, equivalised income and other socio-economic characteristics in the analysis. The results are thus not simply attributable to less pro-environmental attitudes or less (current) household income among those with high employment insecurity. Rather, persons who have repeatedly experienced unemployment and who thus feel less secure about their job opportunities and future income are less inclined to buy organic food. Corroborating past studies (Hughner et al. 2007), our findings also indicated that better (vs worse) educated respondents, younger (vs older) persons, and—descriptively—more (vs less) environmentally concerned participants intended to purchase organic food more often.

To explore the possible boundary conditions of organic food purchases, we conducted multiple regression analysis with interaction tests (Aiken and West 2010), including level of education and environmental concern as possible moderators.<sup>2</sup> We expected that employment insecurity would have a higher impact upon intentions to buy organic food for (1) less educated respondents and (2) respondents who describe themselves as more concerned with environmental issues. We reasoned that less educated persons—in general—would be more affected by insecure (or precarious) employment and thus more susceptible to anticipated income constraints. Similarly, for respondents who are less concerned with the environment, employment insecurity may not influence their, per se, lower levels of organic food purchases. The results supported our assumptions and showed a negative main effect of employment insecurity. More interestingly, this main effect was qualified by a positive interaction effect of employment insecurity and level of education, unstandardised  $b = .13$ ,  $t(383) = 2.13$ ,  $p < .05$  (see Figure 1). Further inspection of the interaction effect revealed that employment insecurity was negatively associated with intentions to buy organic food in the case of a low level of education ( $-1$  standard deviation),  $b = -.27$ ,  $t(383) = -3.40$ ,  $p < .01$ , but not for better educated participants ( $+1$  standard deviation),  $b = -.02$ ,  $t(383) = -.18$ ,  $p = .86$ . Consistent with our expectations, we also found an interaction effect of insecurity and environmental concern,  $b = -.12$ ,  $t(379) = -2.12$ ,  $p < .05$  (see Figure 2).<sup>3</sup> Simple slope analysis revealed that employment insecurity was negatively correlated with purchase intentions at high levels of environmental concern ( $+1$  standard deviation),  $b = -.32$ ,  $t(379) = -3.48$ ,  $p < .01$ , but not for respondents who described themselves as less concerned ( $-1$  standard deviation),  $b = -.08$ ,  $t(379) = -1.11$ ,  $p = .27$ . These results provide further evidence of the negative effect of employment insecurity on financially demanding pro-environmental behaviour.

Finally, we submitted intentions to purchase organic food to multiple regression analysis with interaction tests, including employment insecurity, worries

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2 Following Aiken and West (1991), all interactions were probed at one standard deviation above and below the mean of the moderators.

3 Two outliers with studentised residuals exceeding  $|2|$  were excluded for this analysis. Keeping the outliers in the analysis changed the significance of employment insecurity to  $p = .06$ .

about their own future, as well as their interaction term to investigate the interplay of 'objective' employment insecurity and perceived insecurity (i.e. worries about their own future).<sup>4</sup> Consistent with our expectations, we found an interaction effect of employment insecurity and worries,  $b = -.14$ ,  $t(380) = -2.31$ ,  $p < .05$  (see Figure 3).<sup>5</sup> Inspection of the interaction effect showed that employment insecurity was negatively associated with purchase intentions in the case of high worries (+1 standard deviation),  $b = -.26$ ,  $t(380) = -3.46$ ,  $p < .01$ , but not for respondents who were less worried about their future (-1 standard deviation),  $b = .02$ ,  $t(380) = 0.82$ ,  $p = .82$ . That is, frequent experiences of unemployment/frequent job changes only influenced the purchase of organic food when accompanied by high levels of perceived insecurity. In contrast, when respondents were confident about their future, 'objective' employment insecurity did not affect their purchase intentions.

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4 The correlation between employment insecurity and worries about own future was small to moderate ( $r = .22$ ).

5 Four outliers with studentised residuals exceeding |2| were excluded from this analysis. Keeping the outliers in the analysis changed the significance of employment insecurity to  $p = .085$ .



	$\beta$	T	R <sup>2</sup>	adj. R <sup>2</sup>	F
			.11	.10	7.05***
Sex (0 = male, 1 = female)	.07	1.41			
Age	-.19	-3.74**			
Equivalised household income	.08	1.40			
Education (1 = low, 2 = middle, 3 = high)	.12	2.14*			
Environmental concern	.08	1.66			
Barriers to organic food purchases	-.10	-2.08*			
Employment insecurity	-.14	-2.64**			

Note. \*  $p < .05$ ; \*\*  $p < .01$

**Table 2: Regression of intentions to purchase organic food purchase on employment insecurity and socio-economic characteristics**

## 6 Conclusion: pro-environmental behaviours need social policy

The aim of this paper was to investigate the influence of employment insecurity on the purchase of organic food. Employment insecurity is regarded as a phenomenon of growing importance (International Labour Office 2015). It impairs people's ability to make plans for the future (and to have control over their lives), and thus induces a short-term perspective. In contrast, pro-environmental behaviour is often characterised by a long-term perspective, for example, to fight climate change and to preserve global ecosystems for future generations. Yet, such a time horizon may be difficult to sustain (psychologically) in times of insecure employment.

As hypothesised, we found evidence of a negative effect of employment insecurity on intentions to buy organic food. In other words, people who had experienced frequent spells of unemployment and/or frequent job changes were less inclined to purchase organic food. Furthermore, our findings indicate that the negative effect of employment insecurity was more pronounced for less educated participants and for people who reported to be more concerned with environmental issues. This corroborates our assumption that insecurity may prevent individuals from living up to their convictions (environmental concern), especially those who are most vulnerable to unemployment (i.e. less educated persons). Finally, high levels of employment insecurity only led to lower intentions to buy organic food for participants who, at the same time, were worried about their future. Our findings thus suggest an interplay of ‘objective’ and ‘subjective’ employment insecurity to jointly influence organic food purchases (Lozza, Libreri, and Bosio 2013). This is in line with previous research that has provided evidence for the effects of subjective precariousness on a number of job and family-related behaviours and decisions (Hense 2015). Yet, further research is needed to quantify the relative predictive value of perceived employment insecurity and more objective measures of such insecurity on pro-environmental behaviour.

In sum, the results show that awareness-raising—as frequently requested—is not sufficient to bolster costly pro-environmental consumption. Our findings indicate that pro-environmental behaviour may fail not just because of a lack of concern with the environment but also because individuals face economic insecurity that impedes them from acting on their beliefs and even undermines their self-confidence. Put somewhat provocatively, pro-environmental behaviour requires social policy that enhances people’s opportunities to act on their pro-environmental beliefs. The results also confirm the cogency of going beyond socio-economic factors such as income, gender and current labour-market inclusion as predictors of pro-environmental behaviour: employment insecurity was found to affect organic food purchases after controlling for the effects of other factors. In other words, the negative correlation between insecurity and intentions to buy organic food is not simply attributable to changes in current household income. Our results rather show that frequent experiences of unemployment explained additional variance in purchase intentions. Given the increase in insecure employment (International Labour

Office 2015), our findings thus call for future research that explicitly links employment insecurity and pro-environmental consumption choices.

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# Anti-consumption beliefs among the Swedish general public

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# 1 Introduction

Consumer critique stretches back almost to the beginning of the consumer society itself, including Veblen's (1899) analysis of consumption for display among the *nouveau riche*, Adorno and Horkheimer (1944), who argued that consumers are trapped and manipulated by the capitalist system, and Galbraith (1958), who claimed, among other things, that producers create artificial desires that do not contribute to the well-being of consumers (Schor 2007). In recent decades, much of the consumer critique has also incorporated an ecological dimension. Jackson (2009) and others have argued that continued growth in global consumption is incompatible with sustainable development and that changes in values and priorities are required to tackle society's long-term challenges.

The term 'anti-consumption' has been used to cover a range of interrelated beliefs and practices. Zavetoski (2002a) defines it broadly as '...a resistance to, distaste of, or even resentment or rejection of, consumption'. Lyer and Muncy provide a useful mapping of different types of anti-consumer based on whether the purpose is societal or personal and whether the object is general (all consumption) or specific (individual brands or products). Anti-consumers could then be divided into four types: global impact consumers (general object/societal purpose), simplifiers (general object/personal purpose), market activists (specific object/societal purpose) and anti-loyal consumers (specific object/personal purpose). The focus in this study is the global impact consumers, or what could be termed anti-consumption for sustainable development.

Research on anti-consumption has also, to a large extent, focused on groups such as voluntary simplifiers that have consciously shifted lifestyle away from mainstream consumption patterns (e.g. Zavetoski 2002b; Kozinets and Handelman, 2004; Black and Cherrier 2010; Cherrier et al. 2011). The term is also common in the form of 'anti-consumerism' (Littler 2004; Gilbert 2008), which can be viewed as an ideology or socio-political movement that engages a limited proportion of the people. However, to what extent are such ideas spread among the general public? Do people really support the view that society focuses too much on private consumption, or is this just an elitist idea found

among a small group of academics or alternative greens? A better understanding of this is required in order to assess whether strategies for ‘downshifting’ or ‘sufficiency’ could provide viable paths for sustainability transitions.

To our knowledge, previous research surveying the prevalence of anti-consumption beliefs among the general public is limited to the United States, where the statement ‘Our country would be better off if we all consumed less’ has been included in several surveys. Agreements with this statement have been surprisingly high, ranging between 70 and 88 per cent in a number of surveys in the state of Oregon and 79 per cent in a national survey. Interestingly, these studies have also shown that, while there is a clear ideological divide regarding the concern about climate change (94% of Democrats vs 27% of Republicans in Oregon), agreement with the statement about consuming less was much more universal, with only slightly more support among Democrats (Markowitz and Bowerman 2012; Bowerman 2014).

In this paper we survey the general agreement with anti-consumption beliefs among a large representative sample of Swedish adults. We also analyse in which socio-demographic and political groups these beliefs are relatively weak and strong, and how they correlate with attitudes to sustainability policies.

## 2 Survey

A battery of five questions was developed for incorporation into the Swedish national SOM-survey (Society, Opinion, Media). The questions were formulated to capture contemporary beliefs about consumption and anti-consumption. Sustainability researchers at the Department of Energy Environment at Chalmers University developed an original version of the battery, which was then reviewed and edited by researchers at the SOM-institute. The five questions were formulated as statements that the respondents were asked to rate as absolutely right, partly right, partly wrong or absolutely wrong (Table 1).

**What is your opinion about the following statements about people's consumption?**

**Alternatives: absolutely right, partly right, partly wrong, absolutely wrong**

1. People spend too much time and focus on consumption.
2. People are influenced to buy things they don't need (for example, by TV, advertising, blogs).
3. For environmental reasons, it is important that we reduce our consumption.
4. For environmental reasons, it is important that people share things they rarely use.
5. People's consumption is important to keep the economy going (reversed scale).

**Table 1: 'Anti-consumption beliefs' battery of questions**

The annual national SOM-survey has explored trends in attitudes and habits since 1986. It contains a number of fixed questions but also gathers questions from researchers from different scientific disciplines. The 2014 survey was distributed to a nationally representative sample of 13,600 individuals aged 16–85. The survey was divided into four partial surveys with 3,400 individuals each. The question battery developed for this study was placed in the second of these four partial surveys. Out of 3,400 individuals in this second sample, 184 were considered to be natural non-responders (incapable of responding because of medical or language problems), giving a net sample of 3,216. SOM managed to collect 1,742 responses, giving a net response rate of 54.2 per cent, which is exceptionally high in an international comparison and the result of some very ambitious survey fieldwork (Table 2). The response rate was higher in older age groups than in younger ones, meaning that older people were overrepresented in the sample.



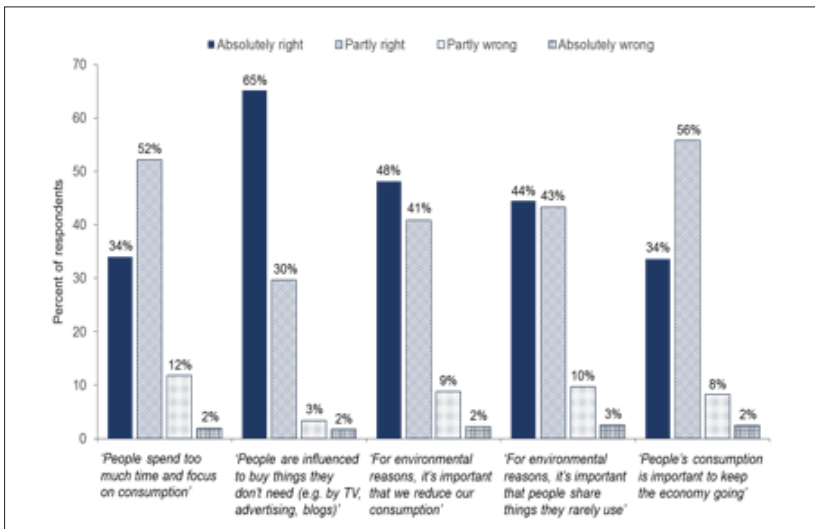
12 Sept. 2014	Notification postcard to inform about inclusion in sample
19 Sept.	Paper questionnaire with information, answer envelope and pen
29 Sept.	Postcard with thank you or reminder
6 Oct.	New paper questionnaire with information about a web version of the survey
16 Oct.–16 Nov.	Telephone reminders (send out of extra questionnaire if missing)
28 Oct.	Postal reminder to people without known telephone number
18 Nov.	Postal reminder to people who answered over the phone that they would participate
19–20 Nov.	SMS-reminder with link to the web version of the survey
28 Nov.–8 Dec.	Telephone reminders
22 Dec.	Questionnaire to those who answered over the phone that they would participate
7–19 Jan. 2015	Questionnaire also including a questionnaire for explaining non-responses

**Table 2: SOM survey fieldwork 2014–2015.** Source: Vernersdotter, 2015.

The main benefit of including the question battery in the SOM-survey is that it provides the best possible coverage of the population. The main drawback is the limited space available. Hence, analysis of how anti-consumption beliefs relate to other variables had to be constrained to a number of socio-demographic and political variables available in the same partial survey.

### 3 Results

Figure 1 shows the distribution of the raw responses to the question battery described in Section 2. We can see a very high level of agreement with all of the consumption critical statements (the four statements to the left), but the majority of respondents also agreed with the statement that people’s consumption is important to keep the economy going.



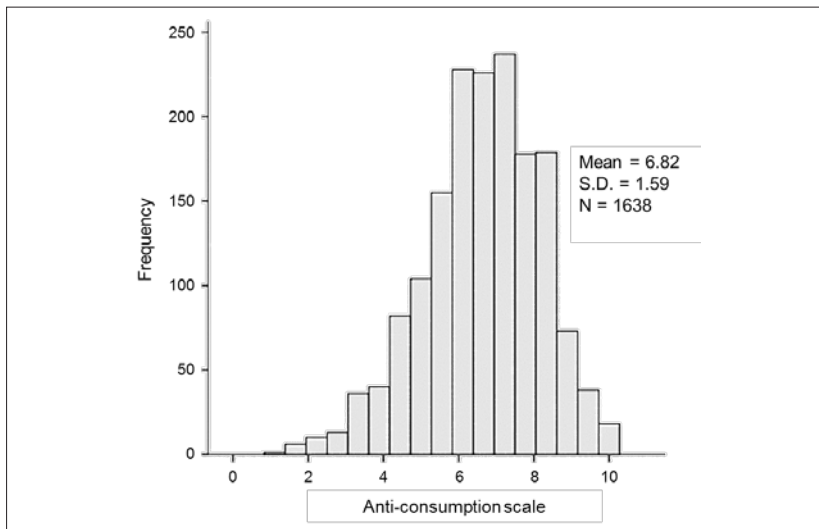
**Figure 1: Distribution of responses to the five statements. The number of respondents, from left to right, were: 1674, 1691, 1684, 1666 and 1686. Source: Own illustration.**

These results will be explored further in the following sections with the establishment of an anti-consumption scale (3.1), comparisons of anti-consumption beliefs in different socio-demographic and political groups (3.2), multivariate analyses of the same variables (3.3), and, finally, analyses of how this construct correlates with some more specific sustainability-related attitudes.

### 3.1 Anti-consumption scale

For further analyses of anti-consumption beliefs, a scale was constructed by summing the responses from the statements in Table 1 (see results in Figure 2). For the consumption-critical statements 1–4, responses were translated so that absolutely wrong is a 0, partly wrong is a 1, partly right is a 2 and absolutely right is a 3. Statement 5 has a reversed direction and was hence translated so that absolutely wrong is a 3, partly wrong is a 2, partly right is a 1 and absolutely right is a 0. The sum of these statements were then normalised to a scale from 0 to 10, where 10 indicates the strongest anti-consumption belief, that is, absolute agreement with statements 1–4 and absolute disagreement with statement 5. The tests indicate acceptable internal consistency of the scale (Cronbach's  $\alpha = 0.72$ ).

Figure 2 shows a histogram of the anti-consumption scale. The mean in the full sample ( $N = 1638$ ) was 6.82, with a distribution slightly skewed to the right. The anti-consumption scale is used as the dependent variable in the following sub-sections.



**Figure 2:** Histogram of the constructed anti-consumption scale. In total, 1,638 respondents answered all five questions. Source: Own illustration.

### 3.2 Comparison of groups

Table 3 provides group comparisons of anti-consumption beliefs for the factors gender, generations, rural–urban, disposable income, education level, education subject and political orientation. Since the analysis of some factors did not pass Levene’s test of homogeneity of variances (generation, education level and left–right scale), all ANOVAs were performed using the Welch’s test and the Games-Howell post hoc test, which do not assume equal variances.

	N	Mean	S.D.	Equality of means tests
All	1,638	6.82	1.59	
<b>Gender</b>				
Women	858	7.03	1.56	$t(1,632) = 5.67, p = .000$
Men	776	6.58	1.59	
<b>Generation</b>				
1930–1939	147	6.60	1.40	$\text{Welch's } F(6, 76.7) = 2.32, p = .034$
1940–1949	354	6.81	1.48	
1950–1959	295	6.92	1.59	
1960–1969	278	6.68	1.73	
1970–1979	227	6.78	1.74	
1980–1989	198	7.15	1.54	
1990–1999	134	6.71	1.56	
<b>Rural–urban</b>				
Rural	233	6.85	1.69	$\text{Welch's } F(4, 630.7) = 4.08, p = .003$
Small town	409	6.65	1.50	
Mid-size city	519	6.84	1.55	
Big city suburb	285	6.80	1.68	
Big city centre	169	7.21	1.55	
<b>Disposable income</b>				
Quartile group 1 (low income)	352	6.79	1.59	$\text{Welch's } F(3, 812.9) = 4.22, p = .006$

	N	Mean	S.D.	Equality of means tests
Quartile group 2	381	6.99	1.55	
Quartile group 3	363	6.88	1.64	
Quartile group 4 (high income)	375	6.60	1.58	
<b>Education level</b>				
Primary school	286	6.56	1.49	Welch's $F(3, 840.5) = 8.30, p = .000$
Secondary school	474	6.71	1.49	
Post-secondary school	403	6.83	1.61	
University degree	454	7.11	1.69	
<b>Education subject</b>				
Technology	331	6.39	1.59	Welch's $F(6, 362.3) = 12.26, p = .000$
Economics, business and law	344	6.67	1.57	
Health care and social work	271	7.02	1.55	
Natural science	132	7.15	1.57	
Teaching and media	155	7.26	1.45	
Humanities	44	7.77	1.34	
Other	147	6.88	1.46	
<b>Political orientation</b>				
Clearly to the left	210	7.60	1.55	Welch's $F(4, 658.9) = 42.72, p = .000$
Somewhat to the left	405	7.26	1.37	
Neither left nor right	421	6.78	1.47	
Somewhat to the right	395	6.47	1.54	
Clearly to the right	189	5.88	1.71	

**Table 3: Comparison of the anti-consumption beliefs (scale 0–10) in groups divided by socio-demographic and political variables.** Equality of means was tested using the t-test for gender and one-way ANOVA with the Welch's F-test for variables with more than two groups.

Gender: The mean value of anti-consumption beliefs was significantly higher for women ( $M = 7.03$ ) than for men ( $M = 6.58$ ) ( $p = .000$ ).

Generations: the analysis reveals no clear trends from generation to generation. Pairwise Games-Howell post hoc tests showed statistically significant differences ( $p < .05$ ) between respondents born in the 1980s ( $M = 7.15$ ) and those born in the 1930s ( $M = 6.60$ ) and 1960s ( $M = 6.68$ ).

Rural–urban: the analysis reveals no clear trends along the rural–urban dimension, but people in big city centres were found to have stronger anti-consumption beliefs than the other groups. Pairwise Games-Howell post hoc tests showed statistically significant differences ( $p < .05$ ) between respondents in big city centres ( $M = 7.21$ ) and those in small towns ( $M = 6.65$ ) and mid-size cities ( $M = 6.84$ ).

Disposable income: the analysis reveals no strong pattern with respect to income level. Pairwise Games-Howell post hoc tests showed statistically significant differences ( $p < .05$ ) between respondents in the second quartile group, namely, medium–low income ( $M = 6.99$ ), and those in the fourth quartile group, namely, high income ( $M = 6.60$ ).

Education level: the analysis shows that people with higher education levels have stronger anti-consumption beliefs than people with lower education levels. The Pairwise Games-Howell post hoc tests showed statistically significant differences ( $p < .05$ ) between respondents with a university degree ( $M = 7.11$ ) and those with primary school education ( $M = 6.56$ ) and secondary school education ( $M = 6.71$ ).

Education subject: the analysis shows that people's education subject has a strong relationship with anti-consumption beliefs. In particular, people with more material education subjects such as 'technology' and 'economics, business, law' were less likely to have strong anti-consumption beliefs. Games-Howell post hoc tests showed statistically significant differences ( $p < .05$ ) between respondents with an education in 'technology' ( $M = 6.39$ ) and all other subjects, except for 'economics, business, law'. Statistically significant differences were also found between 'economics, business, law' ( $M = 6.67$ ) and 'natural science' ( $M = 7.15$ ), 'teaching and media' ( $M = 7.26$ )

and 'humanities' ( $M = 7.77$ ). Finally, significant differences were also found between people with an education in 'humanities' and those with educations in 'health care and social work' ( $M = 7.02$ ).

Political orientation: the analysis shows that people's political orientation along the left–right scale has a strong relationship with anti-consumption beliefs with the highest values in the left end ( $M = 7.60$ ) and the lowest in the right end ( $M = 5.88$ ). Games-Howell post hoc tests indicated strong statistical significance for all pairwise comparisons, except between 'clearly' and 'some-what' to the left ( $p = .058$ ).

### 3.3 Multivariate analysis

Table 4 shows the results of a multivariate regression analysis of determinants for the anti-consumption belief scale. The independent variables are similar to the variables analysed in the ANOVAs (Table 3) but, in order to make use of all the variance in the variables, disposable income was treated as a continuous variable, the generation groups were replaced with the continuous variable age, and the education level variable includes all eight groups available in the SOM survey. The results in Table 4 show that political orientation along the left–right scale is the most important of the analysed variables in terms of explaining anti-consumption beliefs. Other important variables are education level and gender. While the ANOVA indicated a weak but significant relationship between disposable income and anti-consumption beliefs, this was not found in the multivariate analysis, as education level was also included in the model.

		Unstandardized Coefficients		Standardized Coefficients
		B	Std. Error	Beta
Left-right scale	1–5	-.413***	.032	-.320
Education	1–8	.115***	.023	.137
Gender	0 woman; 1 man	-.360***	.078	-.116
Rural-urban scale	1–5	.072*	.034	.054
Disposable income	kSEK/c.u./yr	.000	.000	-.033
Age	yr	.003	.002	.031
N		1441		
R <sup>2</sup>		0.15		
Max VIF		1.27		

Significance levels: \*  $p < .05$ ; \*\*  $p < .01$ ; \*\*\*  $p < .001$

**Table 4: Multivariate regression analysis of determinants of anti-consumption beliefs**

### 3.4 Correlation with green attitudes

Although the available data did not include variables for a green political orientation, it was possible to estimate the anti-consumption beliefs for voters of different parties. People voting for the green party, which has the environment as its main political issue, had the strongest anti-consumption beliefs ( $M = 7.99$ ), which is higher than would be expected by its position along the left–right scale.

Anti-consumption beliefs were also found to be correlated with the following:

- Supporting a new climate tax on meat:  $r = .37$  ( $p = .000$ )
- Supporting a new climate tax on air travel:  $r = .35$  ( $p = .000$ )
- Supporting the proposal for six-hour workdays:  $r = .25$  ( $p = .000$ )



## 4 Discussion

The results of this study have shown that anti-consumption beliefs are widespread among the Swedish general public. For example, the statement ‘People spend too much time and focus on consumption’ was valued as absolutely right by 34 per cent and partly right by 52 per cent, while only 12 per cent valued it as partly wrong and 2 per cent as absolutely wrong. Anti-consumption beliefs were found to be correlated with a political orientation towards the ‘left’ and being ‘green’, being a woman and having a higher education, particularly in the humanities. There were, however, no clear relationships with income level. The people with the strongest anti-consumption beliefs could, to some extent, be described as high cultural capital consumers (Carfagna et al. 2014), but it is noteworthy that no groups were identified that had very strong antipathies towards the surveyed anti-consumption statements.

It may be questioned to what extent these results are generalisable within an international context. Previous research has, for example, also shown a relatively low degree of materialistic values among Swedes (Andersson and Nässén 2016), but, on the other hand, cross-country comparisons of environmental concern in the World Values Survey show that Swedes are somewhere in the middle (Jorgenson and Givens 2014). As mentioned in the introduction, results from the US also show a rather widespread agreement with the statement ‘Our country would be better off if we all consumed less’ (Markowitz and Bowerman 2012; Bowerman, 2014). Hence, it would not be unreasonable to assume that these findings could also be representative of similar Western countries.

These findings should not be overplayed in terms of expectations for more sustainable consumption patterns. The so-called value–action gap is well known from previous research, which has, for example, shown that environmental concern correlates poorly with people’s actual emissions from consumption (Vringer et al. 2007; Tabi 2013; Nässén et al. 2015). Moreover, as shown by Ozanne and Ballantine (2010), who studied the motivations for engaging in sharing activities, not all of those who may be classified as having anti-consumption behaviours hold anti-consumption beliefs. In the long term, how-

ever, what people view as attractive lifestyles may be important in relation to options and opportunities for transitions towards more sustainable societies. If people sense there is something wrong or unsatisfactory with contemporary consumer lifestyles, then that may also open up sustainability pathways that include strategies and policy-making that go beyond eco-efficiency and also include downshifting alternatives. Previous research has also shown that improvements in work–life balance may offer significant potential for reducing greenhouse gas emissions (Nässén et al. 2009; Knight et al. 2013; Nässén and Larsson 2015), and that downshifting consumption volumes may also be combined with high levels of subjective well-being (Holmberg et al. 2012; Andersson et al. 2014).

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# Second-hand consumption as a lifestyle choice

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# 1 Introduction to second-hand consumption

In the past 40 years there has been an increase in second-hand consumption among consumers (Guiot and Roux 2010), since the 'shame and stigma associated with second-hand consumption' disappeared and second-hand goods became 'cool' and 'stylish' (Franklin 2011, 156). In Germany, for example, the turnover of goods sold in second-hand retail outlets is expected to increase from €1.902 mio in 2012 to €2.198 mio in 2020 (Statista n.d.). Second-hand consumption is a niche form of consumption and therefore does not correspond to the norm (Crewe and Gregson 2003; Williams and Paddock 2003). Second-hand goods can be distinguished from new goods because they are pre-used and pre-owned (Luchs et al. 2011). They are usually less expensive than new products and have some traces of wear-and-tear (Estelami and Raymond 2012). Several forms of second-hand consumption exist. These range from 'car boot sales, charity shops, auctions, online auctions, seller websites, vintage and other second-hand shops, nearly new sales to bric-a-brac stalls run by charities or non-profit community organisations such as churches and schools' (Waight 2013a, 299). Although these places for second-hand exchange are shaped by both buyers and sellers (Gregson and Crewe 2003, 3), the professionalisation of second-hand charity shops has taken place recently. In particular, professional online platforms such as Ubup have revolutionised the second-hand market. Ubup is a second-hand retailer that buys second-hand clothes, and then checks, photographs and labels the clothes online for a professional customer experience, just as in a regular online shop for new clothes (Ubup, n.d.). Second-hand shops of all forms are increasingly attempting to copy traditional retail practices (Gregson and Crewe 2003, 75).

A study of German second-hand behaviour shows that consumers sold many types of products within the last 12 months of the study. The identified product groups were: books (46%), clothes (44%), CDs (28%), DVDs (28%), textbooks (25%), video games (22%), toys (17%), furniture (17%), jewellery (14%) and mobile phones (12%) (Sempora Consulting 2012). These findings are consistent with Waight (2013a, 1), who identified, in particular, children's clothes as

being popular second-hand buys ‘because kids grow out of things quickly, while the objects themselves still hold a use value’.

These reasons also apply to collectibles, where the object might even gain value over time. Sometimes items are collected and purchased second-hand because they are currently not sold anymore. Turunen and Leipämaa-Leskinen (2015) pointed out that the acquisition of second-hand goods had initially been related to collecting in the literature (e.g. by Belk 2001; and Zonneveld and Biggemann 2014). Emotional attachment and nostalgia could be the main customer motivations here (Zonneveld and Biggemann 2014).

## 2 Modest consumption and lifestyle

In particular, the production methods and consumption patterns of the twenty-first century are responsible for environmental pollution and the depreciation of resources. Consumers have realised the role they play and are becoming more responsible about their excessive lifestyles (Balderjahn 2013, 202). Lifestyle is ‘a pattern of consumption that reflects a person’s choices about how they spend time and money, but in many cases it also refers to the attitudes and values attached to these behavioural patterns’ (Solomon et al. 2016, 197). Second-hand consumption is a non-excessive, modest consumption type, which exists in many forms (Gregson and Crewe 2003; Williams and Paddock 2003). The term modest is defined as ‘not large in size or amount, or not expensive’ (*Oxford Dictionary*, n.d.). Modest consumption could therefore also mean that consumers decide not to buy at all.

It has been suggested that many second-hand shoppers are not necessarily poor but want to shop clever (Gregson and Crewe 2003, 11) by not putting a strain on their wallet and the ecosystem. Consequently, they practise a form of minimalism or anti-consumption, whereby they place more emphasis on personal growth than on social status (Lee and Ahn 2016). Non-consumption is often a form of voluntary simplicity where the consumption of material goods is minimised. Consumers who practise voluntary simplicity in its mild forms tend

to ‘reduce clutter in their life, reduce burdensome time commitments, and create a peaceful personal space to enjoy life’ (Zavestoski, 2002). Anti-consumption is further described as a lifestyle-driven desire to live a simpler life (Lee and Ahn 2016) by consuming less or downshifting (Cherrier and Murray 2007). Intentional non-consumption plays a key role in sustainability (Cherrier, Black and Lee 2011).

### 3 Motivation for second-hand consumption

Customers today like to get more value from their possessions and sell their goods through different online and offline ‘buy-back’ channels (Trendwatching 2011). Because second-hand trade is gaining popularity, it is necessary for retailers to understand these alternative forms of consumption. Yet, the phenomenon of second-hand consumption has not been investigated much by other researchers in the past (Waight 2013a). To the best of the author’s knowledge, only one book has been published on re-sale culture on the Internet in Germany (Behrendt et al. 2011), but it focuses solely on chances for sustainable consumption through eBay. Other book and paper searches are not particularly extensive, with the exception of, for example, Behrendt et al. (2011), Gregson and Crewe (2003) or Franklin (2011).

Williams and Windebank (2002) suggest that consumers turn to second-hand consumption because they cannot afford new goods and have been excluded from traditional retail channels as ‘excluded consumers’. The researchers call for more alternative retail spaces, for example, formal and non-formal second-hand markets where these excluded consumers can acquire goods. Williams and Windebank (2002) acknowledge that there is little quality control, especially for the electrical household appliances that are traded in. Furthermore, they suggest that these alternative retail forms do not pose a threat to mainstream retailers. Yet, in the meantime the professionalisation of second-hand retailers such as Ubup has taken place, and, since they copy retail



practice, they pose a threat to traditional retailers. Thus, there is a need to investigate this topic further.

After conducting 120 interviews with consumers, Williams (2003) pointed out that there are financial but also rational explanations for participating in informal (e.g. friends and neighbours) and formal second-hand channels (personal advertising, second-hand shops or market stalls). Williams (2003, 105) shows that economic and rational reasons co-exist, for example, when a couple explains that they got a coat from a car boot sale because it was cheaper and because they like to browse around. Further research supports this motivational co-existence. Besides financial motivations, Gregson and Crewe (1997) have shown that there is also a hedonic explanation whereby consumers search for fun and engage with the spaces. They are looking for distinction by buying products that are currently not available on the market. Gregson and Crewe (2003, 103) add that fighting against the consumption system, in addition to income and identity politics, could motivate consumers to buy second-hand. Guiot and Roux (2010, 356) characterise second-hand buying as 'various and unpredictable offerings' in a majority of channels, which may be unavailable in the new goods market; 'visual stimulation'; 'the urge to hunt for bargaining with seller[s]'; as well as feelings of 'affiliation and social interaction' (Guiot and Roux 2010, 356).

Guiot and Roux (2010, 357–360) investigated second-hand shoppers' motivations among French shoppers and found four. First, critical motivations have an ethical and ecological dimension whereby consumers avoid conventional channels by reusing goods and rejecting the standardised appearance usually found on the market. Second, experimental motivation linked to the nature of the offering has an originality component. Consumers try to express uniqueness, nostalgic pleasure, self-expression and congruence. Third, experiential motivations linked to channel characteristics mainly include the discovery of new environments by wandering around and getting into social contact, and involve stimulation and treasure hunting. Finally, the economic motivation is a desire to pay less and includes the search for a fair price. These motivations further consist of bargain hunting and the gratificative role of price. Consumers who primarily have an economic motivation try to satisfy 'needs without depriving them of less essential acquisitions' (Guiot and Roux, 2010, 360). Waight (2013b) adds that the motivation for second-hand consumption is com-

plex, especially when it is done by households that are not considered to be 'excluded consumers'.

In contrast to Guiot and Roux (2010), Waight (2013a, 1) reviews the literature and develops a simpler categorisation. She divides customers into two groups: people 'who enjoy the process or simply want things'; and those 'who are forced to use alternative consumption channels due to financial hardship'. The interviews of 30 English mothers showed that they purchased second-hand baby goods primarily for financial, but also for ethical, reasons (Waight, 2013a). Her research found that mothers were primarily motivated by financial reasons. The two explanations provided were the consequences of the financial crisis and the fact that mothers work less and therefore earn less once they have a child (Waight, 2013a). Gregson and Crewe (2003, 92) also point out that some mothers constantly think about budgeting and fear making a mistake with their finances.

Further evidence for the co-existence of several motivations can be found in a study of Swiss consumers. The results show that these consumers are primarily buying second-hand furniture because of the low price (27%); they find new products boring (20.9%); for environmental reasons (16.8%); since these items cannot be bought new (15.4%); because they find the purchase exciting (5.7%); and for various other reasons (Anibis 2015).

Another potential reason that had previously not been considered by other researchers is the purchase of something that one cannot afford new. Turunen and Leipämaa-Leskinen (2015) show that consumers engage in second-hand luxury consumption because it is a sustainable choice, they want to find a real deal or a unique find, they are hunting for pre-loved treasures, or they are making a risky investment.

Although Guiot and Roux (2010) have developed a motivational scale, this study replicates parts of their work by adapting their scale and studying another cultural context. The aim of this study is to investigate consumer motivations for second-hand shopping in Germany, because the German second-hand market is growing steadily (Statista n.d.) and the retail landscape is influenced by these developments. German consumption behaviour is diverse. Small local corner stores that offer high quality, a nostalgic experience and

social interaction co-exist with discount stores, which are mainly price-driven (Logemann 2013). Furthermore, Germans are thought to have a strong ecological motivation because they consciously separate waste and demand waste-avoidance from manufacturers (Halpert 2001). It is therefore expected that German customers are strongly motivated by ecological and economic motives.

## 4 Methodology

An online questionnaire was constructed based on a selection of motivation variables for second-hand consumption by Guiot and Roux (2010). An item concerning discount shopping and the often critiqued production processes was added to the study because many Germans who do not like shopping at discounters for this reason turn to alternative second-hand channels. Some items were excluded when the translated item was too similar to another item or meant exactly the same when it was translated into German. Five items from the original scale (PUIS<sub>13</sub>, CIRC<sub>31</sub>, CIRC<sub>34</sub>, CIRC<sub>13</sub>, OFF<sub>24</sub>) were thus deleted. In sum, the questionnaire asked about the frequency of consumption in different second-hand channels; product groups that are bought online; the consumer motivation for buying used products; about sales channels and the potential risks; as well as socio-demographics. The data was collected over a period of four weeks in February 2015 and the questionnaire was distributed via social media. A 5-point likert scale was used to measure consumer motivation (1 = strongly disagree, to 5 = strongly agree).

## 5 Analysis

In total, 231 participants completed the online questionnaire. Of those, 73.3 per cent were female and 26.7 per cent male. The respondents' age varied from 16 to 82 years, with a mean age of 32 years (female: 31.3 years; and male: 33.2). Because the link was distributed on social media platforms via a snowball system, perhaps more younger females self-selected to participate in the study than males because young females often have a personal interest in consumption. In addition, females often shop second-hand for the family (Waight 2013a). The sample contained mixed net household income levels where 11.4 per cent of the sample earned below €500, 8.2 per cent earned €500–€999, 22.3 per cent earned €1,000–1,999, 14.7 per cent earned €2,000–2,999, 16.3 per cent earned €3,000–3,999 and 27.2 per cent earned more than €4,000. Altogether, 47 of the 231 participants chose not to reveal their income and were counted as missing. The level of education in the sample was slightly above the average German level, with 39 per cent having a university degree and 2.7 per cent a doctoral degree. In total, 7.3 per cent had either completed secondary modern school or secondary school and 33.6 per cent had earned a university entrance diploma. Altogether, 16.8 per cent had completed vocational training.

The most frequently used purchase channels were measured on a 5-point Likert scale (higher scores mean more frequent usage), as follows: family ( $M = 3.13$ ,  $SD = 1.38$ ), private sales ( $M = 2.82$ ,  $SD = 1.28$ ), eBay ( $M = 2.6$ ,  $SD = 1.40$ ), fairs ( $M = 2.52$ ,  $SD = 1.29$ ), other Internet platforms ( $M = 2.3$ ,  $SD = 1.48$ ), second-hand shops ( $M = 2.29$ ,  $SD = 1.43$ ), Amazon ( $M = 2.23$ ,  $SD = 1.37$ ), contacts through online forums ( $M = 1.90$ ,  $SD = 1.33$ ) and, finally, classified ads in the newspaper ( $M = 1.38$ ,  $SD = .77$ ).

## 6 Exploratory analysis

SPSS 23 was used to conduct a principal component factor analysis with varimax rotation to analyse the motivators. The results are provided in Table 1. Based on Field's recommendation, all factor loadings of lower than .5 were suppressed. Loadings of .512 are good enough for samples of between 100 and 200 if there are a few factors with small numbers of variables (Field 2013, 681). Therefore, these recommendations were followed for a sample size of just above 200. The data was found to be suitable for factor analysis (KMO of .856 and Bartlett = .00).

	Social motivation ( $\alpha = .849$ , $M = 2.74$ )	M	SD	Factor Loadings
CIRC32	I like wandering around second-hand outlets because I always hope I'll come across a real find.	3.35	1.44	.66
CIRC35	In certain second-hand outlets I feel rather like a treasure hunter.	2.94	1.50	.66
CIRC12	I enjoy the social interaction you find in certain second-hand outlets.	2.73	1.44	.86
CIRC12	I like going to second-hand outlets where I can have contact with people and talk to them.	2.66	1.44	.88
CIRC11	In certain second-hand outlets, I like entering into discussion with people even if I don't buy anything.	2.02	1.33	.53

Ecological motivation ( $\alpha = .735$ , $M = 2.70$ )		M	SD	Factor Loadings
ETH11	By buying second-hand I feel I'm helping to fight against waste.	3.16	1.36	.76
DISCNT	I don't like buying at discount stores because of their questionable production processes.	2.95	1.27	.56
ANT11	Buying second-hand enables me to distance myself from the consumer society.	2.68	1.33	.78
PUIS11	Buying second-hand is for me a revenge on the consumption system.	1.99	1.24	.74
Individual motivation ( $\alpha = .624$ , $M = 2.88$ )		M	SD	Factor Loadings
OFF12	I can find products that cannot be bought in mainstream stores.	3.15	1.34	.55
ECO21	By buying second-hand I feel I'm paying a fair price for things.	3.15	1.38	.65
ECO22	I don't want to pay more for a product, just because it is new.	2.79	1.13	.76
OFF23	I like buying second-hand objects because I find them authentic.	2.41	1.20	.53
Nostalgic motivation ( $\alpha = .762$ , $M = 2.65$ )		M	SD	Factor Loadings
OFF22	I am attracted more to old things than new ones.	2.67	1.10	.75
OFF25	I buy second-hand products because they are old and have a history.	2.53	1.26	.70

**Table 1: Factor analysis of shopping motivation**

The cronbach alpha values for the factors were: social (.849), ecological (.735), individual (.624) and nostalgic (.762). Individual motivation with an alpha of .624 is the only scale that does not show high internal reliability, based on the rule of thumb that alpha values above .7 are efficient (Bryman and Bell 2011, 159). Leaving out any one of the items would have further reduced the scale's reliability. The scale mixes the two factors of price and originality by Guiot and Roux (2010), but both factors, especially the pricing items, were perceived to be too important in terms of content—based on the previously reviewed literature—to delete completely. Overall, the motivation model structure of Guiot and Roux (2010) was not replicated identically. Originality as a hedonic or recreational motivation was of little importance in this model. Only item OFF12 from Guiot and Roux's (2010) originality scale loaded on the factor 'individual motivation' (exploratory analysis).

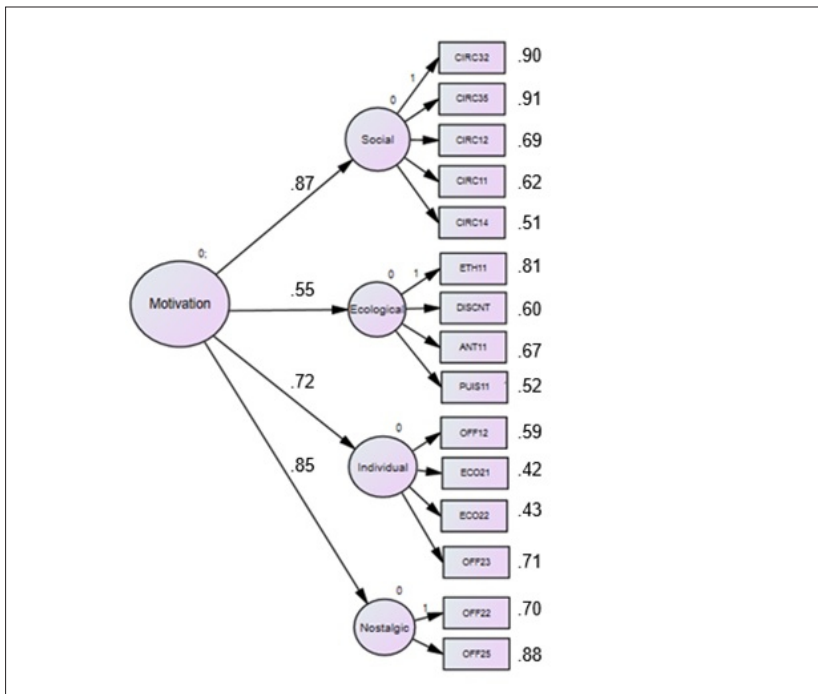


Figure 1: SEM of second-hand shopping motivation. Source: Own illustration.

The global fit indices of the unbiased structural equation model (see Figure 1 for standard estimates) indicate a good fit with the data. The requirements specified based on Byrne's (2001) recommendations were considered ( $\chi^2/df < 5$ , CFI  $> 0.9$  and RMSEA  $< 0.08$ ). The following fit indicators were produced by the model:  $\chi^2/df = 2.149$ , CFI = 0.918, RMSEA = 0.071,  $p = .000$ ). Although items ECO22 and ECO23 scored rather low, they were not deleted, because economic motivations were found to be so important in previous studies (Guiot and Roux 2010; Williams and Paddock 2003; and Waight 2013a).

## 7 Confirmatory analysis of Guiot and Roux (2010)

A confirmatory analysis of the factor structure and the provided model only partly confirmed the work of Guiot and Roux (2010). Internal reliability was not acceptable for all factors with the following cronbach alpha scores: fair price (.47), gratificative role of price (.83), distance from the system (.721), ethics and ecology (.57), treasure hunting (.69), originality (.53), social contact (.87) and nostalgic pleasure (.71). Overall, the model fit indicators were  $\chi^2/df = 1.997$ , CFI = 0.917, RMSEA = 0.066,  $p = .000$ . To test the comparative strength of the three factors, the original CFA model was restructured into a second-order model (see Figure 2). The factor strengths in the model were economic motivation (.72), critical motivation (.80) and hedonic motivation (.79).



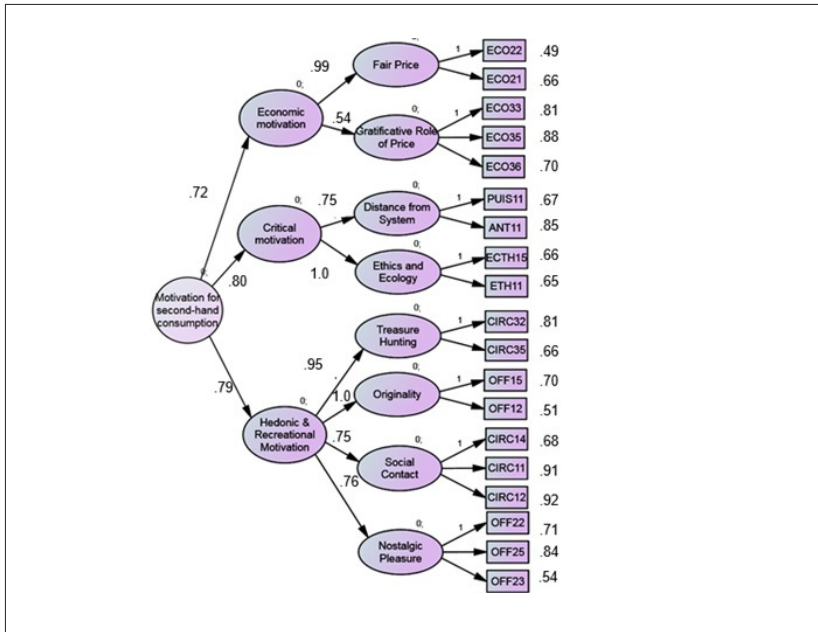


Figure 2: SEM of second-hand shopping motivation (confirmatory). Source: Own illustration.

## 8 Discussion

The results suggest that second-hand shopping is mostly done for non-economic reasons in the German context. Because social and nostalgic motives prevail in the study, it can be concluded that German consumers buy second-hand because they want to live a certain lifestyle.

The motivation for second-hand consumption appears to be different for German consumers than for UK consumers (Williams and Paddock 2003; Waight 2013a) or French consumers (Guiot and Roux 2010). Whereas many consumers in the UK have to buy second-hand in order not to be excluded from society

(Williams and Windebank 2002), or to survive because of financial hardship (Williams and Paddock 2003; Waight 2013), the results of this paper indicate that German consumers are not primarily influenced by economic motivations. Germans are not primarily driven by cheap prices when buying second-hand. Payment-related explanations (ECO21 and ECO23) were the weakest motivational estimates in the structural equation model. In addition, German consumers don't want to take revenge on the consumption system. Furthermore, it doesn't appear that they feel the need to distance themselves from a consumer society. A much better explanation is provided by social factors (especially browsing behaviour (CIRC32 and CIRC35) and nostalgia (OFF22 and OFF25)). The dominance of social and nostalgic motives suggest that German second-hand purchases are made for lifestyle purposes, for example, when older cult products are purchased to demonstrate a certain lifestyle. These findings partly confirm those of William and Paddock (2003). Whereas the researchers suggest that economic necessity is the principal motive for lower income consumers, other consumers choose alternative forms for fun, for social reasons or because of their desire for uniqueness.

The timing and economic situation of the countries at the time of the study could also explain the motivational differences, as the data for Waight's study (2013) and Guiot and Roux's (2010) study were collected in the UK and in France during or shortly after the financial crisis. When there is economic pressure, consumers are perhaps more motivated to buy second-hand than if the economy is doing well.

A further explanation for these different findings could be cultural differences. Turunen and Leipämaa-Leskinen (2015) also put limitations on their own work by stating that the need for uniqueness might differ in more individualistic Western cultures compared to more collective Eastern cultures. Individual, social and nostalgic motivations could therefore be explained by cultural differences. This is in line with Zonneveld and Biggemann (2014, 932), who concluded in regard to collectables that 'local culture remains a central influence on consumer behaviour and individual identity'. Witkowski and Reddy (2010) found evidence for the influence of culture on ethical consumption behaviour by studying young German and US consumers.

A final explanation, and a limitation of this study, could be the sample characteristics. Guiot and Roux (2010) had a much larger sample and Waight (2013a) collected qualitative data. Based on the findings of Witkowski and Reddy (2010), the large proportion of females in this sample is not likely to have influenced the results. In their study there were no gender differences concerning ethical consumption. Yet, a replication of this study with a larger, more representative sample should be conducted to validate the findings.

## 9 Managerial implications and future research

Primarily, these findings have implications for formal and informal second-hand-channel providers. An understanding of the motivational drivers helps fair organisers, second-hand shop managers and individuals who sell in informal channels. Understanding the hedonic motivation could lead second-hand retailers to further focus on nostalgic and social factors, for example, by setting up small areas with benches where interaction between consumers can take place or by explaining to stall owners the importance of social interaction.

The findings show that ‘treasure hunting’ and ‘coming across a real find’ motivate consumers to make second-hand purchases. These drivers could also be relevant for retailers in traditional retail settings. Hollister has, for example, used this unique experimental treasure-hunting approach by minimising the light (Ashley et al. 2010) and placing spotlights on products. Providing a unique customer experience, which includes social interaction, for example, an informative discussion with sales people or other customers, could motivate consumers to keep buying in conventional retail channels instead of turning to alternative forms of consumption. An assortment or store layout that contains nostalgic elements could motivate customers to keep visiting traditional retail channels. Based on the measured items in the questionnaire,

retailers could satisfy ecological motivations by offering products with certified eco-labels.

The results stimulate several further research questions. Are customers with low incomes buying second-hand products for economic reasons, and well-off customers because they are searching for unique products and experiences? A further research direction would be the investigation of minimalism and non-consumption and second-hand purchases. Are people who live a minimalist lifestyle more inclined to purchase second-hand? As outlined above, the cultural, individual and economic situation of the participant should be given attention in future research. Future research could therefore investigate participants' lifestyles, anti-consumption tendencies, personal financial well-being and material value tendencies to better explain the motivation for second-hand shopping. A cross-cultural study, which takes into account the economic climate of the country in which the research is conducted, could also explain motivational differences.

## 10 Conclusion

There has been an increase in second-hand consumption in various formal and informal distribution channels. In contrast to previously published studies, there is evidence that German consumers are not predominantly driven by economic motives and do not seem to be driven by ecological motives either. The findings suggest that German consumers are more motivated to engage in second-hand consumption for social and nostalgic reasons, which implies that lifestyle plays a significant role in the decision to purchase second-hand. The results have implications for second-hand retailers and fair organisers, as well as traditional retailers, who can use this information to create an atmosphere in which these two motivators are supported.

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# Part 4

## Alternative Consumption

Introduction

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Current global challenges such as climate change, lack of resources, desertification, land degradation as well as loss of biodiversity can ultimately be due to human actions. Reasons are excessive production and consumption of goods and services, along with using and consuming natural resources, causing emissions and waste products. Demand in the form of consumption and supply in the form of production are closely intertwined. Changes in consumer behaviour, technological and organizational innovations as well as an appropriate political and economic framework are of major importance for a sustainable development based on responsible demand and supply. Interdisciplinary cooperation between such disciplines as psychology, anthropology, sociology, neurology, evolutionary and behavioural economics as well as marketing is required. Authors in this section of the conference proceedings focus on various types and manifestations of consumption. This is an attempt to address shortcomings of the alternative consumption by providing a wide range of theoretical and empirical explorations. These papers all generally contribute to understand the consumption phenomenon but also discuss potential developments and diffusions of (new reflective) lifestyle. Micheletti addresses the topic of political consumerism from theoretical and empirical point of view showing and discussing different forms of potential actions such as boycotting, discursive endeavors and lifestyle changes. Latter is exactly discussed in Diaz's paper, namely veganism as an example of a new comprehensive and reflexive consumer and citizen lifestyle. Díaz's chapter sets the context by putting veganism as a case study for an application of the innovation diffusion theory development. Klotter's contribution based on psychological, philosophical and historical explanations calls upon the development of new (individual) lifestyle where sustainable food becomes a new competence. In the paper on sharing economy by Zimmermann and Schleusener authors use the theory of planned behaviour (TPB) as a basis to prove affective attitude based on different expected consequences in Germany. Paetz and Guhl present another example from Germany with their study on consumer social responsibility and monetarily pay off for German top orange juice brands at the example of preference and (increased) willingness-to-pay (WTP) for Fair Trade of orange juice. Mitreğa and Malecka report on engagement in or rather determinants of propensity to prosumption in Poland measured based on innovation diffusion literature. The case study from Switzerland presented by Brunner focuses on the cost of healthy diet. Being contributions from the different scientific fields and various geographical areas, all these papers have points in common which

are worth to consider. First, they contribute to the domain of social psychology and consumer behaviour. Second, the guiding topic of papers is the existence of the attitude-behaviour gap which needs to be closed. Third, the contributions identify the demand in more effective framing and communication strategies. To cite just a few, the papers emphasize e.g. “tailor-made” information, “available consumer information that explains”, “targeting more precisely” at the consumers. Development of applicable communication strategies are only possible if consumption behaviour of specific target groups is investigated and known as pointed out by Paetz and Guhl and Brunner. Therefore, it is also essential to differentiate consumption/action trends as Micheletti’s and Díaz’s contributions show.



# Political consumerism

Part of slaktivism and adhocracy?

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This session's title asks if the political consumer is an activist or a slaktivist and if the phenomenon of political consumerism is part of societal advocacy or adhococracy. Posed in binary terms, these questions raise some of the criticisms that scholars have had about the use of the market as an arena for politics. Critics worry that political consumerism will 'crowd out' more conventional or traditional ways for people to engage in politics. Will it simply give citizens an easy way out of caring about and acting on societal developments and turn them into slackers who just boycott or buycott something to give them a feeling of sufficient societal involvement? They also worry about the role of political consumerism in global governance. Is it only a 'fair weather' venture relying solely on voluntary actions based on extra money in consumers' pockets? What happens when this money dwindles in bad economic times or when consumers decide to use it for other purposes? Another broad claim is that democratic problem-solving to meet the challenges of sustainability cannot rely on consumer goodwill and adhococratic voluntary soft law institutions (such as organic, fair trade and green labelling schemes) that rely on corporations taking social responsibility. Here, critics maintain that these mechanisms sideline the need for legally binding 'hard law' governmental regulatory policy that is implemented by the public bureaucracy. In other words, they argue that more voluntary efforts let governments off the hook in terms of taking political responsibility seriously and investing in it both politically and financially.

My talk for this session addressed this theme and these broad questions in four ways—by first offering a personal account of my interest in the topic and then continuing with theorising political consumerism, providing some recent research results and ending with a few ongoing studies. My interest in the topic began in the 1960s and the United Farm Workers' grape boycott. Going to the supermarket in Los Angeles as a child brought me into direct contact with the politics of the marketplace, including this movement's efforts to improve the unacceptable labour conditions of migrant farm workers and the environmental problems associated with food production. There was boycott activism both outside and inside the stores. This meeting with politics in the supermarket was civil education in practice. It soon became the inspiration for a paper for my high-school social studies class. Much later, while doing research on Swedish civil society, I learned that even in a strong European state (such as Sweden) with a dominant labour and environmental movement and a good track record in working environments and green performance, the market was

emerging as an important arena for politics. Why? Environmental activists told me that they believed the state would not do more (that is, not take more political responsibility) to regulate the supply and demand side of production and consumption; therefore, they mobilised consumers to push industry to green its production. Green farmers had the same understanding of the situation; they started a labelling scheme for organic food to boost greener food. Even labour activists believed that more needed to be done in the new field of electromagnetic radiation from computers, an important issue in the 1990s, and constructed a labelling scheme for environmentally friendly electronic products for work that became a global standard (Micheletti 1995). Mobilising citizens to boycott was duly noted in a 1997 national survey on democracy and citizenship in Sweden. Of all measured forms of societal participation for this democratic audit study, we found that boycotting was the one that had increased the most between 1987 (approximately 15%, when first measured, and 1997 (approximately 29%), although it was not among the most used forms of political or societal action (Petersson et al. 1998). Later studies also showed higher levels, particularly for boycotting (deliberately choosing products or brands for environmental, ethical and political reasons) in Sweden, a result partially explained by the prevalence of green labelling schemes in the country (Stolle and Micheletti 2013; Micheletti 2010). In short, political consumerism in these studied cases finds its roots in a desire on the part of frustrated activists and concerned citizens to step in and play a part in greening Swedish society. For them it was not an easy way out of political engagement. Their motivations for political shopping are, therefore, not the characteristics of slaktivism. However, many labelling schemes that emerged in this period used the flexibility of adhococracy to create soft laws promoting the environmental and social pillars of sustainable development.

Over the years I have revisited these research materials and conducted new research in order to improve my empirical and theoretical base for understanding the political consumer phenomenon. This phenomenon can now be defined as the use of the market as a political arena through four forms of action focusing on political, ethical and environmental concerns and motivations for personal and collective actions. They are: engaging in 1) boycotting (saying no to certain products and brands); 2) buycotting (deliberately purchasing certain products and brands); 3) discursive endeavours (discussing the role of production and consumption in society and societal development); and 4) lifestyle change

(altering one's living practices and standards for political, ethical and/or environmental reasons). The social dynamics behind the increased importance of the phenomenon are also clearer. The more forceful emergence of the market as an arena for politics in the 1990s and 2000s is explained by major changes that have created political responsibility gaps and/or challenges in handling complex problems of great global political magnitude. Importantly, globalisation has led to 'governance' situations that shift the focus in problem-solving responsibility from nation-state government to other regulatory institutions and mechanisms, many of which involve voluntary 'soft law' partnerships with stakeholders such as corporations, NGOs and consumers. Moreover, economic globalisation has promoted multinational and transnational corporations and given them more importance politically, and free trade doctrines have made it more difficult for individual states to regulate them sufficiently. Neo-liberalisation, a second important major societal change, has, among other matters, implied that market logic has become a key mechanism for organising society and solving societal problems; it gives choice an enhanced role and consumers a more central role in responsibility-taking at all levels of society.

For a political scientist specialising in studying how people engage in politics, the societal change towards individualisation is of crucial significance. This process involves many developments, including 'looser politics' with more spheres and targets, that is, a kind of adhococracy with more ways for citizens to engage politically. Ulrich Beck was an early observer of this development and theorised it well in his publications on sub-politics, sub-politicians and risk society. Others, including myself, focus on sustainable citizenship, creative political action, ecological modernisation and post-material values (McFarland and Micheletti 2010; Micheletti and Stolle 2012) to understand and study how and why many people decided not only to focus on the obvious material concerns about consumption (quality and price) but also to consider the less apparent environmental and human rights' concerns lurking behind labels and to use their shopping choices to take more societal responsibility. The terms individualised collective action (Micheletti 2010) and individualised responsibility-taking (Stolle and Micheletti 2013) are ways of theorising how and why individuals and looser groups step up to take more responsibility for societal developments. While the terms imply a more personal and less 'one-size-fits-all' orientation in political action, they do not signify 'individualism', purely self-interest driven activities or what Beck called cocooning and flight from



politics. Noteworthy is that empirical studies find that political consumers do not flee ‘old school’ political action (e.g. voting, joining organisations), and political consumer actions do not ‘crowd out’ or replace conventional politics (Stolle and Hooghe 2003). On the contrary, studies find that most political consumers are highly engaged in many forms of political action, including the ‘old school’ ones.

However, this does not imply that political consumerism is not at all related to processes of responsabilisation or the state’s turning over of societal responsibility for solving common problems to individuals and other ‘non-state’ actors (Shamir 2008). In this sense, political consumerism is part of the neo-liberal discourse and more adhococratic forms of governance or governmentality. My sense is that increased interest in organic food reflects responsabilisation because consumers take action in safeguarding their health by wanting to ensure that they get the best food possible for themselves and their families. This impression is confirmed in empirical studies showing that self-interest is an important motivation for buying organically labelled food products; of course, the economic means for doing so are also important (Stolle and Micheletti 2013). In fact, the reframing of the 1960s grape boycott into a family health issue—buying and bringing home grapes treated with pesticides—was what mobilised greater numbers of consumers to support it (Micheletti 2010, 53–54).

This example illustrates well the role of virtues and interests in political consumerism. In my talk I discussed two traditions of theoretical public virtues. They focus on other-oriented interests, that is, how people should be acting to help the public good and commons. The first is consequentialism, which implies deciding to act on the basis of outcomes for, say, the environment, animal treatment and human rights. This approach requires the ability to rationally calculate the consequences of one’s actions on these matters, the intention being to do good by them. The second is deontology and implies acting on the basis of universal rules, norms and guidelines that advocate, for instance, scaling back energy consumption, meat eating and driving to work against climate change. Both public virtue traditions have been criticised for demanding far too much of consumers. For instance, they require considerable information-seeking on the part of consumers, the ability to calculate the consequences of their own choices, and the time and ability to assess the different choice options available if they want to shop for a better world.

Moreover, scholars claim that the public virtue traditions do not recognise the complexities and dilemmas involved in other-oriented actions and demand too much self-sacrifice on the part of individual consumers (Burt 1993). My talk discussed a third approach, virtue ethics, which takes into account these criticisms. Its focus is on how personal concerns and worries (that is, self-interest) can in fact generate a side-effect including the caring of others. This is shown in the grape boycott example discussed above (Barnett, Cafaro, and Newholm 2005). Yet what appears to be crucial here is how the issue is framed and communicated publicly, as well as the kinds of alternative consumption that are suggested instead. This is necessary in order to convince people to change their consumer choices and possible practices and lifestyles in a way that benefits the global common good.

Self-interest in the form of, say, concerns about personal and family health also appears to be increasingly important among the motivations for deciding not to eat meat and to become vegetarian. However, can there be spillover effects from self- to other-oriented interests in consumer areas other than food and agriculture? How could they develop, say, in the field of affordable clothing and textiles (Boström and Micheletti 2016)? Here the relationship between self- and other-interest is less direct and transparent. Perhaps, as suggested by Iris Marion Young's work on the social connection model of political responsibility, institutions like transnational corporations must take more responsibility for framing and communicating the relationship here (Young 2016). For instance, they (and even governments and non-governmental organisations) should be able to provide consumers with 'sensitising information' explaining the connection between private consumption desires and public sustainability challenges so that they can become motivated to make 'better' consumer choices. Corporations can also see to it that consumers are offered 'better' choices by producing goods that can be labelled organic, environmentally friendly and fair trade, or which integrate sustainability values into their production chains in other ways. Importantly, consumers must be able to make such choices and see how their choices are better for themselves and for others. What, then, is needed is available consumer information that explains the link between private consuming desire and public matters, on the one hand, and affordable 'better' goods, on the other, so that consumers can make these choices and do so without sacrificing too much privately.

The problem is that this kind of information and choice is not always available, and corporate transparency platforms do not always encourage consumers to seek this kind of information (Micheletti and Stolle forthcoming). Other studies indicate that this kind of information must be ‘tailor-made’ for different country and societal contexts; there is, in other words, no one-size-fits-all way of engaging consumers with more sustainable consumption practices (Austgulen 2016). Some corporations claim that they will take more responsibility if consumers ask them to; in other words, once they register a consumer demand for more sustainable products. Yet, as many studies show, corporations can and do affect consumer demand. This can be accomplished if they decide to alter their marketing strategies so that they do not play upon private desires and the social status drivers of consumption. It is, therefore, in their power to play down and play less upon, for instance, the need for new toys and clothing and routine presents for particular holidays and the importance of consumption for constructing social identities (Joyner Armstrong et al. 2010).

Another important research finding from political consumer scholarship is that it is quite possible that market actors (corporations, consumers and others) might decide that their engagement for, say, sustainability in one market sector lets them off the hook in another. Such behaviour is called ‘moral licensing’ (Stolle Micheletti 2013) and can perhaps be viewed as a form of slaktivism. Some scholars discuss ways of getting around moral licensing behaviour. One suggested alternative is to encourage consumers to develop a new reflective lifestyle—a kind of life politics or lifestyle politics—that recognises that consumption is embedded in all kinds of social practice and that consumers can learn a reflective way to use their freedom of choice systematically, in a societally responsible and sustainable way across several societal fields. Some scholars argue that veganism is an example of a new comprehensive and reflexive consumer and citizen lifestyle, as discussed by Estela Diaz in this session. Another reflective personal project would be, for instance, to consider how everyday life choices such as buying milk, deciding on what to wear to work and how to get there (mode of transportation) play a role in the responsibility for climate change and our stewardship of the planet.

However, to evaluate the feasibility of this kind of virtue ethical practice, it is important to continue studying what makes it difficult to achieve. Therefore, scholars focus on the effects of the present barriers to consuming more sus-

tainability in their studies. Three kinds of barrier have been identified in the political consumer literature. First, collective action-oriented barriers focus on why individuals might experience a sense of helplessness and a lack of empowerment about what they can do in their role as consumers, and whether their actions really matter. This might even include thoughts about the significance of the realisation that only some consumers change their lifestyles while others do not. Second, economic and market barriers—particularly product availability, price and quality—often play an important role in consuming practices. Among other matters, they can encourage overconsumption by luring citizens into purchasing goods that are on sale and convincing them that large product packages and ‘three for two’ market offers are good buys, even if they really do not need that much of the market item. Third, there are lifestyle barriers. In addition to the important social status ones mentioned briefly above, unreflective consumer lifestyle practices, based on habits and routines, create pathways to certain kinds of consumption that are often less unsustainable than others. This happens because consumers do not have, or take, the time to reflect on their choices, thereby missing out on figuring in the more hidden aspects embedded in market goods, as illustrated by environmental and human rights’ concerns (Isenhour 2010).

Any talk of how shopping can promote a good society must also address the darker side of the political consumer phenomenon, which should never be forgotten. Using the market as an arena for politics does not necessarily, and not always, promote democratic ideals and developments. Boycotting and buy-cotting can be, and have been, used against democracy. They have played an important role historically in persecuting religious, ethnic and racial groups. The best-researched case is the ‘Don’t Buy Jewish’ consumer campaign in Germany, other parts of Europe (such as Sweden) and elsewhere in the 1930s. The Klu Klux Klan in the US also uses political consumerism to promote its cause of white supremacy, anti-Semitism and anti-immigration. Another problem with political consumerism is that it can be confusing for the corporations that come under attack. There are notable examples of how the same business or product can be the target of political consumer boycotts run by social movement networks with diametrically opposing ideologies. A good illustration is The Walt Disney Company, which has had to deal with fair trade, US anti-ethnic and racial discrimination, and Christian fundamentalist groups, all of which call upon their supporters to boycott the same Disney entertainment and toy

industry. How is a corporation to respond to this kind of political consumer action? What specifically should it do, if anything, to end the boycott? Appeasing one network might just irritate another.

Furthermore, political consumerism can be triggered by dilemma-ridden and highly sensitive political developments. This is the case with the mobilisation against Israel's occupation of Palestine territory and boycott calls targeting Israeli 'settlement' goods and non-Palestine market activities in these territories. As noted earlier, concerned citizens often turn to the market as an arena for politics, particularly boycotts (including divestments), when they consider government solutions to be inadequate. Here the Palestine-led Boycott, Divestment and Sanction (BDS) Movement is calling on citizens and consumers globally to use market forces to compel Israel to comply with international law declaring the Israeli occupation settlements illegal. It attempts to mobilise individual consumers and even public procurement officers to take market-based action. The BDS movement creates perplexities for all kinds of consumer—both individual and institutional (e.g. procurement officers)—as a result of the legacy of the aforementioned anti-Jewish boycotts, and also because the boycott can mobilise anti-Semitic sentiment. Several American states and even the US Congress have condemned the BDS Movement as being anti-Israel in orientation. The European Union has taken a different route. It decided to issue a formal interpretative notice declaring that products from Israeli settlements cannot be labelled 'Made in Israel' and that it does not support the BDS boycott. It gives its member states the primary responsibility for enforcing Israeli compliance on how goods are labelled, and even retailers and supermarkets within the member states are called upon to help verify correct adherence to this policy. Such instances raise the question of the ability of political consumerism to handle and solve sensitive and long-lasting political problems. Perhaps they raise awareness of the issue of the occupied territories and give consumers with strong sentiments a way of expressing their views. Should this be viewed as a form of slaktivism?

Hopefully this summary both illustrates and explains the increasing academic and public interest in the phenomenon of political consumerism. It is truly a fascinating, rich and multifaceted area of study. And there is much more to research here. In a year or so the *Oxford Handbook on Political Consumerism*, edited by Magnus Boström, Michele Micheletti and Peter Oosterveer, will be

published. It will include over forty chapters written by scholars from different geographic areas and disciplines. An entire section is devoted to theoretical and research design approaches. While this section of the handbook might appeal most to students and academics, practitioners might find of interest other sections that discuss political consumerism's strong and weak industrial sectors and explore why it is more prevalent in certain commodity markets than others. The handbook will also cover its geographical spread and practice globally. Importantly, it focuses on its democratic paradoxes and challenges, as well as its problem-solving potential and successes. Our ambition is for this volume to answer questions about political consumerism and to raise new ones, including those posed in this conference section on the relationship between it and matters of slaktivism and adhocracy.

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# The well-fed consumer

Sustainable and healthy food

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# 1 Introduction

In this text I would like to answer the question of why it is difficult to eat both sustainably and healthily. Therefore, I must consider the history of human beings in terms of the way they eat. I will discuss the affluent society and the consequences of obesity. In this context it is inevitable to remember the model of society that Plato introduced. Still today, our attitude to how we see obesity is strongly influenced by Plato. Furthermore, what are the causes of obesity? One main cause lies in the structure of the limbic system. However, obesity is not just caused by human nature. We realise that in Germany we are determined by two cultural traditions of eating, one of which demands eating as much as you can! At the end of the text I will summarise the following question: What might sustainable and healthy food and eating be?

## 2 History of human beings

Concerning the history of human food intake we can summarise that it is often a history of hunger, of being threatened by hunger, of famines. Our ancestors, except for the elite of society, such as the noblemen and noblewomen, knew exactly what hunger means.

In contrast, today, we have a unique situation: we are living in an affluent society. We have been living in the land of milk and honey, particularly for the last 70 years in Germany. It is not difficult to determine the reason for this. An affluent society has been caused by the food industry dominating food production for approximately 150 years—with the consequence that human beings have had so much to eat that they can resist most of the communicable diseases, so that life expectancy has increased dramatically in the last 100 years, roughly doubling. And it is still growing.

It is not difficult to explore the interrelation between affluent society and the well-fed consumer. Beyond other reasons, it is evident that an affluent society is the condition for the well-fed human being.

Moreover, we are living in the land of milk and honey, but we don't complain. We are feeling poisoned, for instance, by artificial food, by convenience products, and by the food industry in general. We should be happy but we are unhappy. The well-fed consumer is depressive. The conclusion is that we are not able to realise which epoch we are living in.

### 3 Affluent society and obesity

An affluent society means that we have high rates of overweight people and obesity, compared with the history of human beings. In contrast to today, in nearly the whole history of human beings, being overweight represented power, well-being and a very high socio-economic status. Today, everybody has enough income for there to be overweight, unemployed people too.

If obesity and being overweight are no longer symbols of power and well-being, people with a high socio-economic status use different tools for social distinction (Bourdieu) than being overweight. Slimness has become the new instrument for social distinction. Slimness represents attractiveness and professional success.

The reputation of obese people, therefore, has become very bad. They seem to be lazy and not gifted with self-control—our most important virtue and value. The well-fed consumer therefore has another reason to be unhappy.

## 4 Further causes of obesity

We have seen that an affluent society is a condition for an overweight population. But it is more a condition than a reason.

A *true* cause of obesity and being overweight is our genetic programme. It demands relentlessly: eat as much as you can, especially fatty and sweet foods. Without this programme we would not have survived as a species. If our ancestors had obeyed the rules of the DGE (Deutsche Gesellschaft für Ernährung—the German society for nutrition), we would not have survived. Thus, it is not surprising that in an affluent society there are high rates of obese people.

In contrast to official opinion, being overweight (BMI 25–30) is correlated with the lowest mortality risk, and obesity (a BMI of between 30–35) means nearly the same (Flegal et al. 2013). Thus, it becomes obvious that we see being overweight and obesity as risk factors for health because of cultural determination, because we live in a culture of slimness as a means of social distinction.

For a long time it was a commonplace that being overweight was simply a result of eating too much, and as I said, an affluent society allows over-eating. It allows us to follow our genetic programme.

However, human beings are very different in how they metabolise. Therefore, some become obese and others not. This is also based on the various individual genetic programmes.

And we should not forget that, in addition to the genetic programme, one main cause of obesity is socio-economic status—when this is high, people are generally slim, and when it is low, they tend to be obese. People with low socio-economic status can buy fewer fruits and vegetables. Moreover, Bourdieu (1987) explained that different circumstances produce different attitudes concerning life. Unemployed people, for instance, try to enjoy the moment, the cigarettes they can smoke and the beer they can drink. Employed people with an interesting and well-paid job are looking to their future, and they avoid consuming nicotine because they intend to be healthy 20 years later.

Still today, many health experts argue that obesity is a result of a positive balance of energy. Thus, they ignore the findings of the research of the last 30 years. However, this position is in accordance with our cultural beliefs. Assuming that the cause of obesity is eating too much we believe that obese people do not follow one of the most important virtues of Europe: the ideal of moderation.

A civilisation is held together not with buildings such as churches or castles but with a collection of values and virtues that have clearly existed over thousands of years. They guarantee the identity and continuity of a certain civilisation, such as the Western one. In the middle of our values stands moderation.

The well-fed consumer represents the counterpoint to the ideal of slimness. He or she seems to be the natural enemy of our civilisation. However, this awareness is only possible by ignoring the *true* causes of obesity.

Before we take a look at the history of slimness, a further cause of obesity must be mentioned. The well-fed consumer is also a product of two historic traditions: Mediterranean versus 'barbaric' food. These traditions have a history of more than two thousand years. However, because our nutritional behaviour is based on history, we must look back to understand how we eat today and why the well-fed consumer is a result of history.

'Agriculture and arboriculture were the basis of the Greek and Roman economy and culture ... Grain, vine and olive trees were the food resources, a triad of productive and cultural values which this civilisation had chosen as symbols of its identity' (Montanari 1993, 32).

But this was no affluent society. In the Mediterranean world it was very difficult to survive. Food was naturally ascetic. Christian culture transformed this reality of life into an ideal of ascetic life. However, with the invasion of the barbarian, another style of food intake conquered Europe.

'The Celtic and ancient Germanic people...preferred the use of unspoilt nature... Hunting and fishing, picking uncultivated fruits and breeding undomesticated animals in the forest (especially pigs) were typical of their way of life' (Montanari 1993, 17).

The Germanic people are our ancestors. Christian religion was originally our belief. Thus, we must consider that both traditions influence our behaviour. We are obliged to integrate these conflicting traditions. They still determine our food intake. On the one hand, ‘No meal without meat’ and ‘Eat as much as you can’; and, on the other hand, the ascetic rules of health experts. If health experts dominate the public discourse, the barbaric tradition continues in obesity, in the well-fed consumer.

## 5 The ideal of slimness

The value or virtue of moderation was created in Athene, 2,500 years ago. Moderation means that human beings are not ruled by bodily impulses. Thus, reason and will dominate human behaviour. Being able to control our inner nature is not a value in itself. To control this nature means to be a sensible citizen in a democracy. Human beings who seem not to be able to control their nature are suspected of tending to dictatorship, to blind violence, to terrible passion.

Christianity learnt a lot of Greek philosophy. The value of moderation was transformed into the idea of sin. Not being moderate means to commit a sin. Thus, moderation remained a very important value in Europe. This did not change with the Protestant Church. On the contrary, the Protestant ethic radicalised moderation in rigid ascetism (Weber 1993). Indeed, the Roman Catholic Church and the Protestants have lost their influence over the population in the last 200 years, but the value of moderation has remained an important idea, changed into the ideal of slimness. Furthermore, in the last hundred years this ideal has changed dramatically. Everybody has to be slimmer to have an ideal body (Klotter 1990). Today, we do not talk about moderation but we live it, with a very slim body. Moderation and slimness are still (hidden) political concepts. The slim body represents self-control—as in Athene 2,500 years ago.

To all appearances the well-fed consumer has no competence in self-control.

## 6 Plato and the well-fed consumer

Why does Plato's name appear in a text about the well-fed consumer? He lived thousands of years ago. But still his thinking determines our thinking.

For instance, he created, following Pythagoras a little, the so-called dualism between soul and body. For him, the soul is immortal and the unclean body is the domicile of the soul. The body is the prison of the soul (Kratylos). Thus, we must feed the soul and not the body. The soul is everything, the body nothing. Moreover, it is a danger to the soul. Human beings who are happy and satisfied in *this* life tend to choke the immortal soul.

Still, after 2,500 years, we are not able to leave this dualism. It is still our thinking. The *thick* body appears to be the *real* prison of the soul. Therefore, we despise overweight and obese people—with a good feeling and peace of conscience. These are bad times for the well-fed consumer.

We have already seen many reasons to declare war against obesity. Now, we have a new one, with support from Plato, which I want to explain now. With Plato we try to combat, to fight. The first question is: Against what do we fight? Why is the well-fed consumer our enemy? The second question is: Who are 'we'? The entire population? Plato would say so. This 'we' means the health experts.

Plato had a vision of an ideal society: that it should be led by a wise philosopher. Below the philosopher there is a group of special guardians who have the task of controlling the population, which is not able to control itself and which simply wants pleasure and to eat as much as it can. It lives in the status of demoralisation. The special guardians have the task and the duty to fight demoralisation. All means should be used by the guardians to control the population. The guardians are not peaceful. The intention of this grasp is to have a healthy population, which enables a strong nation. The central goal for Plato was not the happiness of individuals but the happiness of a state or a polis like Athene.

Plato recorded the dialogues of Socrates. However, Socrates had a totally different approach to Plato. For him the individual did not have to think like the polis did; it did not have to knuckle down to the state but it had to work on the following topics: What is a good life? What is a good life for me?

Is the well-fed consumer of our days confronted with Plato or Socrates? I suppose that the spirit of nutritional recommendations is based on Plato. Still today, the health experts as guardians expect the population to follow their rules, and they become angry and disappointed if the population disregards their rules. The health experts take on the role of guardians without any doubt, and without an idea of reflection. Thus, they cannot be surprised that they provoke resistance among the population, that they produce a reaction. If the well-fed consumer does not develop a reaction, he or she simply submits to the rules of the guardians. And in an individualised society this is not an option. Otherwise, the well-fed consumer would commit suicide—psychic suicide.

Thus, the well-fed consumer is confronted by a wall of stigmatisation, but if she or he insists on being an individual, this individual tends to bear stigmatisation instead of losing identity. This is not a tragedy, because tragedy means that all possibilities are bad. The well-fed consumer can decide—against the health experts.

## 7 Healthy and sustainable food

As outlined earlier, many reasons for being overweight and obese exist. Although it is impossible to identify being overweight and obesity with an unhealthy lifestyle (see above), we cannot say that obesity represents health in general. For some people it is healthy to be overweight, and for others it is healthy to have a *normal* weight. Thus, healthy food cannot be organised by normative rules, but rather through exploring the individual specific way to health.



Healthy and sustainable food is not supported by genes. We have no instinct for this. It is not natural. Thus, we need alternative approaches to healthy and sustainable food.

We change to individual, specific healthy food only if we obtain a direct benefit, and not if we expect to live longer—in thirty years. In other words, our well-being must improve straight away.

And we change to a healthy lifestyle if our limbic system gets the same amount of reward. Thus, we can substitute quantity with quality. We eat less but better. We consume food that has a better taste—for us. Or we explore new tastes. We discover food from foreign countries. Therefore, we have to explore which kind of gratification we need and love. Everybody must find his or her good-tasting healthy food. It is a kind of trial and error process.

And this is only possible if we change from an unconscious to a conscious approach to food. Usually, buying and eating is up to 80 per cent emotional and unconscious. This means that we buy and eat how we have done in recent years, in the last decade. We eat what our ancestors consumed. A conscious approach to food, however, means taking care over what I buy and eat. I start to think about food, where it comes from and who the producers are.

With food I develop a new lifestyle, my own lifestyle. This is part of my identity. Then, ethical ideas can influence my food intake, and also political credo. However, I must take care that my consumption of food does not change into a system of compulsions. Composure is an important virtue.

With the same principles for changing behaviour, such as for healthy food, we can develop sustainable food. Traditionally, sustainable food seems to be just a duty, an ethical imperative. However, usually a duty does not change our behaviour. People should not be aggressive, but they are aggressive. Nearly everybody thinks that it is good to behave sustainably, but nearly nobody implements this in daily life. Thus, we connect sustainability with reward, with a pleasing exploration of and in daily life, with an adventure changing both life and lifestyle, with a part of mastery. Sustainable food becomes a new competence, which creates more self-confidence.

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# The second-curve model

A promising framework for ethical consumption?  
Veganism as a case study

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# 1 Introduction

Innovation and diffusion theories have a long tradition in marketing and consumer behaviour literature (Black 1983; Petrosky 1991; Rogers 1976, 2003). However, thus far, little research has been conducted into understanding the diffusion (and adoption) process of ethical consumption under innovation theories (Carrigan, Moraes, and Leek 2011), even though ethical consumption has been recognised as an innovation trend (Ganglmair-Wooliscroft and Wooliscroft 2015; Lundahl 2014). The aim of this paper is to build on the literature on ethical consumption from the lens of the theories of innovation and, specifically, from diffusion theory. First, key concepts regarding these theories are given. Second, ethical veganism (hereafter, veganism) is used as a case study to show how the second-curve model offers an opportunity to reframe the understanding of ethical consumption and, subsequently, its analysis. Finally, some implications for researchers and practitioners are considered.

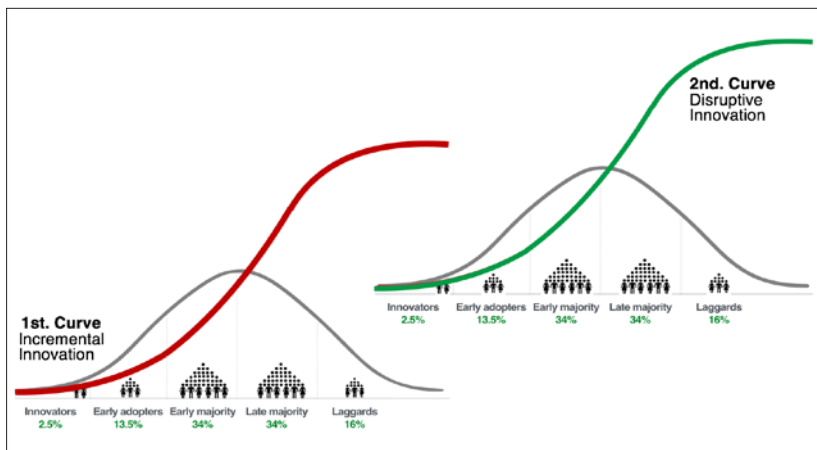
## 2 Diffusion of innovation theory

Briefly, the theory of diffusion of innovation is a social theory, popularised by Rogers (1995) and Moore (2002), which seeks to explain why, how and at what rate innovations spread over time among members of a social system. We understand innovation as ‘an idea, practice, or object that is perceived as new by an individual or other unit of adoption’ (Rogers 2003, 12). As such, most innovations have two interrelated components: ‘software’ aspects, referring to information, ideas and/or ideologies; and ‘hardware’ aspects, referring to objects, products and/or practices (Rogers 2003).

Literature has also consistently shown that innovations, depending on their perceived newness, can be of two types: ‘incremental innovation’ (also known as ‘continuous’, ‘sustaining’ or ‘evolutionary’); and ‘radical innovation’ (also known as ‘disruptive’, ‘discontinuous’, ‘breakthrough’ or ‘revolutionary’)

(Christensen 1997; Rogers 1976, 2003). While incremental innovations introduce some change(s) in existing innovations, radical innovations represent novelty or new paradigms (Christensen 1992, 1997; Morrison 1996; Sandström 2010).

According to the theory of diffusion of innovation, the adoption of most innovations follows a normal or bell-shaped curve. Furthermore, on the basis of innovativeness, this normal curve is divided into five sections, or ideal adopters categories: innovators (2.5%), early adopters (13.5%), early majority (34%), late majority (34%) and laggards (16%) (Rogers 1976, 2003) (see Figure 1). Moreover, the normal curve, when plotted on a cumulative basis over time, results in an exponential or S-shaped curve (Rogers 1976, 2003) (see Figure 1). Recently, a ‘double S-curve’ model (also called ‘second-curve’ or ‘two-curves’ framework) has been proposed to portray the change dynamics between incremental innovation (the first curve) and radical innovation (the second curve) (e.g. Handy 2015; Morrison 1996) (see Figure 1). The second curve not only has different characteristics than the first curve, but it also implies future orientation and introduces economic, social and personal transformation (Morrison 1996); in this sense, ‘[t]he second curve has effects that are far-reaching and far-felt, affecting us as individuals, changing the marketplace, reorganizing corporations, and even transforming major industries’ (Morrison 1996, 14).



**Figure 1: Representation of ideal adopters categories in diffusion of innovation and the double S-curve model.** Source: adapted from Morrison, 1996.

Despite the relevance of the theory of diffusion of innovation, diffusion research has three important shortcomings. First, diffusion research has normally been conducted ‘*after* an innovation has diffused completely to the members of a system’ (Rogers 2003, 112); this approach to study innovations can lead to pro-innovation bias (Rogers 2003). Second, diffusion scholars have been favouring the study of some types of innovation while neglecting others; for example, they have focused mainly on the hardware aspects of innovations to the detriment of the software aspects of innovation; and on the incremental innovations to the detriment of radical innovations (Rogers 2003). Finally, in the diffusion literature, there is abundant research on separated or independent innovations but a scarcity of research on innovation clusters, understood as innovations that comprise multiple and closely interrelated innovations (Rogers 2003).

### 3 Veganism as a form of ethical consumption

Anthropocentrism and speciesism are paradigms built on the belief that humans are at the centre of existence (Rae 2014), fully entitled to exploit ‘the nonhuman universe’ (Martínez, 1997) to pursue their own interests, and the sole bearers of moral standing (Wolf 2012). However, in recent decades, these paradigms have been openly and seriously challenged by different social actors (Novo 1998; Dunlap 2000; Rae 2014). Vegans, one of those actors, defy the dominant ideology that posits that non-human animals are mere objects to be owned, consumed and discarded by humans (McGrath 2000). Veganism is not a diet; it is a social movement, a countercultural phenomenon, and a form of transformative and ethical consumption expressed as the everyday consumption of goods and services that exclude, for moral reasons, the use of animals (Harrison, Newholm, and Shaw 2005).

Among academics, professionals and citizens there is growing interest in studying eating behaviours (e.g. Van Ittersum and Wansink 2016), human–

animal relationships (e.g. Serpell 1996), and transformative ethical lifestyles (e.g. Harrison et al. 2005; Lundahl 2014; Mick et al. 2012). However, veganism continues to be overlooked in empirical research, especially within the domain of social psychology and consumer behaviour (Díaz 2012; Povey, Wellens and Conner 2001; Ruby 2012), key fields for understanding the individual decision-making process and for designing more effective communication strategies. Not surprisingly, our understanding of the process of diffusing (and adopting) veganism remains extremely limited (Beardsworth and Keil 1991a; Jabs et al. 1998; McDonald 2000).

## 4 Veganism as a case study for the second-curve model

In this paper, veganism is chosen as a case study for how the ‘second-curve’ diffusion model may be applied to better understanding ethical consumption because it has three advantages. First, veganism is growing worldwide (Castricano and Simonsen, 2016) but it is still at the stage of being innovatory in most countries. This means that veganism is an innovation that is not completely diffused or ‘an innovation in-process’ (Roger 2003, 112), thereby avoiding the pro-innovation bias highlighted in the literature.

Second, veganism has not only hardware aspects of innovation but also software aspects, which have largely been neglected in the past literature. Veganism is an ideological, moral and political stance (the ‘software’ aspect) that is rooted in animal liberation and expressed in everyday consumer behaviours (the ‘hardware’ aspect), which exclude, for moral reasons, the use of animals (Díaz 2012; Harrison et al. 2005; Horta 2013; Larsson et al. 2003; McGrath 2000). In other words, veganism is an idea innovation and a practice innovation.

Third, veganism has counter-cultural features (Larsson et al. 2003) that introduce significant or revolutionary changes in both software and hardware

aspects; as such, veganism is a radical or disruptive innovation, which has also been overlooked in diffusion research. As an idea innovation, veganism proposes a new ideology that rejects the assumption that humans are at the centre of existence, are the preferential (or sole) bearers of moral standing, and are entitled to exploit non-human animals to pursue their own interests. As a practice innovation, veganism proposes a new style of consumption that rejects everyday consumer goods and services that involve the use of animals for human gain; for example, using animals for research, food, clothing and entertainment.

We propose that veganism is the second curve, an innovation that is radically different from *usoanimalismo* or ‘usoanimalism’, the first curve (see Figure 2). Usoanimalism is understood as an ideology or mental model (the ‘software’ aspect) that is rooted in anthropocentrism and speciesism, which sustain that animals are merely resources expressed in everyday consumer behaviours (the ‘hardware’ aspect) that involve the exploitation of animals. In this sense, usoanimalism is opposed to veganism, and it is broader than other concepts used in the literature, such as carnism, the psychological schema that conditions human beings to eat animals (Joy 2013).

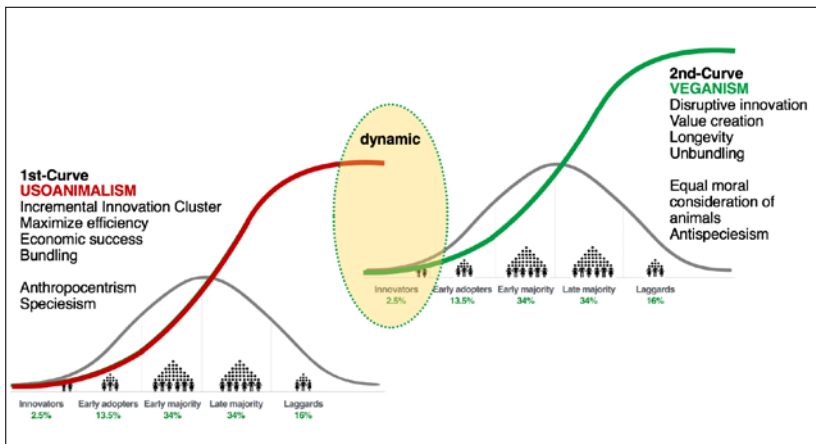


Figure 2: The second-curve model: usoanimalism as the first curve and veganism as the second curve. Source: adapted from Morrison 1996.



Additionally, we assert that while veganism is an independent or separated innovation, *usoanimalism* is an innovation cluster comprising multiple incremental innovations, such as plant-based diets, flexitarianism, *reduccetar*ianism, vegetarianism, conscious omnivorism and the vegan diet—what we consider to be, following Morrison (1996), an impostor or fake second curve because it is not a disruptive innovation.

This proposed framework has important implications for both researchers and practitioners. For researchers, the second-curve framework challenges the widespread assumption of a linear continuum model for studying veganism and other animal-related innovations, according to which omnivorism (anthropocentrism/speciesism/animal welfare/welfarism) and veganism (anti-speciesism/animal rights/abolitionism) are polarised ends of the spectrum, while other alternatives (such as reductionism, vegetarianism or biocentrism) are somewhere in the middle (e.g. Beardsworth and Keil 1998; Jabs, Devine, and Sobal 1991; Povey, Wellens, and Conner 2001).

Moreover, our approach is more sophisticated and dynamic than the linear continuum model. It is more sophisticated in the sense that it enables researchers to perform multidimensional analyses of behaviours. For example, instead of considering vegetarianism to be a one-dimensional phenomenon that stands in the ‘middle’ of the continuum, under our second-curve framework, researchers can study health vegetarianism, ethical vegetarianism and environmental vegetarianism as separate (but probably related) innovations in the first curve. The second-curve model is also more dynamic because it enables researchers to study the similarities and the relationships between different ethical consumption trends (e.g. environmental vegetarianism and voluntary simplifying, health vegetarianism and organic consumption, the vegan diet and reductionism, *freeganism* and *downshifting*).

Additionally, our proposed model could enable scholars to explore key questions, including: What is the current status of diffusion and adoption for each innovation? Do innovations have different rates of diffusion and adoption? What are the differences between innovations regarding their core perceived attributes (relative advantages, compatibility, complexity, trialability and observability)? What are the different clusters of incremental innovations? Are these clusters affected by situational and dispositional factors? Are the ideal

adopter categories similar for different innovations? How does the innovation–decision process (knowledge, persuasion, decision, implementation and confirmation stages) work for each innovation? And, very importantly, how do the different adopters ‘jump’ between incremental innovations, or between incremental innovations and disruptive innovations?

Finally, based on innovation literature that identifies key differences between incremental and disruptive innovations (e.g. Christensen 1997; Morrison 1996), one may wonder if such innovations require different theoretical frameworks for appropriate analysis. For example, is it possible that the theory of planned behaviour (TPB) (Ajzen 1991) could be more suitable for studying the adoption of first-curve innovations (e.g. a plant-based diet, reductionism, vegetarianism) than second-curve innovations (veganism)? In other words, is TPB the ‘right’ model to understand disruptive innovations?

For organisations, companies and policy-makers, the second-curve model has strategic and organisational implications (Handy 2015). This framework can help organisations to better adapt to the environment and to be ‘dynamic’ (ensuring economic success and long-term survival). In other words, our framework can offer clarity to decision-makers by enabling them to develop strategies and to innovate business models, products and projects in accordance with their objectives: maximising efficiency on the first curve (e.g. *usoanimalism*), creating new growth on the second curve (e.g. *veganism*), or pursuing both (dynamic). For example, it can help first-curve organisations to prepare for the second curve (increasing longevity in the long term), or it can help second-curve organisations to capture value from the first curve (ensuring economic success in the short term).

Additionally, the second-curve model can help organisations to enrich or develop ‘product/market fits’: for first-curve organisations to find new products (incremental innovations or bundled value propositions) for existing markets; and for second-curve organisations to find new markets for new products (disruptive innovations or unbundled value propositions).

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# Companies' monetary benefits from consumer social responsibility

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# 1 Motivation

In recent years, the construct of consumer social responsibility has attracted significant attention within academic research and practice. Devinney et al. (2006) define consumer social responsibility as ‘the conscious and deliberate choice to make certain consumption choices based on personal or moral beliefs’ (p. 3). In this vein, the consumption of fair trade (FT) products can be seen as one prominent example of socially responsible consumption. As long as consumer social responsibility translates into increasing consumer willingness-to-pay (WTP) for FT products, companies might benefit if they sell FT products instead of, or in addition to, traditionally traded products. Although the FT market constitutes a niche market, the revenue from FT products is huge: in 2015 the worldwide revenue of FT products was approximately 7.3 billion dollars, whereas in Germany the realised revenue was 978 million dollars (Statista 2015d; Statista 2015b).

Products are called ‘FT products’ if they adhere to the guidelines of the FLO (fair trade labelling organisation) and are marked with an FT label. These guidelines have been developed to secure the rights of workers and to fix labour conditions. They address issues such as fair commodity prices, fair labour conditions for suppliers’ employees (e.g. no forced or child labour) and the compliance of producers with workers’ rights, among others (Fairtrade International 2015).

In Germany, the vast majority of FT products being distributed are coffee, fruits, flowers, chocolate and fruit juice (Statista 2015c). Much academic research has already been dedicated to FT coffee; several studies have been published,<sup>1</sup> which deal with the price premia that respondents are willing to pay. So far, however, the marketing literature has focused much less on FT fruit juices, despite the fact that fruit juices count as the top distributed FT products in Germany.<sup>2</sup> In our study, we decided to examine orange juice for several rea-

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1 Andorfer and Liebe (2012) provide a literature review within the FT category.

2 To the best of our knowledge, Peyer and Balderjahn (2007) conducted the only FT orange juice study based on a German data sample.

sons: orange juice is the second most preferred fruit juice in Germany, only exceeded in unit sales by apple juice (Statista 2015e). However, while apples can be planted in the (developed) Global North, where reasonable wages should be paid, oranges are commonly grown in the (emerging) Global South, where FT standards should be of crucial relevance. For example, in Germany more than 95 per cent of the imported frozen orange juice concentrate comes from South America, namely, Brazil or Mexico.

Despite the increasing sales potential of FT products, almost all the leading orange juice brands in Germany do not yet have an FT label. The Austrian brand Pfanner is currently the only established manufacturer's brand selling FT orange juice in the German market. However, Pfanner's annual unit sales (39m litres in 2015) are rather small compared to, for example, Eckes-Granini (341m litres in 2015), Valensina (224m litres in 2015) or Albi (117m litres in 2015) (Statista 2015a). To sum up, as yet, none of the top 10 leading brands in Germany is selling an FT orange juice. This is surprising because recent studies on FT products revealed that consumers increasingly acknowledge social product components, for example, the FT label, within their purchasing decision process (Auger et al. 2008). Furthermore, Tully and Winer's (2014) meta-study reported average price premia of 17 per cent, which is quite high. Last but not least, Peyer and Balderjahn (2007) found that an already established brand might significantly benefit from product enhancement with an FT label.

Therefore, we investigate whether German orange juice brands could benefit monetarily from the admission of FT standards, namely, the introduction of an FT label, and hereby consumer social responsibility. We will answer the following research questions: (1) Does the inclusion of an FT label increase a respondent's utility and therefore WTP? (2) How do a respondent's individual background variables, for example, gender or age, influence his/her WTP for the FT label? (3) What happens to equilibrium prices and profits if one brand adds an FT product variant?

To answer these research questions, we conducted an empirical conjoint choice study and evaluated the data by estimating mixed logit models. Subsequently, we calculated respondents' WTP and determined equilibrium prices and profits in a counterfactual simulation. We present the approaches and re-

sults of our empirical study in Section 2. In Section 3 we draw conclusions from the results of our research questions before closing the discussion.

## 2 Experimental study

### 2.1 Questionnaire set-up

We conducted a conjoint choice experiment, where 360 (student) respondents were asked to choose their preferred orange juice alternative out of 16 choice sets, respectively. Each choice set contained three orange juice brands as choice alternatives and a no-choice option. The orange juice alternatives were built by permuting the following attributes with their associated levels:

- Brand (Albi, Granini, Hohes C, Valensina)
- Price per litre (1.09€, 1.39€, 1.69€, 1.99€)
- Type of packaging (PET bottle, tetrapak)
- Display of an FT label (no, yes)

For the non-price attributes (brand, packaging and display of an FT label), we used dummy coding, where ‘Albi’, ‘PET bottle’ and ‘no FT label’ served as reference categories. For the price attribute, we estimated a linear parameter.

In addition to the choice task, we were interested in respondents’ individual background variables. Therefore, the respondents were asked about their age, gender, and ‘consciousness of fair consumption’ (CFC) level. The last variable served as a surrogate for consumer social responsibility. To determine the individual level of CFC, we used the scale developed by Balderjahn, Peyer and Paulssen (2013). This scale combines a respondent’s beliefs about adherence to a specific labour standard with the importance a consumer attaches to adherence to this standard. We employed confirmatory factor analysis (CFA) to obtain CFC estimates at the respondent level.



## 2.2 Random utility and willingness-to-pay

Let us take a look at the underlying utility function and the model used to evaluate the choice data. We followed random utility theory and assumed that the utility of a respondent  $i$  for a certain alternative  $j$  in choice occasion  $t$  could be divided into a deterministic part and a random error term:

$$u_{ijt} = x_{ijt}^T \cdot \beta_i + \gamma_i \cdot p_{ijt} + \varepsilon_{ijt} \text{ with } \varepsilon_{ijt} \sim EV(0,1).$$

The deterministic part is the sum of the product of a design vector,  $X_{ijt}$ , multiplied by an individual part-worth utility vector  $\beta_i$  (for all non-price attributes), and the product of the orange juice's price,  $p_{ijt}$ , multiplied by an individual price parameter  $\gamma_i$ . The random error term captures all effects that are not included within the deterministic part but which also influence the respondent's utility. If it is assumed to be Gumbel-distributed, the multinomial logit model results.

Since we want to account for observed heterogeneity, we follow Allenby and Ginter's (1995) approach and specify the individual preference parameter as:

$$[\beta_i^T, \gamma_i]^T = \Gamma^T \cdot \alpha_i + \vartheta_i \text{ with } \vartheta_i \sim MNV(0, \Lambda),$$

where the matrix  $\Gamma$  contains the effects of our individual background variables on a respondent's preferences and  $\alpha_i$  is a vector, which contains the individual background variables, for example, gender, age and CFC level. The unobserved heterogeneity term  $\vartheta_i$  is assumed to be Gaussian-distributed with zero mean and covariance matrix  $\Lambda$ . Therefore, we apply the mixed logit model and use maximum simulated likelihood to estimate individual preference parameters (see Train 2009 for details regarding the model and its estimation).

In order to determine a respondent's WTP for the FT label attribute, we calculate the marginal rate of substitution between the FT attribute and the price.

Since we use dummy coding for the FT attribute, the WTP of respondent  $i$  can be computed as follows (see Tully and Winer 2014):

$$WTP_i = \frac{\beta_i^{FT \text{ label}}}{|\gamma_i|}$$

## 2.3 Results

### 2.3.1 Preference and WTP for the FT label

Table 1 displays the estimation results of the mixed logit model, namely, the population means of preference parameters and their standard deviations (as a measure of the degree of unobserved heterogeneity), as well as the interaction terms with the individual background variables, that is, gender, age and CFC level.

	Means	Standard deviations	Gender	Age	CFC
Granini	0.468*	2.507*	-0.306	0.323	0.176
Hohes C	1.572*	2.678*	0.070	0.841*	-0.036
Valensina	0.472*	2.450*	-0.166	-0.324	-0.110
FT label	2.170*	2.356*	1.198*	-0.156	1.017*
Carton	1.142*	3.183*	0.115	0.363*	0.722*
Price	-6.364*	6.558*	0.374	0.160	0.655*
NONE	-8.294*	10.001*	1.951*	0.249	1.728*

\* Parameters are significant at  $p < 0.05$ .

**Table 1: Parameter estimates**

Let us first examine the population means of the preference parameters: obviously, the reference brand 'Albi' is the least preferred brand. The display of the FT label increases a respondent's utility, while the price parameter shows the expected negative sign. Hence, increasing prices decreases utilities. The carton packaging is preferred to the PET bottle. However, the size of the standard deviations shows that preference heterogeneity is highly prominent; for example, for the FT label, the standard deviation exceeds the parameter's magnitude. Hence, we may derive the following: on the one hand, there are respondents who strongly favour FT orange juice, while, on the contrary, there are respondents who do not like the FT label at all.

An inspection of the interaction terms reveals further insights: a high CFC level is associated with an increasing preference for the FT label, the carton packaging, the no-choice option and decreasing price sensitivity. Females are more likely to choose an FT orange juice or the no-choice option. Older respondents prefer the carton packaging and the brand 'Hohes C'.

We calculated each respondent's individual WTP for the FT attribute and found a median FT price premium of 24 euro cents. The mean FT price premium was approximately 35 euro cents. The discrepancy between the median and mean WTP once more reflects the substantial heterogeneity within our data. Focusing on the median WTP results, we found that young women with a high CFC are willing to pay the highest premium for the FT product feature (> 50 euro cents), whereas older men with a low level of CFC are willing to pay the smallest premium (< 10 euro cents). Hence, we were able to validate the literature's finding that the degree of a respondent's consideration of social product features is associated with the level of his/her individual background variables (Auger, Devinney, and Louviere 2003).

### 2.3.2 Equilibrium prices and profits

So far, our findings have suggested a high WTP for the FT label. However, the WTP is a purely demand-based measure that takes into account neither additional costs resulting from the introduction of an FT label nor the competitive market situation. Hence, not surprisingly, it is well known that the WTP often overstates the potential price premium (Allenby et al. 2014).

Therefore, we leave the individual utility level, which we used to calculate respondents’ individual WTP, and focus on aggregated choice probabilities and market shares of our four brands instead. In our model, the market share is obtained via an integration of the logit choice probability  $pr(x_j, p_j, \beta_i, \gamma_i)$  over the (estimated) heterogeneity distribution. For brand  $j$  we have:

$$s_j = \int pr(x_j, p_j, \beta_i, \gamma_i) \cdot \varphi(\vartheta_i | \Gamma, \Lambda) d\vartheta_i.$$

For simplicity’s sake, we consider one retailer, who uses fixed mark-ups  $m_j$  for each brand  $j$ . We follow the approach of Yang, Chen and Allenby (2003) and assume that manufacturers maximise profits  $\pi_j$  of brand  $j$  under Bertrand competition:

$$\max_{w_j} \pi_j = M \cdot s_j \cdot (w_j - c_j)$$

with  $p_j = w_j + m_j$ , where  $M$  denotes the market size (which we normalise to 1 w.l.o.g.),  $c_j$  describes the costs and  $w_j$  is the wholesale price of brand  $j$ . For the cost specification, we assume that the FT label attribute increases the marginal cost by 5 per cent. The maximisation is based on a fixed-point approach. Table 2 displays the equilibrium price results in three different market scenarios.

	Scenario 0	Scenario 1		Scenario 2	
Brand	Price	Price	Diff.	Price	Diff.
Albi	1.793	1.800	0.007	1.778	-0.015
Granini	1.890	1.919	0.029	1.876	-0.014
Hohes C	1.893			1.953	0.060
Hohes C (FT)		2.125	0.232	2.174	0.281
Valensina	1.787	1.810	-0.166	1.776	-0.011

**Table 2: Equilibrium prices in varying market scenarios**

In scenario 0, we consider our four brands, assuming that none of them sells an FT orange juice. The calculation of equilibrium prices reveals that Hohes C yields the highest price, which is on par with the price of Granini. Albi and Valensina also show lower prices being on par with each other.

In scenario 1, we assume that Hohes C switches entirely to an FT variant. In this case, the price increases by 23 euro cents. In scenario 2, we consider a product line extension of Hohes C; in other words, Hohes C introduces an FT version in addition to the traditionally traded juice. In this case, Hohes C may charge a 28 euro cent higher price for the FT juice and, interestingly, a 6 euro cent higher price for its traditionally traded juice. Table 3 displays the corresponding equilibrium profit results.

While Hohes C already yields the highest profit (8.5 euro cents) in scenario 0, these profits increase to 13 euro cents (+53%) in scenario 1. In scenario 2, all non-FT orange juices lose profits. However, Hohes C increases its total profits by 89 per cent. Because of the strategy's superior financial success, it seems advisable to extend the product line (scenario 2), thereby giving consumers the opportunity to reveal their true social preferences, rather than completely switching to the FT variant (scenario 1), thus forcing buyers of Hohes C to buy an FT juice (Devinney et al. 2006).

Brand	Scenario 0	Scenario 1		Scenario 2	
	Profit	Profit	Diff.	Profit	Diff.
Albi	0.021	0.023	0.002	0.018	-0.008
Granini	0.028	0.033	0.005	0.025	-0.009
Hohes C	0.085			0.057	-0.028
Hohes C (FT)		0.130	0.045	0.104	0.104
Valensina	0.043	0.048	0.005	0.039	-0.004

**Table 3: Equilibrium profits in varying market scenarios**

### 3 Conclusions

To investigate whether the introduction of an FT label might pay off monetarily and whether brands might benefit financially from consumer social responsibility, we conducted an empirical conjoint choice study using the top German orange juice brands. In particular, we formulated three detailed research questions: (1) Does the inclusion of an FT label increase a respondent's utility and therefore WTP? (2) How do a respondent's individual background variables influence his/her WTP for the FT label? (3) What happens to equilibrium prices and profits if one brand adds an FT product variant?

We allowed for observed and unobserved consumer preference heterogeneity by estimating a mixed logit model. (1) We found that the vast majority of respondents (85%) favour the FT label attribute, which translates into increasing WTP. The estimation of a mixed logit model further enabled us to additionally address the influence of individual background variables (e.g. age, gender and individual level of CFC) on consumers' WTP. (2) We found that young women with a high CFC level were willing to pay the highest premium for the FT label attribute, while older men with a low level of CFC were willing to pay the smallest premium. The mean WTP was 35 euro cents, which translates into an average price premium in the orange juice category of 20 per cent. To gain further insights, we conducted an equilibrium analysis, in which equilibrium prices and profits for the examined orange juice brands were determined in a counterfactual simulation. (3) In the case of Bertrand competition at the manufacturer level and a retailer using fixed mark-ups, the equilibrium price increased by 23 euro cents respectively 28 euro cents. The equilibrium profit increase for the leading brand Hohes C was considerable (53% respectively 89%).

In sum, the equilibrium price of Hohes C is only two-thirds of the (mean) WTP for the FT label, but revenues are still higher for Hohes C after the introduction of an FT orange juice. Therefore, the introduction of an FT label seems to be advisable from an economic point of view, and Hohes C appears to benefit substantially in monetary terms from consumer social responsibility.

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# Prosumption among young consumers

Some research insights from Poland

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# 1 Introduction

Companies operating in mass markets engage in various collaborations with consumers that range from using customer feedback and word of mouth, through engaging customers in various standardised operations, to encouraging some product-related advisory between consumers themselves. Although studies on the antecedents of prosumption have advanced substantially, we do not know much about the specific features. The aim of this paper is to test empirically the association between selected customers' characteristics and their inclination to engage in prosumption. The research model assumes that consumer innovativeness, as well as consumer need for uniqueness, leverage consumer inclination to become prosumers, while advanced concerns about privacy discourage consumers from such an inclination. The estimation results provided support for all hypothesised paths in the research model. Practical implications, challenges and future research directions have been highlighted.

## 2 Theoretical background

The consumer–producer relationship has traditionally been conceived of as an exchange relationship in which each party trades one kind of value for another (Bagozzi 1975). However, contemporary customer culture departs from McDonaldisation's (Ritzer 2008) focus on passive consumers, showing instead that actively engaged consumers are strong assets. For companies, these changes offer the opportunity to apply customers' open innovation to their innovation efforts (Chesbrough 2013). By using new technological channels and richer knowledge assets, such as social networks, companies can seek external resources to develop or improve their offerings (Djelassi and Decoopman 2013). If one assumes that the contemporary consumer not only knows his or her own needs best, but can also contribute to his/her fulfillment in a competitive way in relation to the firm's employees, finding ways to facilitate and encourage the consumer to action has become the greatest challenge.

Such an approach is in accordance with the one proposed by Prahalad and Ramaswamy (2004, p. 121), who claim that ‘the new framework puts the spotlight squarely on consumer–company interaction as the center of value creation. Because there can be multiple points of interaction anywhere in the system (...) this new framework implies that all the points of consumer–company interaction may become the locus of value creation’. It is clear that companies operating in mass markets engage in various collaborations with consumers that range from using customer feedback, through to engaging customers in various standardised operations (e.g. self-service at cashiers), to encouraging some product-related advisory between consumers themselves (e.g. voluntary advisors at a company’s funpage). The exchange of skills and knowledge between companies and customers becomes essential.

The term ‘prosumer’ was originally used by Toffler (1980) to emphasise the novelty of asking individuals to simultaneously play the role of both consumer and producer. Toffler divides the whole of human productivity into two domains: sectors A and B. Sector A encompasses all works performed by individuals exclusively for their own needs, whereas sector B is manufacturing destined for exchange. All prosumers are always situated in sector A. At different waves (phases of economic and social development), dominates either sector A or sector B. Despite the fact that the term is relatively new, the issue itself is quite old.

The origins of prosumption date back to primitive times (Ritzer et al. 2012, pp. 379–398), being developed in agricultural society, where people produced goods mainly to satisfy their own needs. The economic process that dominated at the time was production to satisfy someone’s needs. Only in the case of surplus stock was it destined for market. In industrial society, prosumption stopped playing a vital role. Increased significance led to the production of goods for exchange. Most of the people produced goods not for themselves but for the market. The prosumer sector decreased, whereas the consumer sector began developing. The standard feature of industrial society became mass consumption. In spite of domination in the market exchange in the agricultural environment, prosumption never disappeared; rather, it simply changed its nature. It took the form of working for free, for example, working as a housewife and child-rearing, and became an unseen element of the economy.

Nowadays, prosumption is returning, although for different reasons to those observed in the time of agrarian civilisation: now it is not a must but a matter of choice. The reason for this is both internal, of an economical and technological nature, and psychological, being deeply rooted in human nature. It is connected with the appearance of discouragement of the mass market, but at the same time technological progress enables a departure from large-scale production. Toffler (1980) observed that the production of standard wares saturated the market. In order to continue the growth of production, companies must initiate the process of customisation in the form of mass production of very personalised products.

Prosumption itself is perceived as 'value creation activities undertaken by the consumer that result in the production of products they eventually consume and that become their consumption experiences' (Xie et al. 2008, p.110) Prosumption is characterised by constant changes in its form resulting from the development of new technologies and changes in consumers' value systems connected to their expectations of consumption. The original form of prosumption is related to fast-food restaurants, banking based on cash machines and people's own work using kits designed for home assembly (e.g. Ikea).

Denegri-Kont and Zwick (2011) describe an important role of the community consisting of buyers and sellers in the user-generated space. They describe platforms such as eBay as places where, akin to the concept, a customised product is received in return for consumers' time and the demand side is also partly the producer. A new form of prosumption that emerged recently is connected to Internet communication based on Web 2.0 tools (e.g. Wikipedia, Facebook, Second Life, eBay, YouTube, Amazon.com). Many terms have been used that communicate different perspectives, for example, 'produser' (Bruns 2008), 'working consumer' (Cova and Dallı 2009) and 'prosumer'. These terms combine the meanings of 'professional' and 'consumer' to refer to an expert user who demands advanced and/or high-performance features (e.g. from a camera) but who does not use the product mainly for business purposes (Kirsner 2005). Regardless of the terminology, essentially the new re-conceptualisation frames prosumers as co-creators of value (Bitner et al. 1997).

Recent study results show that people value more highly the objects they produce on their own even when those things do not have a higher exchange value (Norton and Ariely 2007, cited in Humphreys and Grayson 2008); and the pleasure that the customer experiences by purchasing the product adjusted to his or her individual expectations can be seen as the main motivation for participation in the product's co-creation (Prügl and Schreier 2006). From a company's perspective prosumer participation in value co-creation can be a mechanism for cost externalisation (Toffler 1980; Bendapudi and Leone 2003; Cova and Cova 2012). Pan and Holland (2006) find that these types of service experience can reduce risk for the firm and increase customer satisfaction. As a result, ideas about producer–consumer cooperation have recently garnered significant academic attention.

### 3 Hypotheses

Consumer innovativeness has origins in the literature on innovation diffusion (Hagerstrand 1968; Mahajan, Muller, and Srivastava 1990) and describes the extent to which consumers tend to buy new products, accumulate knowledge about these products and share this knowledge with other consumers (Goldsmith and Hofacker 1991). It was found that such innovators are usually opinion leaders through systematic and spontaneous word-of-mouth (Goldsmith and Desborde 1991; Sun, Youn, Wu, and Kuntaraporn 2006). We assume that, at least, a part of this communication takes the form of sharing information about the products, not only with other consumers but also with selling companies. Therefore, we hypothesise (H1): 'Consumer innovativeness (INNOV) is associated positively with prosumption.'

Consumer concern about privacy have become very important for today's companies, because marketing communication is extremely intrusive, and increasingly consumers are trying to protect their privacy with regard to various communication channels: telephone, email, social media and computer games (Mitręga 2013; Mitręga 2012). The results of a recent study by Li et al. (2013) demonstrate that privacy concerns restrict consumer willingness to register at

company websites, which may be treated as one of the forms of communication. Generally, we assume that consumers that are strongly protective of their personal data are less likely to become prosumers, as there are few types of prosumption that allow people to remain anonymous. Therefore (H2): ‘Consumers’ privacy concern (PRIV) is negatively associated with prosumption.’

The need for uniqueness in the consumption pattern is somehow similar to ‘consumer innovativeness’ in the sense that it also manifests in buying certain categories of product; however, in this case these products do not necessarily have to be new to the market, but they should rather express a consumer’s identity and distinguish that consumer from all other consumers (Cheema and Kaikati 2010; Simonson and Nowlis 2000). We assume that consumers with a strong need for uniqueness will seek relationships with these brands that provide customised products and services, and, consequently, they will more willingly co-create products with companies. Chellappa and Sin (2005) found that consumers’ value for personalisation is almost two times more influential than consumers’ concerns for privacy in determining usage of personalisation services. Therefore (H3): ‘The consumer need for uniqueness (UNIQUE) is positively associated with prosumption.’

## 4 Research design and research results

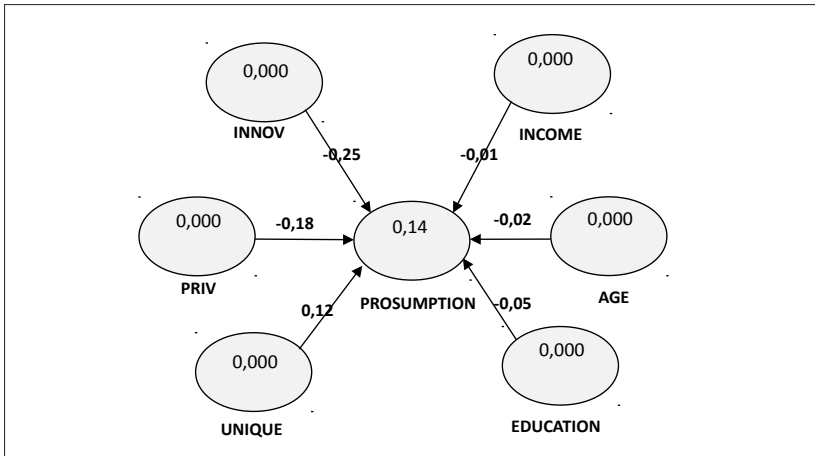
The aim of this research was to test empirically the association between selected customers’ characteristics and their inclination to become prosumers. A structured questionnaire was used to collect the data. The following constructs were measured using appropriate scales for each of the variables: consumer innovativeness using a three-item measure based on a scale developed by Goldsmith and Hofacker (1991); consumer privacy concern using a three-item measure based on the research of Gao, Rohm, Sultan and Huang (2012); and consumer need for uniqueness using a three-item measure created on the basis of Cheema and Kaikati (2010) and Wang, Yu and Wei (2012). All of these constructs somehow describe ‘consumer character’, because, instead of focusing on general personality, they concentrate on specific behavioural and cognitive

patterns of individuals with regard to such activities as selecting products for purchase and sharing information with market players. Additionally, these constructs assume that such behavioural consumer characteristics take the form of continuous variables, so they assume that all consumers may somehow be ordered along a given scale representing concrete consumer features. All items were measured on a five-point Likert scale, from 'strongly disagree' to 'strongly agree'. A number of demographic questions were included.

To test our hypotheses, we conducted a survey using a non-random sample of Polish consumers who use social media ( $n = 625$ ). The majority of these consumers were young people (73.6% were no more than 25 years of age), generally students and women (62.9%). Before estimating the research model, we first tested the measurement models, as well as assessing their reliability and validity. We conducted exploratory factor analysis (EFA) with Varimax rotation for all multi-item research constructs. After purification of the measurement model, all constructs received support for their validity and reliability, as tested by average variance extracted (AVE), scale composite reliability (SCR) and the item factor loadings.

The model was tested using a partial least squares (PLS) structural equation modelling technique with the SmartPLS 2.0M3 software package (Ringle, Wende, Will, 2005). There are some advantages of PLS-SEM in comparison to CB-SEM (covariance-based SEM), which we followed, including non-normal data distribution (Hair, Ringle, and Sarstedt 2011). The results of the PLS estimation are presented below (Figure 1.).

This study provides the empirical evidence that there are three features associated with such an inclination: consumer innovativeness (+), consumer privacy concern (-) and consumer need for uniqueness (+), with statistical significance at the level of 0.01. This study also demonstrated the significant moderation effect connected with consumer incomes. Specifically, the positive impact of the need for uniqueness tends to decrease for consumers who receive higher incomes. Low incomes seem to prevent certain consumers from fulfilling their uniqueness need directly through buying expensive personalised products; instead, such consumers tend to fulfill this need through other actions, including product co-creation with companies or providing individual comments to selling companies.



**Figure 1: PLS Estimation of structural model.** Source: Own elaboration using application SmartPLS 2.0M3.

## 5 Conclusions

This paper attempts to fill the gap existing in the literature on the determinants of the propensity to prosumption. Consumer innovativeness proved to be most strongly correlated with taking action in the field of prosumption among the listed constructs. This indicates that consumers who are most willing to reach for new products are also those who eagerly share opinions about them, which could have important implications for the development of the product. Interesting in this context seems to be the topic of whether, and how, to obtain information from consumers with lower levels of innovativeness.

It should be noted that this study included only those activities on the line: a consumer—a company such as engagement in new product creation, and sharing opinions about it with a company. Indeed, we do not know whether there is any relationship between the variables and those aspects of prosumption that are being created on the line: a consumer and other consumers, for example,



how the relationship between the variables and the tendency to share one's opinion with other consumers is shaped, especially taking into consideration the fact that nowadays a consumer has much more confidence in other consumers' opinions than in announcements sent by the company.

The dependence between the consumer's need for uniqueness and prosumption seems to be clear from the perspective of receiving one particular product in return for sharing information about a consumer's expectations. Sharing information itself after the purchase, however, is a separate issue. Defining the dependence of the taking-up of entrepreneurship activities in the field of mass personalisation and consumers' propensity to share information with others would be interesting from the viewpoint of their tendency towards prosumption, especially when we take into consideration the expectancy of cost calculation and the potential benefits of such actions.

Although prosumption is usually perceived in the literature as cooperation between the consumer and the producer aimed at a personalised solution, it is advisable to consider another aspect, namely, the taking over of some activities by the consumer, for example, in order to reduce the cost of purchasing a product or service (Xie et al. 2008; Mitreęa 2013). Thus, although the traditional view of prosumption typically assumes that prosumers desire to be involved with production, or 'making units of output' (Vargo and Lusch 2008, p. 7), it is clear that prosumers are value co-creators with specific motivations to participate in value co-creation (Chandler and Chen 2015).

Managers may learn from this study by targeting more precisely those customers that may enlarge the productivity of human resources. They should rather concentrate on opinion leaders and consumers seeking personalised products (e.g. via monitoring social media behaviours). Prosumers can affect the company's success and increase its resistance to negative external factors by cooperating in creating products that are perfectly adjusted to customers' and market needs. However, companies should rather neglect customers with strong privacy concerns, because they should avoid engaging in an 'extra role' in their relationships. Alternatively, managers could make special efforts to reduce privacy concerns among potential prosumers. Specifically, they should implement special consumer data responsibility programmes, as suggested by Wirtz et al. (2007).

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# The responsible, sharing consumer

A closer look at the motivation of potential private durable goods' suppliers in the sharing economy

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In the twenty-first century, consumers have various options in terms of acting more responsibly towards their environment. One of these options is a more conscious utilisation of private durables by renting them to other consumers at times when they are not being utilised. This kind of sharing has always taken place within living memory between friends and family. However, with the emergence of the Internet, consumers can now also initiate such exchanges with likeminded strangers from far away. They can meet virtually at C2C<sup>1</sup> online renting platforms, which allow them to exchange the rarely utilised durables with minimum transaction costs.

## 1 Introducing the sharing economy

These C2C online renting platforms are just one manifestation of the sharing economy. The term ‘sharing economy’—also referred to as the access economy, collaborative economy, collaborative consumption or shareconomy (Zimmermann 2017, 1)—refers to a development that is described as one of the 10 most disruptive ideas that will change the world (Walsh 2011). A range of companies is regularly cited when it comes to the description of the phenomenon: for example, the online platform Airbnb<sup>2</sup> connects consumers wanting to rent (out) private rooms or properties at times when they are not inhabited. Consumers can resell, buy, swap or simply give away pre-loved fashion items via platforms such as Kleiderkreisel.<sup>3</sup> TaskRabbit<sup>4</sup> in turn matches everyday tasks posted by consumers and so-called taskers instantly via its platform. Such firms are regularly valued at a billion dollars on the stock market. Analysts forecast a bright future for the whole sharing economy, with revenue estimations ranging from 3.5 to over 110 billion US dollars (Andjelic 2015; Thomas 2015).

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1 Consumer-to-consumer.

2 [www.airbnb.com](http://www.airbnb.com)

3 [www.kleiderkreisel.de](http://www.kleiderkreisel.de)

4 [www.taskrabbit.com](http://www.taskrabbit.com)

Even if the media and society are thrilled at this development, a general definition of the sharing economy is still missing. The question is: What do these concepts have in common? Looking at today's sharing landscape, we can see some core patterns:<sup>5</sup>

[1.] There is a great diversity of exchange processes in the sharing economy, even if it is all designated as sharing. From the supplier's viewpoint the processes range from reselling, gifting and swapping to lending or renting. Whereas the latter two refer to access-based exchanges where the resource is shared only temporarily, the first three imply a permanent transfer of ownership. Furthermore, the exchange can be compensatory or not. If a resource is borrowed or gifted, the receiving party gets it for free. When it comes to swapping, the receiving party gives a non-monetary resource in return. Reselling and renting incorporate monetary compensation.

[2.] Despite the diversity, all these exchanges lead to a higher usage intensity of underutilised resources. When clothes are swapped, which are otherwise thrown away, their period of use is extended. By lending a durable such as a drill at times when it is not being used by its owner, the durable's usage is intensified. Even when you are renting a seat in a car, then the capacity of the car is being better used.

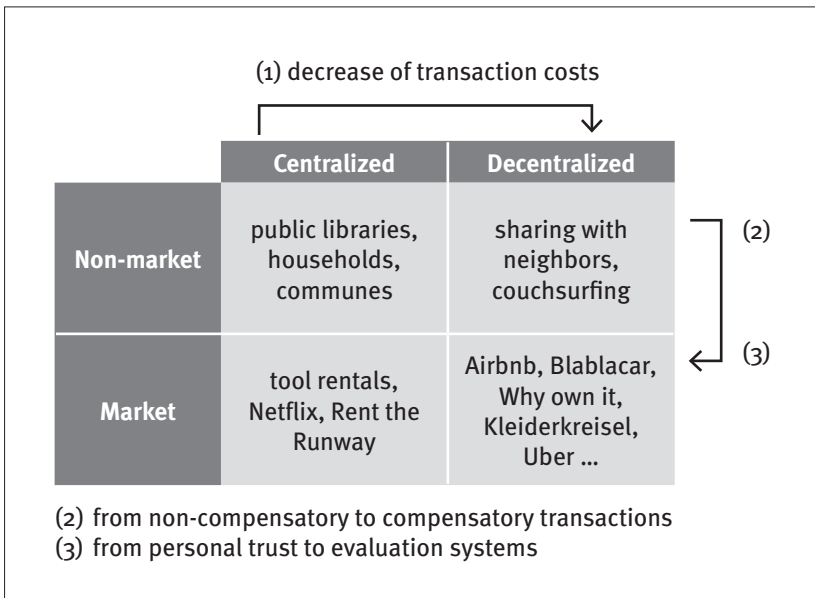
[3.] The introduction of the Internet, and more precisely the mechanisms of Web 2.0, has boosted sharing concepts on a larger scale. Lower transaction costs make it possible to decentralise sharing on the demand and supply side, therewith connecting a wider range of actors and finally enabling the more efficient handling of transactions via online platforms.

Bringing all this together we can summarise that the modern sharing economy stands for an economic concept that encompasses all undertakings that provide online platforms via which decentralised distributed actors can increase the usage intensity of idle resources through either ownership-based or access-based exchange processes (Zimmermann 2017, 25). In this context, sharing can be seen as a distribution function that makes a property useful even at

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5 For more details, see: Zimmermann 2017, 10ff.

times when the proprietor is not using it. The newness arises from the technology component, which lifts the modern sharing economy from a centralised to a decentralised construct by decreasing transaction costs. At the same time, whereas the ‘old sharing’ with the inner circle was often non-compensatory, the idea of exchanging resources with strangers increasingly invokes the purpose of earning money with it. When these transactions between strangers take place, it becomes necessary to have an evaluation system, replacing the former trust between family members, friends and neighbours. This transforms non-market sharing to today’s market-based sharing.



**Figure 1: The sharing economy development matrix.** Source: Own illustration based on Fremstad 2014, 10.



## 2 Focus of study and research questions

During the initial desk research we came across an article about the German start-up Why Own It, which started as an app-based platform where people could lend items to friends and later also strangers. After some years it had to shut down its operations. The founder stated: “People who have registered preferred to borrow things, but hardly anyone has uploaded items” (Gloeckler 2015). In other words, the platform suffered from a lack of participants offering items—an imbalance of supply and demand occurred.

We intensified our research in that direction and found that at least in Germany there are indeed fewer consumers willing to lend something compared to those who want to borrow. According to a recent study, 46 per cent of the population have already rented something in the sharing economy, but only 33 per cent have offered something (PricewaterhouseCoopers AG WPG 2015a). A similar picture was revealed by a second study: although 90 per cent are willing to lend items to friends or family, less than 10 per cent are willing to lend something to a stranger (TNS Deutschland GmbH 2015). Looking at the network effects in these markets it becomes clear that the shortage in suppliers is the key obstacle in the context of C2C sharing concepts. More suppliers mean more items, which makes a platform more interesting to demanders. Therefore, more demanders would join the platform, and more matches, namely successful rentals, would occur. There is no shortage in demand; therefore, the poor supply in goods being offered is the reason that the market is not as efficient as it could be.

We wanted to understand why this shortage in supply occurs in the case that the supply side is made up of consumers only. Because of the wide scope of the sharing economy we decided to focus on a certain (1) product range, (2) a specific exchange process and (3) a specific process phase. As the big successful examples mostly deal with high-value sharable resources such as cars or flats, we anticipated that the shortage problems might rather occur in the context of durables of lower value. Thus, we concentrated on (1) physical durables that can be found in a typical household. Furthermore, we decided to examine (2) the exchange process of renting in order to take the mone-

tary compensation as one possible factor into account. The actual process of renting out items over an online platform includes several phases. First, the supplying consumer has to decide whether he or she wants to offer a specific underutilised item on an online platform for rent. If this decision is positive, an account has to be established, the item has to be inserted (including description, pictures etc.) and decisions regarding the renting conditions—such as shipping costs or renting period—have to be made. If someone is interested in renting the item, the supplying consumer will receive a request. After that he/she can finally decide whether to rent the item to that particular party for that specific time. Bearing this process in mind, we decided to concentrate (3) on the first fundamental decision—about whether or not the consumer wants to offer a specific item on an online platform for rent.

These specifications led us to the following research questions:

[1.] Why do consumers offer—or not offer—their durables for rent via online platforms to foreign consumers?

And in addition, considering addressability:

[2.] Are there any target groups that are particularly affine? Are there any socio-demographics that discriminate between consumers who would and would not offer their durables for rent?

### 3 Development of a causal model

Under perfect conditions, behaviour would be the dependent variable. However, it has to be taken into account that a representative survey showed that only 6.5 per cent of the German population had already used a C2C online renting platform in 2013 (Zentes, Freer and Beham 2013, 34). Even a few years later, this figure might not have increased significantly. Therefore, the intention instead of the actual behaviour seemed to be the more appropriate dependent variable. However, it is not just the usage but also the knowledge of the

existence of sharing concepts such as the one above that are not particularly common. Only 25 per cent of respondents knew of such C2C online renting platforms in 2013 (Zentes, Freer and Beham 2013, 34). As intention is a kind of plan and can only be developed if one is aware of an opportunity (Davis and Warshaw 1992, 392), intention also seemed to be inappropriate. Therefore, we finally decided to go for expectation as a more probability-based form of intention. Thus, the expectation to offer a durable for rent on a C2C online platform if the opportunity is given<sup>6</sup> was chosen as the dependent variable.

Further development of the causal model was fundamentally based on Ajzen's Theory of Planned Behaviour (TPB). The intention to do something—which we replaced with the expectation to offer a durable for rent—is a predictor for a specific actual behaviour in this model. The intention, in turn, is influenced by the subjective norm, the perceived behavioural control and the attitude towards the behaviour (Ajzen 1991, 186). The attitude can be described as a constant tendency to react to a stimulus in a certain manner (Cloerkes 1997, 76). The perceived behavioural control stands for the degree of confidence in having the ability to execute a certain behaviour. The subjective norm reflects the perceived social pressure to exhibit a certain behaviour or not (Ajzen 1991, 184ff).

The subjective norm is criticised as being a weak indicator of intention (Armitage and Conner 2001, 481f). Additionally, some authors note that TPB-based studies often examine the injunctive norm only (Rivis and Sheeran 2003, 219; Lapinski and Rimal 2005, 132f). The injunctive norm is a subfield of the social norm and describes the individual's perception of whether a certain behaviour will be approved or disapproved by important others. The counterpart of this is the descriptive norm, which reflects the individual's perception of whether important others would or would not show the specific behaviour under the same circumstances (Stürmer and Siem 2013, 20f). According to Rivis/Sheeran, the latter is missing in the TPB. In a meta-analysis they were able to prove that the addition of the descriptive norm as a further predictor can increase the variance explained in the intention (Rivis and Sheeran 2003, 218). Accordingly, we introduced the descriptive norm as the first additional predictor.

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6 Hereafter called *expectation to offer a durable for rent*.

Another extension of the model is former experience with identical or similar behaviour. According to Ajzen/Fishbein, experiences are implicitly covered by the attitude variable (Vogelsang 2003, 27). However, as other studies were able to show that the inclusion of the experience as a separate variable can increase the amount of variance explained (Oullette and Wood 1998, 62ff), we decided to include the former experience as well. We split it into (1) the experience with C2C renting platforms as renter, (2) the experience with C2C renting platforms as tenant and (3) the experience as a supplier on C2C sharing platforms based on other exchange processes (such as eBay).<sup>7</sup>

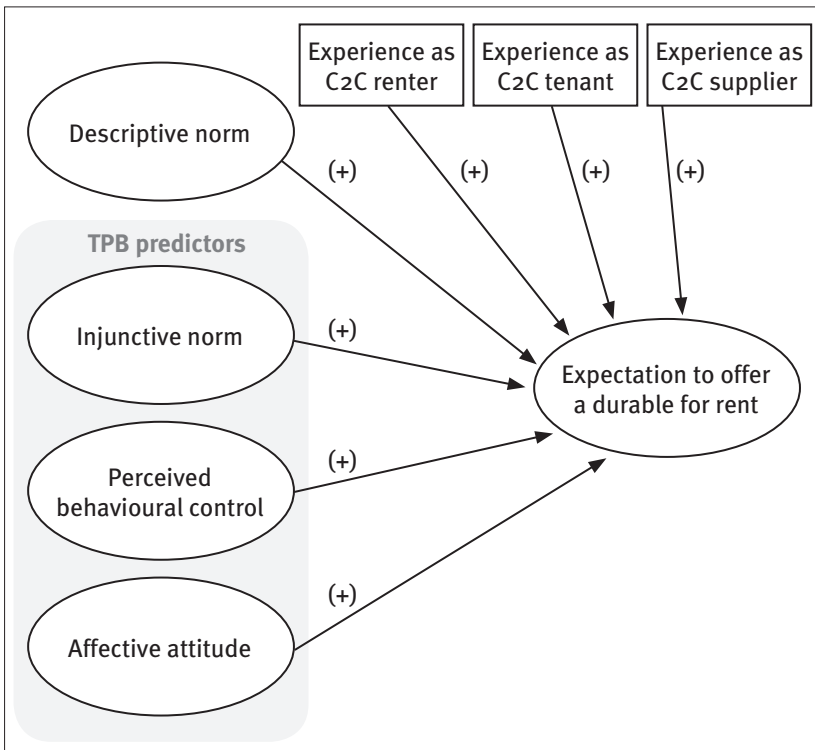


Figure 2: Main model. Source: Zimmermann 2017, 76.

<sup>7</sup> Herefrom abbreviated as *experience as C2C renter*, *experience as C2C tenant* and *experience as C2C supplier*

‘A key attribute of the TPB is that it allows for a direct or indirect measurement of the constructs depending on the scope and nature of the study’ (Holst and Iversen 2011, 19). Direct measurements are sufficient if one aims to predict intention or behaviour. However, at the same time these direct measurements prevent one from gaining deeper insights about the reasons for evaluation of the attitude, subjective norm or perceived behavioural control. Indirect measurements take this into account by predicting the independent variables based on the respondents’ beliefs and expected consequences (Holst and Iversen 2011, 19).

In many other studies the attitude towards behaviour turned out to be the strongest predictor of intention (Ajzen 2005, 9). Thus, we decided to delve deeper into this influencing variable by measuring it indirectly. To reflect the attitude adequately, the indirect measurement requires a profound knowledge of its determinants. Therefore, we decided to make use of the direct measurement for all constructs in the main model and tried to predict the attitude (which is affective if measured directly (Herrmann 2003, 119; Slaby and Urban 2002, 18)) with the help of the indirect measurement in a second partial model. By doing so, we hoped to gain first insights about the structure of the affective attitude.

## 4 Exploration of the affective attitude’s determinants

According to the TPB, people build their affective attitude on the basis of expected consequences of their behaviour. The question in our setting was therefore: What consequences do consumers expect when offering their durable for rent on a C2C online platform? Based on certain surveys and a small-sample pre-study, several predictors were explored.

One of the expected consequences was the expected financial benefit. Several surveys (PricewaterhouseCoopers AG WPG 2015b, 18; ING-DiBa AG 2015,

5) show that a substantial proportion of consumers (approximately 30–45%) think that generating additional income would be an important benefit of sharing private items. This goes hand-in-hand with the fact that the unused potential of physical items can be turned into money by renting them.

The second expected consequence is the expected social benefit. This enjoyment of sharing might result from a more egocentric or altruistic perspective, but nevertheless the good feeling of doing something good for society seems to be a further motivator for participation as a renter on such a collaborative platform (TNS Deutschland GmbH 2015, 18; PricewaterhouseCoopers AG WPG 2015b, 18; Hawlitschek, Teuber and Gimpel 2016).

The expected ecological benefit could also be a predictor for affective attitude. A positive benefit for the environment is recognised by the vast majority of people, although it remains unclear whether they look at it from a renter's or a lender's perspective (GfK-Nürnberg e.V. 2015; ING-DiBa AG 2015, 5).

Consumers also seem to associate negative consequences with the behaviour of renting items to others. This is not surprising taking into account that people treat items that belong to others less carefully compared to handling their own property (Durgee and O'Connor 1995, 9off). In the pre-study, the respondents thought about possible losses or depreciation of the durables. As both risks were mentioned throughout separately, we conceptualised them as two variables: the expected risk of loss, and the expected risk of depreciation (Zimmermann 2017, 64).

The last expected consequence is the expected effort necessary for renting. As physical products have to be handed over, transaction costs occur. Negotiating the conditions, packaging and shipping, for example, take time and therefore negatively influence the affective attitude (Zimmermann 2017, 65f).

## 5 The meaning of the durable as moderator

Items can become containers of emotions and memories when someone associates them with important experiences or persons. Thus, it might be that a particular item has a specific meaning for one person but not for another (Lastovicka and Fernandez 2005, 813ff). If one is asked about offering a meaningful durable for rent it can be hypothesised that the expectation to offer a durable for rent will be lower on average compared to durables without any emotional ties. In addition, the question arises about how far the meaning of the durable influences the effects in both models.

Two consumers might think about offering a camera for rent—for one of them the camera is of irreplaceable value, as it is a gift from an old friend. The other consumer has purchased the camera and never used it. It is quite likely that the consumer with the gifted camera will have a more rejecting and thereby lower affective attitude towards offering this irreplaceable durable for rent. Nevertheless, it is also quite likely that he or she will evaluate the expected consequences like the other consumer, as they represent the rational part of the attitude. If this is the case, an ambivalence between the emotional part (affective attitude) and the rational part (expected consequences) occurs in the case of meaningful durables. The meaning of the durable then negatively moderates the effect of the consequences on the affective attitude.

Furthermore, this attitudinal ambivalence might result in a lower effect of the affective attitude on the expectation to offer a durable for rent. Therefore, we follow the results of Povey/Wellens/Conner, who can prove that attitudinal ambivalence leads to a significantly lower effect of attitude on the intention in the TPB (Povey, Wellens and Conner 2001, 23f).

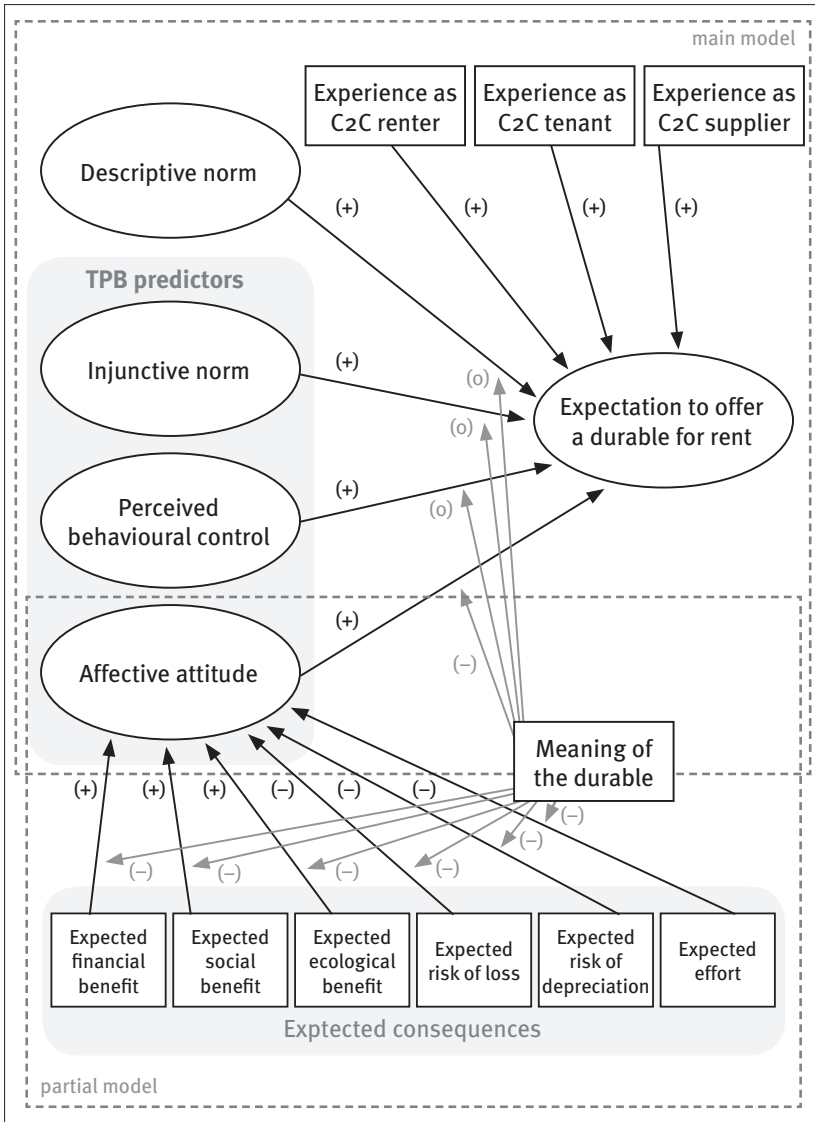


Figure 3: The complete model. Source: Zimmermann 2017, 76.



## 6 Inclusion of socio-demographics

The nature of the TPB model implies that socio-demographic variables are not separate indicators for intention. At the same time, it is within the scope of this research to review the discriminative power of socio-demographics. Several surveys (GfK-Nürnberg e.V. 2015; PricewaterhouseCoopers AG WPG 2015b, 7; Balderjahn et al. 2015, 16ff; TNS Deutschland GmbH 2015, 8; Heinrichs and Grunenberg 2012, 13ff) indicate that age, gender, income and education have discriminative power to separate different types of sharing consumers. Although these surveys refer to a wide range of sharing contexts, it makes sense to include these socio-demographics in the research. These variables will not be included in the model but the size and structure of the quota sample will allow us to analyse the potential differences.

## 7 Study design

As the meaning of the durable was used as a moderating variable, two separate samples were drawn with the same structure. In one sample the respondents were asked to think about a non-meaningful durable [group A]. In the other group they had to refer to a meaningful durable [group B]. As all statements were in respect of a concrete durable, this durable had to be defined at the start of the questionnaire. To simplify the process, respondents were shown a list of 50 typical household durables that are offered regularly on sharing platforms.

In respect to the socio-demographics, we used a quota sampling to ensure that sample structures were comparable. Each sample was expected to have  $n = 250$  respondents.

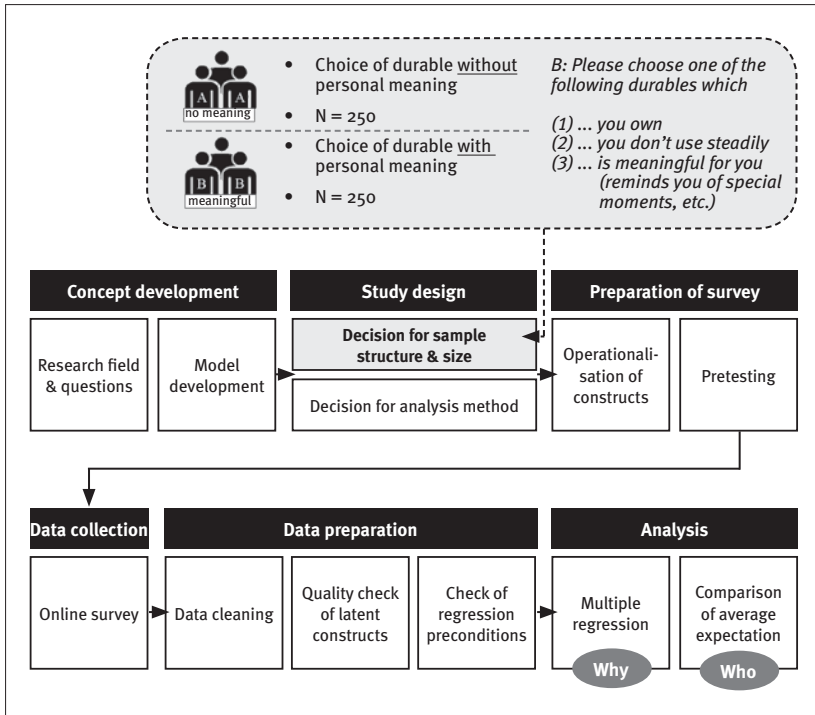


Figure 4: Research process. Source: Own illustration.

To analyse the extended TPB model, a regression approach was used. The latent variables of the model were measured using several indicators,<sup>8</sup> which we combined into an index at the end. As a result of the popularity of the TBP, many items had already been tested. This allowed us to measure fewer items in the questionnaire, with the positive effect of a reduced cognitive effort for the respondents. Additionally, we conducted cognitive interviews for validity checks and an online pre-test to review the reliability of the constructs in advance.

8 Items can be looked up in Zimmermann 2017, 90ff.

After the survey had been completed, we found no significant difference in the composition of the groups. So we were able to compare the results of both samples, which only differed regarding the meaning of the durable. The quality of the operationalisation of the latent constructs had been evaluated in three steps according to Zinnbauer/Eberl (Zinnbauer and Eberl 2004, 6ff). At first, we checked the internal consistency using Cronbach's Alpha and the item-to-total correlation. Then an exploratory factor analysis was carried out. If the results were acceptable, these were re-tested with the help of a confirmatory factor analysis. As a result, the construct of perceived behavioural control was withdrawn from further regression analysis. The other constructs were kept.<sup>9</sup> The assumptions for regression analysis—such as homoscedasticity or no multi-collinearity—were also tested.<sup>10</sup>

## 8 Results

The expectation to offer a durable for rent is very low on average, with means of 2.63 [non-meaningful durable] and 1.93 [meaningful durable] on a five-point scale, where five represented the highest level of agreement. The difference between the groups is highly significant [p-value of 0.000], which supports the hypothesis that consumers are less willing to offer a meaningful durable for rent.

In contrast, we could not find any differences regarding age and income for the two groups. When it comes to group B the results show that gender has a small discriminative power: men are slightly more likely to offer a meaningful durable for rent than women [+0.25 on a 5-point scale]. The same is true for group A regarding level of education. When comparing the extremes, the results of group B reveal that consumers with a university degree are much more likely to offer a non-meaningful durable for rent than consumers who have completed junior high school [+0.8 on a 5-point scale].

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9 For more details, see: Zimmermann 2017, 106ff.

10 For more details, see: Zimmermann 2017, 110ff.

The multiple stepwise regression reveals that the TPB variables of affective attitude and injunctive norm explain most of the variance in the expectation to offer a durable for rent [79% in group A; 75% in group B]. By including the descriptive norm it can be slightly increased up to 81 per cent in group A [non-meaningful durable]. The former experience variables are unable to add any additional explanation of variance.

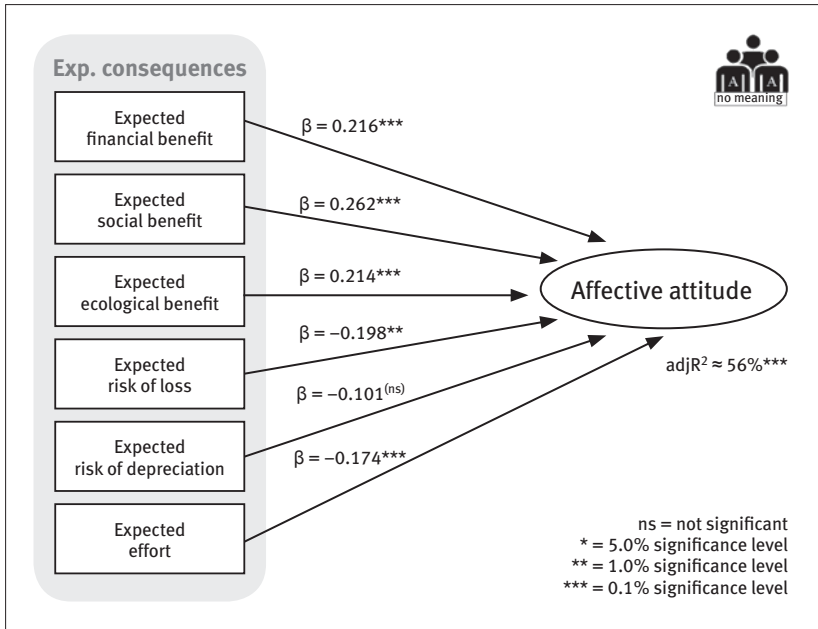
**Table 1: Stepwise regression analysis of the main model**<sup>11</sup>  
([http://www.verbraucherzentrale.nrw/978-3-86336-918-7\\_23\\_table1](http://www.verbraucherzentrale.nrw/978-3-86336-918-7_23_table1))

As expected, the affective attitude is the strongest predictor for the expectation to offer a durable for rent. In the partial model, we tried to explain this variable, partly with the expected consequences. By taking a look at the average rating, we found a relatively low average expectation of financial benefit [group A: 1.76; group B: 2.28] and a fairly high average expectation of associated negative consequences such as the risk of loss [group A: 3.14; group B: 3.63], the risk of depreciation [group A: 3.54; group B: 4.00] and expected effort [group A and B: 3.5]. The external consequences of social benefit [group A: 3.32; group B: 3.07] and ecological benefit [group A: 3.27; group B: 2.72] revolve around a medium positive rating on average.

By using multiple regression, we were able to achieve approximately 56 per cent variance explained of affective attitude for group A [non-meaningful durable] and around 44 per cent for group B [meaningful durable]. Figure 5 shows the results of the multiple regression for group A [non-meaningful durable]. All the examined predictors have incremental validity, except for the expected risk of depreciation. The effect of the expected social benefit on the criteria is the highest, with  $\beta = 0.262^{***}$ . Nonetheless, the effects of the other predictors are approximately at the same level, with highly significant  $\beta$ -values from 0.216 to 0.174 in absolute numbers.

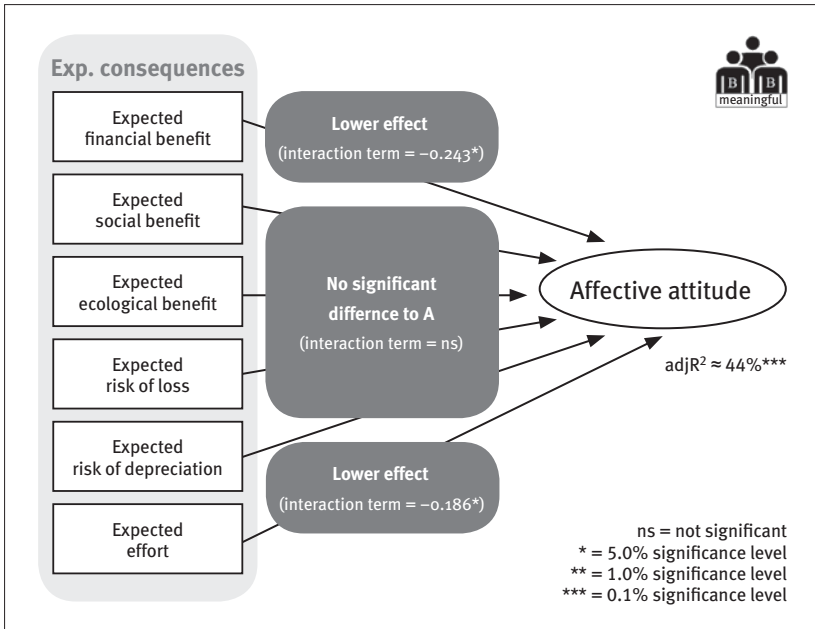
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<sup>11</sup> Zimmermann 2017, 120; former experiences are added separately in models three to five and can be looked up, *ibid.*



**Figure 5: Partial model – predictors of the affective attitude [group A – durable without meaning].** Source: Own illustration.

Comparing this with the results from group B [meaningful durable], we were able to find lower effects for the expected financial benefit (interaction term =  $-0.243^*$ ) and the expected effort (interaction term =  $-0.186^*$ ). In turn, the meaning of the durable does not influence the effects of the other predictors on the expectation of offering a durable for rent.



**Figure 6: Moderating effect – results of group B [meaningful durable] in comparison to group A.** Source: Own illustration.

## 9 Summary

We have seen that the expectation to offer a durable for rent is relatively low in Germany, which explains the problems of C2C renting platforms in terms of having a sufficient supply. The meaning of the durable actually plays a role in the rating of the expectation rating. Durables that are personally meaningful are not for rent and limit the potential range of durables on these platforms even further.

In contrast to the cited studies, our research does not provide any evidence that age or income discriminate between consumers. In turn, a higher level of education seems to serve as a positive amplifier to become a supplier for non-meaningful durables on such platforms.

Moreover, the lack of durables on such platforms cannot be blamed on factors other than the affective attitude towards offering a durable for rent itself. It would not make sense either to invest in new platforms or to inform or train consumers to use these platforms. It is the attitude towards renting itself that must be changed—and this is indeed a more time-consuming process that can only come about with a shift in the views of society. The examined expected consequences—from which the affective attitude derives—give us some hints at what platform providers can foster in communication. As the financial benefits were rated relatively low on average, platform operators could explicitly mention the possible monetary returns of renting. Furthermore, as the risks seem to be predominantly in consumers' minds, operators would be well advised to establish and highlight risk-reducing measures such as insurance options or the verification of members.

Nevertheless, the question arises of whether platform operators or even consumer policy actually have the power to increase consumers' renting behaviour. Despite the Internet and lowered transaction costs, it is possible that C2C renting would not be successful as a result of insufficient intention from the supply side.

To address this issue, there are still several unanswered questions to be clarified:

As socio-demographics turned out to be mainly non-discriminating, could it be that renting-affine people have a certain mindset and character that distinguishes them from renting-rejecting consumers? Is it a special type of consumer that must be addressed?

As only 56 per cent of variance can be explained for affective attitude, which other factors influence affective attitude?

What roles do location and geographical conditions (i.e. neighbourhood in a big city versus rural area) play as they determine physical transaction costs?

Future work could concentrate on these issues and improve the understanding of the economically relevant phenomena even further.

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# The costs of a healthy diet

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This study, carried out on behalf of the Federal Food Safety and Veterinary Office (FSVO), examines the cost of a healthy diet.<sup>1</sup> Cost is a popular reason that consumers give when asked why they do not eat healthier foods (c.f. FSO, 2007). Therefore, the real costs of a healthy/balanced diet and a somewhat unhealthy/unbalanced diet should be calculated. The goal was to add up the total of three different shopping carts: one with balanced, fresh ware; one reflecting a balanced diet, but including convenience food; and one with an unbalanced selection of food. Additional cost factors were considered to account for the differing types of household (number of adults and children) and work scenarios: these extra factors included meals outside the home, the work involved in cooking, and other costs for external child care. Finally, in a second step, a survey was carried out in the German- and French-speaking parts of Switzerland to draw conclusions concerning costs and nutritional behaviour for the entire population.

## 1 The shopping carts

In order to design the shopping carts as realistically as possible, an online survey was drawn up by a consumer panel of the School of Agricultural, Forest and Food Sciences (HAFL), a department of the Bern University of Applied Sciences, and used to recruit 20 people for qualitative, guided interviews. On the basis of statements made in the interviews, weekly menu plans were put together to meet the criteria of three diets: healthy, healthy and convenience, and unhealthy. This compilation was checked and adapted to meet the recommendations of the Swiss Society for Nutrition (SSN, 2011) according to the Swiss food pyramid, data from the online survey and food consumption figures

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1 When one talks about a healthy diet, what is meant is a balanced diet according to more or less recognised, national, and international recommendations (c.f. Federal Food Safety and Veterinary Office, the Swiss Society for Nutrition and the World Health Organization). Conversely, an unhealthy diet refers to a diet that is seen as unbalanced and which can carry health risks. A single food item cannot really be deemed healthy or unhealthy. It all depends on how much, and in what proportions (compared to other food items), the food is consumed.

in Switzerland. The primary carts were put together from the list of ingredients for these meals. The point of reference was a two-person household with one man and one woman, and a timeframe of one week. The costs of these primary carts were determined via Storecheck in retail shops, and the cheapest products were always chosen. In a second step, and based on these primary carts, the shopping carts and overall costs for the different household types (families with several children, single parents, etc.) were calculated according to work scenarios and related cost factors.

	The healthy shopping cart	The healthy shopping cart and convenience products	The unhealthy shopping cart
Cost per week per couple	CHF 108.30	CHF 146.50	CHF 95.10

**Table 1: Cost of the three shopping carts**

The shopping carts in Table 1 show that a healthy/balanced diet is only slightly more expensive than an unhealthy/unbalanced one (approximately CHF 15.– more, or approximately 14%). At CHF 146.50, the convenience shopping cart is considerably more expensive, and eating outside the home is the main source of these extra costs. A coffee out costs a lot more than one at home. On the other hand, differences in price between semi- and finished products, such as frozen vegetables or ready-made pizza, are not significant when compared with their fresh equivalents: convenience products are sometimes even cheaper. Furthermore, when comparing products and product categories of the healthy and unhealthy shopping carts, it is clearly impossible to identify one single item that is responsible for driving up the costs. The healthy shopping cart is more expensive because of the purchasing of vegetables, but this is because of the greater quantities of vegetables required, and not because this product group costs more.

With regard to the different totals of the shopping carts, food costs overall are pushed up by refreshments taken outside the home. This was already apparent with the shopping cart with convenience products. However, it becomes

clear in the seven different types of household and two work scenarios when meals or snacks taken outside the house are included. Eating out 11 times for a family with 2 children and a 140 per cent workload equals a shopping cart for a whole week, that is CHF 132.–.

Similarly, expenses for external care for pre-school children are a significant cost factor compared to money spent on food. With estimated costs of barely CHF 27.– per half-day for a family with two children and a mid-range income, these costs rapidly exceed the costs of food. If the rate of CHF 32.60 per hour is calculated for preparing the meals, this too adds up. The cost for eight meals, with a preparation time of half an hour for each meal, equals the amount of the shopping cart.

At the same time, these preparation costs are greatly reduced per household member as the household gets larger. A preparation time of only 10 minutes lowers the overall cost of the convenience shopping, making it cheaper than the fresh-food shopping cart. According to the calculated shopping carts, the answer to the question of whether or not a healthy diet entails higher costs is clearly 'no'. Even if the costs of a healthy shopping cart are slightly above those of an unhealthy/unbalanced one, the amount is significantly lower than the amount spent on food, on average, every month by a household (of two) (with a low income: CHF 472.35<sup>2</sup> to CHF 612.30<sup>3</sup> or 618.90<sup>4</sup>).

At the same time, it must be pointed out that ideally the cost of the products placed in the shopping cart is kept low (the cheapest products are consistently chosen and amounts are calculated exactly). This is unlikely to happen in real life. However, a first comparison can be made, making it possible to assess the costs of a healthy diet '*in extremis*'. Second, a more one-sided diet with inexpensive products (for example, mainly pasta) would be even cheaper.

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- 2 This monthly amount is calculated by multiplying the weekly shopping cart by 4.333 (the average number of weeks per month: 52/12).
  - 3 HABE (2011): Two-person households under 65 years of age with a net income of less than CHF 7,631.
  - 4 HABE (2011): Two-person households over 65 with a net income of less than CHF 4,470.



However, as such a diet does not coincide with real, unhealthy/unbalanced dietary patterns, this was not taken into consideration.

## 2 Population poll

The purpose of the second part of the study was to collect data from the population on their eating and nutritional habits, and to use this data to investigate the factors that influence a healthy diet and its costs. For this, a random selection of households in German-speaking ( $n = 2,000$ ) and French-speaking parts of the country ( $n = 1,000$ ) was made from the Swiss telephone book. Questionnaires were mailed to these households, which the families were asked to fill out and return. In total, 929 questionnaires were returned. With 147 undeliverable questionnaires, this works out at a response rate of 32.6 per cent. In addition to a detailed food frequency questionnaire (FFQ), which recorded food eaten, the questionnaire also included a detailed section concerning attitudes to nutrition, shopping and cooking—so-called potential drivers. These were the central components of the analysis. Questions were also asked about visits to various shopping locations, the cost of nutrition, knowledge about nutrition and cooking skills. As a result of incomplete information in the FQQ, some cases had to be excluded. A total of  $N = 880$  cases were considered for the analyses. Approximately two-thirds of the participants were female, as, in order to obtain the necessary information, the survey was aimed explicitly at the households' (co-)leading persons. Age and income were slightly above the Swiss average.

The survey revealed valuable initial descriptive findings concerning what food—and in what quantities—is consumed by the Swiss population. These findings were categorised according to recommendations of the Swiss food pyramid (SSN, 2011) and used to determine how balanced the diet was. In a final step, of the potential drivers (independent variables) and the degree of fulfilment (dependent variable), a linear regression analysis was applied to identify the influencing factors. Factors:

- that encourage or inhibit a healthy diet,
- that raise or lower the cost of the food,
- that raise or lower the cost of a healthy diet.

With constant prices for all product categories according to the calculations of the shopping carts from the first section, dietary patterns in the survey were also examined to determine the relationship between balance and (standardised) costs of nutrition. Barely 10 per cent comply with less than 40 per cent of the recommendations of the food pyramid. Around one-third of the respondents feed themselves at 60 per cent or more. None of the respondents reach 100 per cent. Respondents consume more sweet and salty snacks and soft drinks—items appearing at the top of the pyramid—than is recommended.

When the factors influencing a balanced diet were analysed, the importance of neither health nor a healthy diet are shown to affect eating habits. However, the importance of nutrition itself and consulting nutrition tables have a positive effect on healthy eating habits. In addition, certain frequently visited shopping locations clearly have a positive effect: people who often shop at fair trade outlets, health food stores or the *Landi* (a chain of agriculture shops in Switzerland) enjoy a more balanced diet.

Eating at restaurants raises the personal costs of food, and people with higher incomes spend more on food and nutrition. However, the size of the household reduces the costs of food (per head, *nota bene*), as does sound knowledge about nutrition and good cooking skills. When considering the cost of a healthy diet, the relationship between a healthy diet and the amount of money needed for this diet, income and restaurant food have a negative effect. The more money high earners spend on food, the more unbalanced their diet. On the other hand, the size of the household raises the quality of the diet for every franc spent on food. Table 2 shows an overview of the influencing factors and identifies those factors that show no effect.

Factors influencing	... a balanced diet	... the cost of the diet	... the cost of a balanced diet
Encouraging	<ul style="list-style-type: none"> <li>- Health food stores</li> <li>- Index nutritional value</li> <li>- Children</li> <li>- Index nutrition</li> <li>- <i>Landi</i></li> </ul>	<ul style="list-style-type: none"> <li>- Going to restaurants</li> <li>- Household income</li> <li>- Specialty shops (bakery, etc.)</li> </ul>	<ul style="list-style-type: none"> <li>- Going to restaurants</li> <li>- Household income</li> </ul>
Inhibiting	<ul style="list-style-type: none"> <li>- Discount shop</li> <li>- Index readymade products</li> </ul>	<ul style="list-style-type: none"> <li>- Size of household</li> <li>- Nutritional knowledge</li> <li>- Cooking skills</li> <li>- Time pressures</li> </ul>	<ul style="list-style-type: none"> <li>- Size of household</li> <li>- Animal welfare index</li> </ul>
No effect (selection)	<ul style="list-style-type: none"> <li>- Household income</li> <li>- Money spent on food</li> <li>- Price index</li> <li>- Health index</li> <li>- Index Importance of a healthy diet</li> <li>- Index healthy = expensive</li> </ul>	<ul style="list-style-type: none"> <li>- Price index</li> <li>- Health index</li> <li>- Index Importance of a healthy diet</li> <li>- Season index</li> <li>- Swiss index</li> </ul>	<ul style="list-style-type: none"> <li>- Organic index</li> <li>- Season index</li> <li>- Index healthy = expensive</li> </ul>

**Table 2: Summary: factors influencing diet and costs**

If we return to our initial question of whether cost affects a healthy, balanced diet, no such influences were observed. There were no economic predictors positively influencing a balanced diet. Nor were there health aspects pushing up expenditures on food. The only economic factor of any significance was household income. A higher income leads both to higher spending and higher costs for healthy food. Put the other way round, this means that people or households with a lower income spend less, yet achieve a higher degree of compliance with dietary recommendations. The analysis of the dietary patterns, using prices from the shopping cart, showed that the more the diet met the recommendations, the cheaper it was.

### 3 Conclusion

Both the shopping carts and the results of the population poll indicate that cost considerations are not a criterion for a healthy diet. The healthy, balanced shopping cart is only slightly more expensive than the unhealthy one, and, *nota bene*, it is well below the average expenditure on food in Swiss households with low incomes. As far as was included in the analysis, expenditures on food are relativised by other, falling costs in the household (e.g. eating out or external child care). There was no indication in the population poll that a healthy diet is more expensive or that spending more money will lead to a healthier diet.

The various cost aspects of the shopping cart could create the impression that food costs are very low compared to other costs and that the preparation is more 'expensive'. Although this finding is not incorrect, it must be qualified in two respects: first, the costs of the food in the shopping cart were deliberately kept low. Second, it is debatable whether the time spent on cooking can be monetised into francs, from either the economic or the personal perspectives of the cook. If so calculated, convenience food has a clear advantage, because the cost savings due to reduced preparation time are considerable. At the same time, it can be seen that external child care and eating out incur substantial costs for family households, which can increase the pressure to save money on eating and/or food.

This study has made a significant contribution to the field of costs and diet. However, further investigations, replications and more differentiated studies are needed. In this way, the food consumption behaviour of specific target groups (singles, lone parents, adolescents, etc.) could be investigated, or consumer behaviour towards individual product categories examined. An evaluation of communication campaigns relating to eating and dietary behaviour would also be useful. This would require the application of valid measurement instruments. The commonly used food frequency questionnaire would afford such a study a proven survey instrument while also optimising the Swiss food pyramid for the purposes of the study.

To return to the opening question of whether eating a healthy diet is actually more expensive, the answer, based on the findings of this study, is no. However, this conclusion begs the question of why so many people say that a healthy diet is more expensive (c.f. FSO 2007). The issue is all the more interesting given that the results of the driver analysis indicate that this driver (the 'more expensive' index) has no influence. Possible explanations for this are that the 'expensive' argument is popular (even though it does not really apply), or that a healthy diet may be associated with organic and other premium-class products with correspondingly higher prices, which could lead to this perception.

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