Assumptions about consumers in food waste campaigns:

A visual analysis

Introduction

Food waste can be regarded as a wicked problem concerning all parts of the food chain, the largest and the most significant contributor being the consumer (Stenmarck, Jensen, Quested, & Moates, 2016). There are multiple reasons behind consumer food waste, making it a very complex issue to solve (Aschemann-Witzel et al., 2017). In the tackle against consumer food waste, institutions and organizations (both for-profit and not-for-profit) can take a significant role by establishing initiatives and campaigns around reducing food waste (Principato, 2018). One of the most well-known food waste campaigns is the "Love Food Hate Waste" campaign initiated by the Waste and Resources Action Programme (WRAP) in the United Kingdom. This campaign has been suggested to a key contributor, along with other factors such as changes to labelling and increases in food prices, to the significant reduction in food waste in the UK between 2007–2012 (Quested & Parry, 2017). Similar types of food waste campaigns have been initiated around the world by different national and international institutions and organisations.

Food waste campaigns and initiatives have recently become of interest also in academic research (see e.g., Principato, 2018; Aschemann-Witzel et al., 2017). Principato (2018) identified five clusters of consumer food waste initiatives: food waste redistribution, food waste reduction, awareness-raising campaigns, food waste reuse and the sale of short-dated products. Based on research by Aschemann-Witzel et al. (2017), consumer-related food waste initiatives can also be divided into the following three categories: information and capacity building initiatives, redistribution initiatives, and retail and supply chain alteration initiatives.

Food waste campaigns and initiatives can be viewed as social marketing, and this viewpoint is adopted in this chapter. Social marketing refers to the utilisation of marketing viewpoints,

techniques and theories in attempt to change consumers' behaviour for the sake of individual or societal well-being (see e.g., Kotler, Roberto & Lee, 2002). Although many of the food waste initiatives and campaigns have been directly targeted at the consumer, existing research has not focused on the assumptions about consumers mirrored by these initiatives. Questions about theoretical foundations of different food waste initiatives and assumptions about consumers have remained unanswered in earlier research. This chapter argues that in order to create, plan and run effective campaigns around food waste, the prevailing assumptions about consumers in the fight against food waste need to be carefully and critically evaluated.

The research reported in this chapter focuses on the assumptions about consumers in food-waste-related campaign material. The main purpose of the chapter is to identify and analyse the assumptions about consumers in food waste campaign materials. To fulfil its purpose, two research questions are asked: "How is food waste portrayed in campaign materials?" and "How is the consumer portrayed in campaign materials?". In its theory section, the chapter draws on social marketing literature and its different approaches to consumer behaviour change. The research data consists of visual food waste campaign materials published in Finland and Sweden from 2012–2018. The analysis method is inspired by semiotic analysis and emphasises the role of signs and their meanings (see e.g., Ball & Smith, 1992). Through intensive analysis and interpretation, six different assumptions about consumers are identified. The assumptions of economical, environmental and ethical consumer reflect the assumed orientation of consumers. The latter three assumptions, childlike, uninformed and active consumer, describe the assumed agency level of the consumer.

The research positions itself in a gap in the literature introduced by Porpino (2016), who points out the lack of marketing and consumer behaviour focus in previous food waste research and suggests the topic of communications initiatives for mitigating food waste as an opportunity for future research. This research aims to contribute to the growing area of research around food waste reduction by focusing on the consumer perspective and viewing the campaign materials as social marketing

efforts to transform consumers' behaviour toward sustainability. In addition, the research provides useful insights for food waste campaign initiators and campaign material creators; the research highlights the importance of careful and critical evaluation of the prevailing assumptions about consumers before launching any new initiatives or campaigns aiming to change consumers' behaviour.

Changing consumer behaviour through social marketing

This chapter approaches food waste initiatives and campaigns as social marketing. The innermost purpose of food waste initiatives is to make consumers waste less food, i.e., to change their behaviour. The core idea of social marketing – to "influence behaviours that benefit individuals and communities for the greater social good" (AASM, ISMA, & ESMA, 2013) – is strongly connected to the theoretical concept of behaviour change. However, the discipline of social marketing does not aim to provide a single theory of behaviour change. Instead, it is more of a general approach to solving the troubling problems of the world (Lefebvre, 2013). The main theoretical approaches to consumer behaviour change utilised in social marketing can be roughly divided into cognitive, conative, affective and sociocultural approaches. It is important to note that this division is not the only one presented; for instance, Brennan, Binney, Parker, Aleti, & Nguyen (2014) propose as many as seven different theoretical approaches utilised in social marketing, including a multi-theory perspective and commercial marketing models. Next, different approaches adopted in social marketing are reviewed. In line with the aim of this chapter, the following approaches are based on the theoretical viewpoints as well as the assumptions about consumers and their behaviour instead of, for instance, strategy level applications or methodological approaches. To give an overall idea of how these approaches have been utilised in the context of food waste some illustrating case examples are also presented.

Focus on thinking: Cognitive approach

The cognitive approach presents the most commonly adopted theoretical approach to consumer behaviour change in social marketing (Wymer, 2011). Theoretical models following this approach often have their roots in psychology and economics. These models include, for instance, prospect theory (Kahneman & Tversky, 1979), theory of reasoned action (Ajzen & Fishbein, 1980) and theory of planned behaviour (Ajzen, 1991). The cognitive approach relies strongly on individuals being self-reflexive, rational decision-making consumers (Spotswood & Tapp, 2013). When applied in social marketing, the assumptions include individuals' capability to understand the risk, respond to the message given and consciously adjust their behaviour according to external factors (Brennan et al., 2014). Hence, the cognitive approach depends on consumers' ability to change their behaviour after receiving new information.

A majority of campaigns related to food waste have their roots in the cognitive approach. For instance, Aschemann-Witzel et al. (2017) proposed that a large share of food waste initiatives can be categorised as information campaigns that share facts about the severity of food waste problems. A well-known campaign in Great Britain, "Love Food, Hate Waste", is one example of this type of information campaign that aims at influencing consumers' behaviour regarding food waste by providing information about the consequences and magnitude of food waste (Principato, 2018).

Focus on actions: Conative approach

The conative approach emphasises the role of the realised behaviour of the consumer and has been introduced in part to oppose the assumption of rational consumers proposed by cognitive models (Brennan et al., 2014). Within the conative approach, the focus is on the actions of consumers instead of thoughts and feelings. The approach builds upon the idea that behaviour can be changed only if the consumer does something differently. The perspective has its roots in behavioural economics. For instance, the idea of a nudge (Thaler & Sunstein, 2008) relies on the conative perspective of consumer behaviour. A nudge is a perspective of behavioural economics introducing the idea that consumers

can be "nudged" to make better decisions without restricting their freedom of choice (Thaler & Sunstein, 2008). Within this perspective, individuals' behaviour is seen as not (always) rational, but largely habitual and unconscious instead. Furthermore, consumers are seen more as reactive than proactive (Brennan et al., 2014).

Several food waste campaigns can be seen as following the conative models of behaviour change. Some efforts have been made to ban "buy one, get two" types of discounts that often lead consumers to make excess purchases (Calvo-Porral, Medín, & Losada-López, 2017). Furthermore, a research conducted in Canada found out that people do not want to see themselves as wasting more food than their peers, highlighting how comparing consumers' behaviour in relation to their peers could be a useful way to "nudge" consumers to reduce their food waste (Parizeau, von Massow, & Martin, 2015). Aschemann-Witzel, de Hooge, Amli, & Oostindjer (2018) have suggested that the nudging approach could be especially beneficial in influencing food waste behaviour of the "least concerned" consumers.

Focus on emotions: Affective approach

The affective theoretical approach utilised in social marketing relies strongly on emotional engagement (Brennan et al., 2014). Within this approach, consumers are assumed to be driven (at least partly) by their unconscious emotions rather than rational cognitions (Parkinson et al., 2018) and as constantly trying to maximise the net balance between their positive and negative emotions (Brennan et al., 2014). To influence and encourage behaviour change, the key is to get consumers emotionally engaged. Evoking negative emotions, such as guilt, shame and fear, have played an important role in social marketing (Brennan & Binney, 2010). The focus on negative emotions has, however, raised some critique among researchers who suggest that influencing consumers' behaviour by evoking positive feelings might actually be more effective and ethical (Hastings, Stead, & Webb,

2004; Henley, Donovan, & Moorhead,1998). In addition to emotions, theories concerning values, beliefs and norms can be positioned under this approach (Brennan et al., 2014).

In the context of food waste, some campaigns have followed this approach and have relied on consumers' feelings of guilt around wasting food by showing piles of food wasted yearly or comparing the amount of food waste with the needs of people suffering from hunger. As an opposite to provoking negative emotions, there have been some food waste campaigns aiming at evoking positive feelings about reducing food waste. For instance, in France, an award-winning campaign by a French retailer "Inglorious fruits and vegetables" displayed misshapen fruits and vegetables in a positive light to emphasise the beauty of the produce (Block et al., 2016). Furthermore, a recent study proposed that the use of anthropomorphism when selling misshapen produce triggers positive affective reactions, thereby strengthening taste perceptions and purchase intentions (Cooremans & Geuens, 2019).

Focus on cultural and social surroundings: Socio-cultural approach

The sociocultural approach views the consumer's behaviour and behaviour change from the perspective of the individual's environment rather than the individual themselves (Brennan et al., 2014). According to this approach, consumers' behaviour stems from larger constructs embedded in the social and cultural surroundings of the consumer. While the aforementioned approaches emphasised processes happening "inside" the consumer's head or their realised actions, this approach focuses on the sociocultural structures shaping consumers' behaviour; to change behaviour, something has to change in the sociocultural surroundings of consumers. Theoretical approaches focusing on cultural and social aspects currently play a minority role in social marketing, although they have been applied in practice and research in some cases. Theories within this approach and utilised in social marketing research include, for instance, social practice theory (see e.g., Spotswood,

Chatterton, Morey, & Spear, 2017), community-based theories (see e.g., McKenzie-Mohr, 2011) and Bourdieu's theory of habitus (see e.g., Spotswood & Tapp, 2013).

The sociocultural approach to behaviour change has not been very central in food waste initiatives. Grassroot movements and campaigns engaging consumers, however, can be regarded as examples of taking a more holistic, sociocultural perspective on food waste and consumer behaviour change. For instance, a blog campaign in Finland, 'From waste to delicacy', which aimed at changing the negative connotations around food waste, could be regarded as an initiative following this approach (see eg., Närvänen, Mesiranta & Hukkanen, 2016; Närvänen, Mesiranta, Sutinen, & Mattila, 2018).

Other theoretical approaches to consumer behaviour change within social marketing

Theories of behaviour and behaviour change are the vital foundations of social marketing research as well as initiatives and campaigns in practice. Careful consideration of the role of theory in social marketing can offer valuable benefits such as stronger outcomes and savings in money and time (Brennan et al., 2014). Although social marketing is an established field of practice and research, it has been a target of critique due to several issues (Spotswood, French, Tapp, & Stead, 2012; Truong, 2014; Wymer, 2011). For instance, one critique is the narrow theoretical base of the discipline (see e.g., Lefebvre, 2011; Rundle-Thiele et al., 2019). Social marketing has also been criticised as overemphasising consumers as drivers and roots of change while ignoring the role of policymakers and policies (Vihalemm, Keller, & Kiisel, 2018). Recently, interest has increased in social marketing for social change at the macro level (see e.g., Brennan, Previte, & Fry, 2016; Lefebvre, 2013) with the idea of changing behaviour by changing the broader structures and environment.

Summarising the approaches from the perspective of this research

As the review of previous research shows, changing consumers' behaviour is not a simple or universally agreed process. Within social marketing, the issue of changing consumers' behaviour has been approached from different theoretical perspectives; recently, even more perspectives have been introduced. The theoretical approaches all have their strengths and weaknesses, and none of them have been proven to work in every situation. However, as Brennan et al. (2014) suggest, different theories offer researchers and practitioners a way to simplify a complex phenomenon into manageable elements, and each theoretical approach can be applied only to a certain unit of analysis. The chapter will return to these approaches in the discussion section where empirical findings are evaluated in light of the different theoretical approaches.

Material and methods

The nature of this research is exploratory, and the research adopts an interpretive, qualitative methodology to gain new understanding of a certain phenomenon in its own context (see e.g., Justesen & Mik-Meyer, 2012): assumptions about consumers in food waste campaigns in Finland and Sweden). Reality is regarded as socially constructed, and to access these realities, one must focus on social constructions such as language and shared meanings (Eriksson & Kovalainen, 2015). Different kinds of visuals are a significant part of socially constructed reality and consumers' everyday lives (Moisander & Valtonen, 2006; Schroeder, 2002). It can be argued that research on pre-existing images is important because it "attends to the role of visuals in the circulation of cultural meanings but also draws attention to the different – often invisible – forms and relations power infused in them" (Moisander & Valtonen, 2006, p. 89). Building on these premises, this research is focused on visual images and the assumptions they reflect about the consumer.

Data

The data used in this research consists of food waste campaign materials published in Finland and Sweden, so the data is naturally occurring (Silverman, 2014). The generation of the data involved three steps (see Figure 1). The first step aimed at finding food waste campaigns conducted in Finland and Sweden. First, campaigns were searched for in Finland, then in Sweden. Due to the sociocultural perspective of the study, the choice of these two countries with a similar cultural background was seen as important. Both of the countries are part of the Nordic region, and they share a similar welfare model and a long history, as Finland was a part of Sweden for almost 700 years (Götz, 2003). In terms of the research topic, the levels of household food waste have been estimated to be somewhat similar between the two countries; the estimated amount of annual food waste (both unavoidable and avoidable) is 63,6 kg/person in Finland and 71,5 kg/person in Sweden (Stenmarck et al., 2016). As the result of the first step of data generation, 20–30 different food waste campaigns initiated by commercial and public entities were identified.

The second step of data gathering involved narrowing down the identified food waste campaigns based on two criteria: the initiator and the target. Some campaigns were targeted specifically at commercial companies such as restaurants; these campaigns were eliminated from the data as this study focuses on consumers. The second criterion regarded the initiator of the campaign. This research is positioned within social marketing literature, and it is still debated whether for-profit organisations can be involved in social marketing (see e.g., Hastings & Angus, 2011; Polonsky, 2017). Even though also several commercial actors have established initiatives around food waste, only campaigns initiated by public or non-governmental actors were selected. However, in some of the selected campaigns, there was some collaboration between public and commercial actors, which is very common in these types of campaigns (Aschemann-Witzel et al., 2017). This step resulted in identifying a total of 14 food waste campaigns: eight from Finland and six from Sweden.
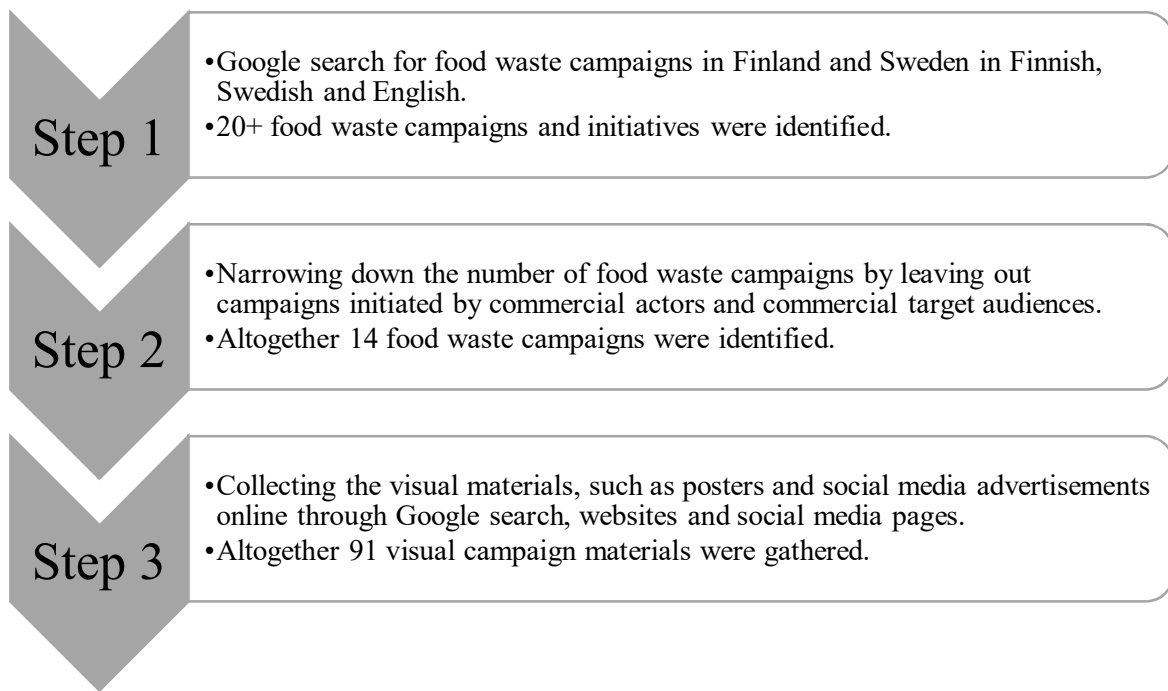
Figure 1. Phases of data generation

The campaigns included a variety of different kinds of campaign materials. Each of the campaigns had a specific emphasis, but they all aimed to reduce food waste and targeted, either directly or indirectly, consumers and households. Campaign materials included posters, social media postings, videos, texts, logos, websites, tweets and social media shares. All of the selected campaigns had different kinds of visual materials. In the third step, these visual materials were collected online, through google picture searches and campaigns' websites and/or social media accounts. The third and final step in the data gathering process resulted in the collection of 91 visual campaign materials (Table 1).

Table 1. Description of data

CAMPAIGN NAME	COUNTRY	ANALYSED MATERIALS (PUBLISHED 2012–2018)
Bäst Före 2017 (Best before 2017)	Sweden	8
Hävikkiviikko (Waste week)	Finland	32
Matsvinnet.se (Foodwaste.se)	Sweden	2
Ota iisisti (Take it easy)	Finland	4
Ruokaa vai roskaa (Food or waste)	Finland	1
Ruokahukka ruotuun (Food loss into order)	Finland	5
Ruokarahaa kuin roskaa (Grocery money as waste) as a part of "Do you pay it forward" campaign	Finland	3

Rätt i Påsen (Right in the bag)	Sweden	1
Saa syödä (Can eat)	Finland	3
Släng inte maten (Don't waste food)	Sweden	9
Stoppa matsvinnet (Stop food waste)	Sweden	2
Svinnkampen (Waste fight)	Finland	10
Tähteitä nolla (Zero leftovers)	Finland	9
Ät upp maten (Eat up food)	Sweden	2

Research on visual materials and data analysis

In this research, the campaigns' visual materials are viewed as social marketing advertisements, and data is analysed from a cultural marketing perspective (Moisander & Valtonen, 2016). The visual food waste campaign materials are seen as both carriers and producers of meanings that participate in the process of constructing and/or maintaining a social reality around the issue of food waste and food waste reduction.

The analysis method draws inspiration from semiotic analysis, which emphasises signs and their meanings. In this study, semiotic analysis is used to study the signs in the material and figure out the meanings carried by these signs and the logic behind them (Ball & Smith, 1992). Ferdinand de Saussure (1974) is the founding father of semiotic approach, also called as the science of signs; signs bring together an image/word (signifier) and a concept (signified) (Silverman, 2014). Another well-known semiotic researcher, Barthes (1964), extends this idea by introducing two layers of meaning: denotation and connotation. For instance, a picture of a bed on a road sign (signifier) denotes an accommodation by the road. However, this type of road-side accommodation can have several connotations such as a place for rest or a dirty road-side motel. The connotation cannot be separated from the viewer's sociocultural or personal characteristics (Fiske, 1990).

In addition to images, several campaign materials also included textual elements. The significance of the text varied; in some cases, the text had a very central, dominating role, and in some other materials, the text was used as an anchor that positioned the picture in a certain paradigm and instilled the picture with the desired connotation (see e.g., Barthes, 1964). For instance, the text provided an explanation on why a certain picture was brought into the context of food waste. When

analysing the textual elements within the materials, also the tone (for instance, command versus neutral) of the text was analysed as a sign signifying a particular meaning.

In this study, the food waste campaign materials were regarded as "assemblages of signs", as advertisements are often approached from the cultural perspective (Moisander & Valtonen, 2006). Thus, each visual material is a composition of different signs that are connected to certain sociocultural meanings. The analysis progressed through three stages. In the first stage, the materials were carefully and thoroughly reviewed to establish familiarity with and a general understanding of the data. In the second stage, each visual material was analysed separately with the help of analytic tools inspired by semiotics (see e.g., Rose, 2016). During the third stage, all the identified meanings were grouped together, and special emphasis was placed on the meanings' connections to the portrayal of food waste and the consumer in the materials. The last stage of analysis and interpretation led to the identification of six different assumptions about consumers. To illustrate the campaign materials without compromising any copyright issues, mock campaign posters were created to reflect each assumption about consumers. First, the author sketched out these illustrations on the basis of the analysis, then a professional graphic designer, Kaisa Eskola, designed the final illustrations. These illustrations are positioned within the next section of the chapter, which presents the findings.

Findings: Assumptions about consumers in campaign materials

The intensive analysis and interpretation resulted in the identification of six assumptions about consumers in campaign materials. Three of the assumptions are strongly connected to the assumed orientation of the consumer (i.e., how consumers are seen to be driven), and the other three assumptions are related to the assumed agency of consumers (i.e., how capable consumers are seen to be). There was a rather large variance in the data since the campaigns had different perspectives and approached the issue from different angles; however, several recurring themes were identified.

One intriguing notion was that despite the consumer-driven focus of the campaigns, the consumer is not actually portayed in the majority of the campaign materials. There are few exceptions where the face or the body of a person is portrayed, but the most of the materials consist of pictures of food products and other items related to food, such as cooking equipment. The dominating absence of a human made the last analysis stage focusing on the portrayal of the consumer very interesting but also challenging. The main findings of the study – the six assumptions about consumers – are presented in the following.

Assumptions related to the orientation of consumers

  Economical consumer. Some of the analysed campaign materials carry the assumption that consumers are driven by money-related issues. The visual materials carrying this assumption focus strongly on the current situation regarding food waste, for instance how much money is wasted yearly. The campaign materials include signs such as *banknotes, coins, shopping lists, grocery bags, trucks, numbers, rollercoasters* and *trash bins*. Banknotes and coins reflect the direct meaning of money and spending. However, some of the identified signs also carry meanings related to the extent of the food waste problem. For instance, a picture of several grocery bags shows the volume of the wasted food in a concrete manner. Not only do the pictures convey meaning, but also the text in the campaign materials include provocative messages such as "Grocery money as trash?" ("Grocery money as waste") and "Household food waste takes 125 euros from the wallets of Finnish people each year" ("Food loss in to order" campaign).

<Insert Picture 1 here>

  Positioning money-related signs in the context of food waste conveys a strong message of food waste as a waste of finances. The campaign materials have illustrations of food being thrown

into the garbage along with money (as in Picture 1), which can be seen as an extreme way to illustrate the point. In one campaign material, the issue of food waste is depicted as an amusement park, reflecting abundance. Conflicts between the signs, their meanings in the pictures and their context in food waste highlighted the absurdity of wasting food from an economical perspective. The visual campaign materials contest certain cultural conceptions such as the appreciation of money, food as a valuable resource and the ability to handle money wisely (for more discussion on the Finnish ethos of economism, see Huttunen & Autio, 2010). By highlighting the severity of the current food waste situation and portraying food waste as excessive and a waste of money, these campaign materials convey a strong assumption of the consumer as economical.

Environmental consumer. Some of the campaign materials reflect the assumption of the environmental consumer. Similarly to the campaign materials that assume an economical consumer, these campaign materials also focus on the current problem with food waste. However, the difference here is that the food waste is portrayed as a waste of resources from an environmental perspective and the materials highlight issues such as environmental consequences and emissions. The campaign materials include signs such as *green arrows, cars, houses, food products, numbers, green colour, packages* and *water*. The textual elements within the campaign materials provide facts about the environmental consequences such as "the environmental effect of throwing away one slice of ham is larger than the environmental effects of producing one package of ham" ("Take it easy" campaign).

<Insert Picture 2 here>

In these campaign materials, the environmental consequences of food waste are in many cases compared to other types of pollutants such as cars, plastic packages and factories, which are often in the centre of environment discussion. The negative environmental consequences of one's actions are usually difficult to understand because they are not connected to the present moment but are often a

matter of the future, and related issues such as CO2 emissions or climate effects are not visible. Hence, a picture of a car or several cars in the context of food waste illustrate that food waste causes high pollution rates and is environmentally unfriendly (as in Picture 2). Some of the campaign materials also include signs with more positive meanings. For instance, one of the analysed materials includes a campaign logo of a plate, knife and fork, as well as green arrows on the plate. The arrows refer to recycling and the circular economy, both of which have very positive connotations in today's society. Through this visual design, the material proposes that reducing food waste can cause the consumer to be perceived as pro-environmental. By illustrating the negative environmental consequences of food waste in a concrete manner and depicting decreases in food waste with as environmentally friendly, these campaign materials assume that the consumer cares about as well as is motivated by environmental issues.

Ethical consumer. The third assumption identified in the campaign materials was the ethical consumer. Here, the word "ethical" refers to moral principles of right and wrong (Cambridge University Press, 2018). Although everyone has their own perception of what is right or wrong, a person's social environment has a significant impact on these perceptions. The campaign materials carrying this assumption emphasise food waste as morally wrong and champion reducing food waste as the right thing to do. The campaign reflecting this assumption vary quite widely and include different ways to illustrate this assumption. The signs identified in the campaign materials include, for instance, *different food products, faces, trash bins and bags, kitchen appliances, plates* and *human eyes and mouths*. In addition, the word "right" and similar variants are repeated. In addition, mentions about consumers suffering from hunger were identified.

<Insert Picture 3 here>

The majority of the campaign materials reflecting this assumption include anthropomorphised food products. Products such as eggs, lemons and milk are given human eyes and mouths. By giving faces and voices to food products, the campaign materials connect the potential leftover food with human feelings and thoughts (as in Picture 3). Although some of the campaign materials carry a rather lecturing tone, a more positive approach was also identified. For instance, in one campaign material that includes a cartoon, food products are having a conversation about "good" or "heroic" consumers who made exactly the right amount of food for a party so that there were no leftovers. In addition to humanising food products, some campaign materials brings up the reality of people starving in other parts of the world. This suggests the virtuous "duty" of the wealthy well-fed citizens to take care of the underprivileged, an idea that is strongly rooted in the social system of Nordic countries. The campaign materials carrying the assumption of ethical consumer have a lot to do with the conceptions of right and wrong. By assuming that the consumers behave according to their moral principles and norms, the campaign materials include several signs and meanings intensifying the idea of "wrongness" and the immorality of wasting food and attempt to evoke strong emotions by appealing to the consumer's moral principles.

Elaborating on the orientation-related assumptions

The campaign materials assume that the consumer is driven by economical, environmental, and/or ethical influences. The materials vary in their overall orientation toward the issue of food waste, thus answering the question of how consumers are assumed to be driven. One of the reasons food waste is considered to be a "wicked problem" can be traced back to its multidimensional nature, in connection with economic, environmental and social problems (see e.g., Papargylopoulou, 2014). As the issue of food waste can be approached from multiple viewpoints, also the orientations of the consumers can vary. Table 2 summarises the identified assumptions related to consumer orientation

and drive. The identified assumptions are reflected with the help of the two research questions: "How is food waste portrayed?" and "How is the consumer portrayed?".

Table 2. Assumptions related to orientation

ASSUMPTION	FOOD WASTE AS . . .	CONSUMER AS . . .
Economical consumer	a waste of money	rational money saver
Environmental consumer	an environmental problem	responsible for the environmental consequences
Ethical consumer	wrong or bad	ethical actor who cares about food and others

Assumptions about the consumer related to agency

Childlike consumer. It was identified that certain campaign materials reflect the assumption of childlike consumers who have limited agency and capability to change their behaviour. The signs of this assumption include *plates, trashcans, chefs*, *people, police and anthropomorphised food products and animals.* The campaigns' text use different tones including commands such as "take as much as you can eat" ("Zero leftovers" campaign) as well as jokes and wordplays (not always even related to the issue of food waste).

<Insert Picture 4 here>

Two broader meaning categories were identified in in the campaign materials carrying this assumption. First, there are signs that reflect some kind of an authority. The materials include commands or direct guidelines, such as how much food one should put on their plate. In this way, the materials act as authority figure that has the power to tell consumers what they should do. Explanations of "why" are absent. The other broader meaning is connected to the "active agents" in the campaign materials. Some of the materials portray anthropomorphised food products or animals that act like human beings. This kind of representation resembles children's books, which often tell

stories with anthropomorphised animals as main characters. Furthermore, the materials include amusing elements (jokes and wordplays) similar to children's books and shows (as in Picture 4). These campaign materials reflect the assumption of a naive, reactive childlike consumer. The consumer is treated as though they will change their behaviour regarding food waste based on what they are told to do or with the help of a funny story.

Uninformed consumer. The uninformed consumer refers to the assumption that consumers do not know enough about the issue of food waste. The focus is strongly on the current food waste situation and the consequences of it. These campaign materials include signs such as *numbers, infographics, food products*, *trash bins* and *trash bags*. The tone is quite neutral and the focus is on the facts such as "every tenth piece of bread, potato or fruit ends up in waste" ("Waste week" campaign) or questions such as "Do you know what the best before date means?" ("Best before 2017" campaign).

<Insert Picture 5 here>

Textual elements play a central role in these campaign materials. Sometimes the picture, an apple for instance, is depicted in the background while the text constitutes the most important part of the campaign material (as in Picture 5). The presented numbers and percentages highlight meanings related to the severity of the food waste situation. The textual elements' neutral tone used in the materials also reflect a "news-like" approach of sharing facts. The campaign materials reflect the assumption that consumers are not aware of the real quantities or consequences of food waste and just need more information in order to change their behaviour. Most of the materials does not give much information on what could or should be done differently.

Active consumer. The sixth and the final assumption identified in the campaign materials is the active consumer. The campaign materials reflecting this assumption portray the consumer as

capable of and motivated to change their behaviour if the tools and inspiration for change are provided. The signs within these campaign materials include *food products, pictures of consumers, dishes* and *human hands*. The textual elements within these campaign materials consist of recipes, concrete tips on reducing food waste i.e., "using clean spoons in jars lengthens the life of pesto, olives and salsa etc." ("Don't waste food" campaign) and inspirational quotes directed at consumers such as "be creative, challenge yourself and acquire cooking skills" ("Waste fight" campaign).

<Insert Picture 6 here>

The signs are connected to the concrete actions of what the consumer could do to reduce food waste. Overall, the campaign materials reflecting this assumption convey fairly positive meanings related to the appreciation of food and active, motivated nature of the consumer. The materials focus on the possibilities of future action instead of the current situation or the negative consequences of food waste (as in Picture 6). The portrayal of potential food waste in a positive light, emphasising the beauty and aesthetics of leftover food, can also be seen as a renegotiation of the typically negative connotations of food waste. This assumption that consumers are active and involved is strongly connected to the consumers' concrete behaviour and focuses on how they can reduce food waste in their everyday life. In addition, this assumption is connected to broader sociocultural meanings regarding food waste and food waste reduction. Consumers are assumed to change their behaviour related to food waste when inspired and motivated, and broader sociocultural meanings around the issue make the tone and portrayal more positive.

Summarising agency-related assumptions

Childlike, uninformed and active consumers differ from each other in their assumed level of agency. The level of agency here refers to the ability to act in order to reduce food waste. While the

orientation-related assumptions focused on the how consumers are seen to be driven, the agency-related assumptions reflect the capabilities and knowledge level of the consumers. Table 3 illustrates the assumptions by focusing on the two research questions "How is food waste portrayed?" and "How is the consumer portrayed?".

Table 3. Assumptions related to agency

ASSUMPTION	FOOD WASTE AS . . .	CONSUMER AS . . .
Childlike consumer	not allowed	a reactive actor
Uninformed consumer	a significant problem	unaware of the consequences and amount of food waste
Active consumer	an opportunity	eager to "take charge" if given the right resources

Discussion: Tracing the foundations of the identified assumptions

As the findings suggest, the analysed visual campaign materials reflect different kinds of assumptions about consumers as viewed from two perspectives: orientation and agency. Although these six assumptions are introduced by highlighting their specific features, it is important to remember that these assumptions also overlap. The assumptions do not necessarily rule each other out, but sometimes even complement one another. For instance, the assumption of the uninformed consumer was often identified along with the assumption of the economical or environmental consumer. However, the assumptions of the childlike consumer and the active consumer were not identified in the same materials since their overall idea of agency is so different. Some assumptions pair better with other because of their theoretical foundations, as each assumption can be viewed in light of the broader theoretical approaches to consumer behaviour change reviewed in the second section of this chapter.

The assumptions of an *economical, environmental* and *uninformed consumer* can be seen as following the cognitive approach to consumer behaviour change. These assumptions rely strongly on the thinking process happening inside consumers' heads and the consumers' rationality in making a

change in their behaviour after receiving new information. By emphasising facts about the current food waste situation, either from a financial or environmental perspective, the consumers' capability to change is taken for granted. The effectiveness of this approach and the consumer assumptions it reflects, however, have raised concern. Especially among Western consumers, it can be argued that consumers are well-informed about the environmental, social and economic issues around food waste (Evans, 2012). However, the consumers' knowledge has not lowered levels of consumer food waste in the developed countries.

The assumption of an *ethical consumer* can be connected to the affective approach. Emotional appeals (both negative and positive) often play a significant role in social marketing campaigns (Hastings et al., 2004). However, as discovered in earlier research, wasting food is already connected with feelings of guilt; therefore, evoking guilt and other negative emotions might not lead to the desired outcome when it comes to food waste reduction (Evans, 2012; Gjerris & Gaiani, 2013). The conative approach, on the other hand, is connected to the assumption of a *childlike consumer* (particularly the campaign materials carrying authoritative meanings). The conative approach has been criticised due to its "paternalistic" ideas of policymakers and marketers as "nudging" consumers toward a desired outcome (see e.g., Hausman & Welch, 2010). It is important to take this criticism into consideration when choosing to implement the conative approach in a campaign.

The sixth assumption, an *active consumer*, is slightly more challenging to connect with the broader approaches to consumer behaviour change in social marketing. The assumption focuses not only on the behaviour of the consumer—following the conative approach—but can also be traced back to the sociocultural approach. For instance, in representing the skills, meanings and materials around food waste reduction, this assumption can be viewed through the practice-theoretical lens of behaviour (see e.g., Närvänen et al., 2016). It can be argued that the assumption of an active consumer takes a shift up from the individual level to everyday societal practices and sociocultural meanings around the issue. The importance of positive sociocultural meanings around food waste and the

agency of the consumer have also been introduced in earlier literature. In their article, Närvänen et al. (2018) suggest that taking a more positive stance toward food waste and food waste reduction, and also providing space for consumers to participate and contribute to the discussion, could offer fruitful way to create novel ways to approach food waste reduction though campaigns and initiatives.

Building upon different theoretical approaches to consumer behaviour change, the identified assumptions about consumers reflect certain ideas of how consumers can or should act. For instance, the varying assumptions related to consumers' agency allow different kind of space for human action. For instance, the assumption of a childlike consumer does not take into consideration the consumers' willingness to think by themselves and make decisions without persuasion. The assumption of an uninformed consumer, however, speaks to the consumers' rational side and does not attempt to provoke action based on feelings or the social environment.

Conclusions

The purpose of the research was to *identify and analyse assumptions about consumers in food waste reduction campaign materials.* As a result of intensive analysis and interpretation, six main assumptions were identified. The identified assumptions reflected either the assumed orientation of consumers or the assumed agency of consumers. These assumptions also reflected different theoretical approaches to consumer behaviour change adopted in social marketing research.

Although initiatives and campaigns have gained increased interest among food waste researchers (see e.g., Principato, 2018; Aschemann-Witzel et al., 2017), their focus has differed from the purpose of this study. Instead of focusing on the characteristics or aims of the campaigns, this research has taken a closer look at the visual materials of different campaigns and has emphasised the consumer; the target of the campaign materials. Taking a close look at the visual campaign materials, it was possible to identify different assumptions reflected by them. The assumptions about consumers

have not previously been evaluated within food waste literature although the assumptions are directly connected to the ways in which consumers can be persuaded to change their behaviour.

The findings of this research reflect an emphasis on the cognitive approach that focuses on the rational perspective of consumer, an approach that is typical of social marketing research (see e.g., Brennan et al., 2014; Spotswood & Tapp, 2013). However, as the findings from previous research show, the problem of consumer food waste is seldom connected to the lack of knowledge (see e.g., Evans, 2012). Thus, other perspectives and approaches are needed in order to facilitate change. To date, food waste reduction has remained a narrowly researched phenomenon within social marketing with few exceptions (e.g., Pearson & Perera, 2018). By drawing on theoretical foundations of social marketing and consumer behaviour change, this research contributes to this under-researched area and highlights recent food waste campaigns' approaches to consumer behaviour change.

This research illustrates how each visual material, even if small, aimed at reducing consumer food waste can carry several meanings that reflect different kinds of assumptions about consumers. Following the constructionist perspective, these kinds of recurring assumptions about consumers shape the reality around the food waste issue and steer the consumer's position in the fight against food waste.

Implications for food waste campaign initiators

In addition to its contribution to academia, the purpose of this chapter was also to provide "food for thought" for practitioners. Both the assumed orientation of the consumer and the agency of the consumer should be critically evaluated when establishing any type of new initiative or campaign targeted at consumers. Different assumptions arise from different perspectives on consumer behaviour change, all of which having their strengths and weaknesses. Instead of copying ideas from existing campaigns, each initiator should think about their own perspectives and more detailed aims.

For instance, while price-centric consumers typically report low levels of food waste (Achemann-Witzel et al., 2018), grounding the entire food waste initiative in the assumption of an economical consumer may not turn out to be very successful.

Furthermore, it is important for campaign initiators to know and understand their target audiences. The power, the sources of information and media literacy of consumers are currently better than ever before. Although many of the campaign materials analysed in this study did not include direct representations of the consumer, it was possible to make conclusions about the assumptions of the consumer beyond the campaign material by identifying their different signs, meanings and their connotations. Conveying strong assumptions about consumers can easily raise neglection or even resistance toward the issue if consumers do not feel related to the assumption. As has been suggested in previous research, initiators should understand consumers as a heterogeneous group of people with differing standpoints on food waste; to effectively approach different groups of consumers, the initiator should adopt different strategies and viewpoints on behaviour change (Aschemann-Witzel et al., 2018).

The underlying reasons for food waste are very complex and connected to different issues. It is easy to say that the problem will be solved when consumers stop wasting food. However, it is not enough that consumers are simply told to stop wasting food or told that wasting is wrong. There is a plenty of research focused on the causes of consumer food waste (see e.g., Evans 2011, 2012), and some research has also been interested in the ways consumers have been able to reduce food waste (see e.g., Närvänen et al.; 2016; Mattila et al., 2018). These studies offer fruitful foundations for campaign initiators in planning and anchoring their campaigns.

Limitations and avenues for future research

The findings of this research are based on food waste campaign materials published in Finland and Sweden, so it is important to notice that certain themes and issues elaborated here may be strongly

related to Finnish and Swedish cultural contexts. The assumptions about consumers might look different if the same type of data was collected and/or analysed in another cultural context. Furthermore, due to the analysis method, the data utilised in this research consisted only of visual materials for food waste campaigns that were available online. This means that the analysis did not reach the multiple events, videos or websites connected to these food waste initiatives. If other materials were also included in the data, more assumptions might have been identified. This research did not focus on the specific target audiences of the analysed campaign materials. However, different assumptions are likely to resonate with different groups of people so it is possible that the campaign materials reflecting a certain assumption have targeted a specific segment of consumers.

This research opens up several avenues for future research, both within food waste research and social marketing. Future research could explore the assumptions about consumers viewed from the consumers' perspective by interviewing a group of consumers, for instance, using photo elicitation techniques (see e.g., Harper, 2002). While the success of different kinds of social marketing programs are difficult to measure, this kind of approach could offer rich, qualitative information about how consumers feel about or relate to different types of assumptions. A greater focus on the entire journey of a food waste campaign from the founding idea to the final outcome could also offer interesting insights about the ways in which the idea and assumptions change during the process through negotiations among different actors such as campaign planners, campaign designers and coordinators.

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