



Towards a circular economy in food consumption: Food waste reduction practices as ethical work

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Abstract

This article explores the transition towards a circular economy in the context of household food waste practices. The research concerning the circular economy has mainly focused on engineering or the processes of production, manufacturing, business and industry. However, the transition towards a circular economy requires, in addition to new technologies, infrastructures and innovations, a societal change and a change in everyday practices. In this article, we address this by examining the everyday practices of food waste reduction in households as ethical work. We claim that the intertwined practices, institutions and policies of the circular economy create moral categories and responsibilities in everyday food consumption. Thus, the transition towards circular economy requires everyday ethical work carried out by consumers. However, our analysis also brings out some possible challenges related to this transition that has not yet been accomplished. Our research materials consist of 26 food waste diaries collected from Finnish households and participant observation in 4 leftover cooking workshops organized with the Finnish Martha organization. We adapt Michel Foucault's conception of ethics, focusing on the constitution of ethical subjectivity in food waste practices. Moreover, we utilize practice theoretical approach that has been widely used in food waste and sustainable consumption studies and connect it with Foucault's theory. Our results suggest that in order to understand the circular economy as a moral economy, it is crucial to note the moral complexity of everyday life that results from partly contradictory ethical sensitivities and practices.

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Introduction

Production of food waste is currently significantly affecting the sustainability of the food system, alongside the consumption of meat and dairy products. Due to the economic, environmental, and social significance of food waste, reducing it is also part of the European Union's Circular Economy Strategy (Prieto-Sandoval et al., 2018). The aim of this strategy is to increase resource efficiency by maintaining the value of materials, through closing the loop of the product life cycle (EU Commission, 2014). Thus, the transition towards a circular economy (CE) requires changes in technological infrastructures, business models and consumption practices (Geissdoerfer et al., 2017). However, research concerning the CE has mainly focused on the engineering domain and the processes of manufacturing and production (Korhonen et al., 2018). More research is needed for understanding the transition in the socio-material underpinnings of everyday life that the transition towards a CE requires (Mylan et al., 2016).

This article argues that a CE is a moral economy (Gregson et al., 2015). This refers to an economic approach that aims to assess the moral justifications of the economic organization and, moreover, the responsibilities and possibilities of acting in its context (Sayer, 2015). In the context of the CE, moral categories that are created through the moral problematization of practices perceived as unsustainable or morally wrong are part of the logic of economic organization (Gregson et al., 2015). For example, such commonplace food consumption practice as reusing leftovers is a morally and ethically charged activity that constitutes consumer subjectivity. This article takes the practices of living with the abundance of food as its starting point.¹ Thus, our perspective is based on the necessity of dealing with excess production (Valkonen et al., 2019). As things stand, current production volumes force people to find environmentally and morally sustainable ways to live with food waste and other excess materials.

To explore this subject, we adopt Foucault's (1994) theory on ethical subjectivity to examine the practices of reducing food waste. Foucault's (2003) theory enables not only the examination of individual consumer practices but also the suggestion of wider modes of ethical action in society as well. In addition to Foucault's conception of ethical subjectivity, our theoretical framework draws from the practice-theoretical approach (Evans et al., 2017; Reckwitz, 2002; Shove, 2010). Practice theories have been previously used as an analytical framework in research concerning sustainable consumption in general (Gram-Hanssen, 2011; Plessz et al., 2014; Shove, 2003) and food waste in particular (Evans, 2011; Mattila et al., 2019; Närvänen et al., 2016; Southerton and Yates, 2015).

We address the practices of food waste reduction as everyday ethical work on the self that aims to transform food consumption practices towards sustainability. Our research is guided by the question, *how is ethical subjectivity constituted for reducing food waste in the context of circular economy?* Our research materials consist of participant observations from leftover cooking workshops organized with the Finnish Martha Organization and food waste diaries from Finnish households. The study participants are mainly people interested in sustainability and the reduction of food waste and thus construct their ethical subjectivity in this context. Although we adapt the Foucauldian approach to ethics, we also perceive that the ethical subjectivity in relation to food waste is constituted in situated and sometimes ‘messy’ mundane events (Woolgar and Neyland, 2013). Based on this, we perceive the ethical relation as constantly produced and situated in everyday practices, not simply internalized by our participants.

The circular economy, food waste and practice theory

The CE can be defined as an alternative to the so-called linear economic model of ‘take, make, and dispose’ perceived as unsustainable (Ness, 2008). The transition to a CE requires not only improved treatment of waste but also the curtailment of disposal (Ghisellini et al., 2016). Thus, the implementation of a CE calls for radically alternative solutions in the whole economic model and resource management (Ghisellini et al., 2016). Moreover, some researchers have also emphasized the importance of the connection between the generation of (food) waste and waste management (Alexander et al., 2013) – in CE, the use of waste for profit may conflict with the aim to protect the environment by reducing waste (Valkonen et al., 2017).

The fields of industrial ecology and both ecological and environmental economics have been the most significant domains to date for research concerning CE (Ghisellini et al., 2016; Korhonen et al., 2018). However, the research on CE has paid less attention to consumers and consumption. This would be crucial for better understanding the transformation to a CE, since the transition requires changes in everyday consumption practices (Mylan et al., 2016). As Hobson (2016) has argued, ‘[E]xtant academic, policy, and business-led analyses frame transformations towards the CE as predominantly issues of innovation, technical systems, fiscal and business incentives, and reformulated business models’ (p. 89). To fill this gap in research, we analyse the transition towards a CE from the viewpoint of everyday food waste practices in households.

Our research takes place in Finland, where food waste became a widely discussed problem after the Finnish Institute for Agriculture and Forestry (MTT) began investigating it at the beginning of the 2010s (Raippalinna, 2019). Like in other countries in the Global North, most of Finland’s food waste emerges in households – the amount of food wasted annually by households is 120–160 million kilograms (Natural Resources Institute Finland (Luke), n.d.). In addition,

Finland's public discourse is affected by EU objectives for consumer-level food waste reduction (Raippalinna, 2019).

We adopt the practice-theoretical approach in our analysis (Hargreaves, 2011; Warde, 2014). According to a much-cited definition by Reckwitz (2002), a social

‘practice’ (Praktik) is a routinized type of behaviour which consists of several elements, interconnected to one other: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational knowledge. (p. 249)

Practice theory is increasingly applied in the domain of sustainability research because it allows consumption to be analysed as a social phenomenon (Corsini et al., 2019). Some of the previous practice-theoretical research concerning food waste and sustainable consumption has stressed that sustainability policies cannot be targeted only to change the actions of individual consumers while the material and social contexts of (over)consumption remain unchangeable (Evans, 2011; Evans et al., 2017; Shove, 2003). Thus, research on sustainable consumption should shift focus from individual consumers to the collective, routinized, and mundane aspects of consumption (Gram-Hanssen, 2011). Moreover, Sahakian and Wilhite (2014) state that in the context of sustainable consumption, agency is distributed between people, objects and infrastructures that influence and are influenced by everyday life. Thus, unsustainable behaviour cannot be changed simply through top-down management or behaviour change; rather, the surrounding circumstances must be addressed as well.

Social scientific research concerning food waste and sustainable consumption has paid little attention to the transition towards the CE, apart from the research of Mylan et al. (2016) on domestic food provisioning. However, practice-theoretical food waste research has shown, among other things, that the social, material and temporal contexts of eating are important for understanding the production of food waste in households (Southerton and Yates, 2015), that preventing food waste through cooking from leftovers requires varied culinary skills and knowledge (Cappellini, 2009; Närvänen et al., 2016), and that the production of food waste is a consequence of keeping a family well-fed (Watson and Meah, 2012). It has also acknowledged the significance of nonhumans in the production and reduction of food waste (Mattila et al., 2019). Moreover, Alexander et al. (2013) have pointed out that the cause for household food waste can also sometimes be earlier in the food chain – for example, household food waste might emerge from too big portion sizes.

From these viewpoints, the material and social contexts of everyday life and the embodied knowledge are central to the production and reduction of food waste. In line with the above, we approach food waste reduction as a social practice, emphasizing the dynamics between ethical action and persistent socio-material practices that delimit transformation. We connect previous practice-theoretical work on food waste and sustainable consumption studies with Foucault's (1994) theory concerning ethical subjectivity. According to Reckwitz (2002), Foucault's late work on ethics can be perceived as ‘praxeological’. However, Foucault's work

has not been widely used in practice-theoretical research on food waste or sustainable consumption, apart from Hawkins' (2006) research concerning the ethical relationship to waste. Thus, this article deepens the understanding of ethical subjectivity in practice-theoretical research on food waste.

Moral economies and the constitution of ethical subjectivity in food waste reduction practices

We approach the transition towards the CE in everyday practices through the concept of moral economy. Gregson et al. (2015) have pointed out, in their research concerning the CE and resource recovery in the EU, that a CE is a moral economy, since there are right and wrong ways to circulate materials. By referring to the discussion concerning moral economy, we aim to highlight that the practices, institutions and policies connected to the CE create moral categories in the mundane practices of everyday life. These categories could be expressed, for example, through obligations such as recycling food waste. Thus, the concept of moral economy is useful in understanding the transition to the CE at the level of everyday life.

Our analysis on the moralities of the CE is guided by Foucault's (1994) conception of ethics as arts of existence. Foucault (1994) states that the self is not given to us and that to become ethical subjects, we have to constitute ourselves as ethical beings. For Foucault (1994), the constitution of the ethical self is not self-centred action – it is about creating an *ethos*, a way relating to others. He divides the arts of existence into four techniques of the self: ethical substance, mode of subjectivation, self-forming activity and *telos* (Foucault, 1994: 263–266). Ethical substance refers to the part of the self that is worked over by ethics, in other words, the matter of the ethical work (Foucault, 1994: 263–264). The mode of subjectivation means 'the way in which people are invited or incited to recognize their moral obligations' (Foucault, 1994: 264). Self-forming activity refers to the measures we take to moderate ourselves as ethical subjects. The fourth dimension, *telos*, means the objective of our moral behaviour (Foucault, 1994: 263–266).

Foucault's conceptualization of ethical subjectivity adds to the understanding of the ethical practices of food consumption and the CE as a moral economy by showing the concrete work consumers do to evaluate, sustain and transform their practices. Through this, it enables us to address the possibilities for consumer agency in the context of the transformation to a CE. Referring to Foucault (2003), the ways in which people form ethical subjectivity are not invented by the individuals themselves. Rather, they are based on the models suggested by society, social group, or culture (Foucault, 2003). Thus, using Foucault's conception enables us to take a look not only at the ways our participants act as individuals but also at the modes of ethical action suggested more widely in the surrounding society or culture. It also allows us to examine the limitations that practices bring to the enactment of ethical behaviour and how these difficulties in following moral

principles are justified, explained and rationalized by our participants. Referring to Shove (2010), our analysis of the transformation of the practices does not perceive our participants as ‘autonomous agents of change’ (p. 1279). Rather, we perceive that daily domestic conventions ‘are sustained and changed through the ongoing reproduction of social practice’ (Shove, 2010: 1279).

Research materials and methods

Our research material consists of participant observation in 4 leftover cooking workshops organized with the Finnish Martha organization² in spring 2018 and 26 food waste diaries collected from Finnish households during spring 2019. The participant observation material was collected as a part of a research project concerning the reduction of food waste on the consumer level, and the food waste diaries are part of the first author’s PhD dissertation project. The workshops were documented using the EthOS mobile application,³ designed for ethnographic research. Our research can thus be seen as ethnographically informed. However, it differs from traditional ethnographic research, since it did not include long-term field work in a ‘natural’ field (Emerson et al., 1995).

In any case, this kind of data enables us to observe the ethical considerations of the participants, since the cooking workshop focused on the reduction of food waste by cooking creatively from leftovers. Furthermore, while it is difficult to gain access to the participants’ everyday lives through traditional participant observation at home, this method offers us a resource-efficient way of accessing the phenomenon at hand (Sirola et al., 2019). Four workshops were designed in cooperation with the Martha organization’s specialist, and they lasted from 3–4 hours, with a maximum of 10 participants in each.

In addition to the participant observation material, we analyse the food waste diaries to achieve a closer view of people’s everyday practices related to food in their homes – the diaries enable us to observe the participants’ mundane, routinized practices. Diaries enable regularity, personality and contemporaneity in data collection (Alaszewski, 2006). Thus, the diaries enable us to analyse concrete everyday practices, rather than only observing the workshops and relying on participants’ descriptions of their practices. Through these two data sets, we illustrate how consumers perform their everyday food-related practices and how they aim to modify and transform them. The diaries were kept by a casual sampling of people recruited mainly from different Finnish Facebook groups (Puskaradio Seinäjoki, Ruokahävikkiryhmä, Tampere-ryhmä, Vegaani-ryhmä) and by sharing the research call on the first author’s Facebook wall. The diaries were kept for a period of 2–4 weeks by the participants.

The participants of our study are mainly women, and most live in the biggest cities of Finland. It is crucial to note that most of the participants are notably concerned about food waste and the environmental issues related to it. This emphasis in our data results from the simple fact that it is hard to get people with no interest in the subject to take part in the research. Participant

backgrounds obviously affect the ways in which they verbalize their practices, and this unavoidably has an effect on the results of our research – but it would be hard to answer our research question with data from people with little or no interest in the subject.

The quotes presented in the following section of this article have been translated from Finnish to English by the authors, with the aim of retaining as much idiomatic meaning as possible. The diary material and the participant observation material were both encoded using the Atlas.ti software. The first author of this article did the preliminary coding, and the other authors commented on the emergent findings. The codes were arranged according to Foucault's (1994) four dimensions of ethical subjectivity.

Analysis

In this section, we analyse the four dimensions of ethical work carried out by consumers in the practices of reducing food waste. Our focus is on how everyday practices enable and restrict possibilities for making food consumption practices more sustainable through ethical work on the self.

Ethical substance

The ethical substance refers to the part of the self that is perceived to need moral processing (Foucault, 1994). The ethical substance in the context of food consumption is articulated very clearly throughout the data: Current food consumption practices are perceived as wasteful and unethical, and food consumption thus has to be modified. In the data, the disposal of food is rather often described as a sin or waste. Wasting food raises feelings of annoyance, disturbance and anger. Frugality with food is seen as a moral duty. This is connected with the environmental concerns related to food waste, but it also reflects a more direct moral obligation to respect food. In the following quote, a participant describes how she perceives the disposal of food as a sin:

[...] Though I have a passionate attitude towards the subject, since I think that disposing of food is a kind of sin. Climate change forces people to observe their own wastefulness. (Diary entry, a 43-year-old woman living with her 2-year-old child)

The participant recognizes that food consumption is a significant factor affecting climate change. She sees the wastefulness of people as the main reason for the state of the planet; that is, the participant considers that people have to modify their wasteful food consumption practices for environmental reasons. The participant's statement has a strong moral charge – she connects Christian ethics (wasting food is a sin) to the moral obligation to act in a way that minimizes the effects of the consumption on the climate. Thus, the reason for avoiding food waste is not the biblical virtue of frugality but instead the current ecological crisis that forces

people to observe their consumption behaviour. However, it is not enough to be aware of the problem; concrete and material actions must be taken to modify consumption (Koskinen et al., 2018; see also Evans, 2011; Southerton and Yates, 2015). Unfortunately, awareness does not often easily translate into action, as the following quotations on coffee consumption illustrate,

In the morning, I realize, I always make 2.5 cups of coffee. I drink only one cup. This feels stupid, I have not fixed it, I've been too lazy to do that. I count this as waste. I decide to try to be better. (Diary entry 20.2.2019, a 22-year-old woman living alone)

I still haven't learned to make less coffee. (Diary entry 23.2.2019, same person)

Coffee still ends up in the trash!! (Diary entry 4.3.2019, same person)

The diary acts as a disrupting element that forces the participant to notice her wasteful routinized behaviour. However, as the quote suggests, turning this observation into action and actually making less coffee is not straightforward. Referring to Evans (2011), domestic conventions are intertwined with the social and material organization of everyday life. It is easy to make too much coffee because coffee is readily available and using a coffee maker is effortless. In this quote, the art of existence is formed through attempts to modify the resilient everyday reality.

The rational objective to protect the environment is not the only reason raised for the avoidance of food waste. Previous research on food waste has shown that existing cultural logics make people feel guilty about throwing food away (Watson and Meah, 2012). A large variety of emotions is often present in food-waste-related practices, such as excitement when preventing food waste by cooking from leftovers or guilt when disposing of spoiled food. In the following field note, a participant in a leftover cooking workshop describes her feelings towards the disposal of food:

A participant tells me that soup is a dish that they usually cook from leftovers. In the winter, she does not buy tomatoes since they do not taste good and it is terrifying if they end up as waste. (A field note from a food waste cooking workshop)

The participant describes it as 'terrifying' to see food wasted. This participant does not articulate clearly why the disposal of food is so upsetting or terrifying, instead assuming that her feelings are in some way commonly shared and understood. As Reckwitz (2002) has pointed out, 'every practice contains a certain practice-specific emotionality' (p. 254). Thus, according to him, emotions are not only the internal feelings of individuals; they also belong to practices as a form of knowledge (Reckwitz, 2002). Negative feelings are part of the practice of disposing of food. Thus, in addition to the rational objective to protect the environment from the effects of overconsumption, emotions are central to the modification of food consumption practices.

Mode of subjectivation

In Foucault's (1994) conception of ethics, the mode of subjectivation invites us to recognize moral commitments, and it further refers to the ways in which individuals constitute their relation to a moral rule and recognize themselves as obligated to put it into practice (p. xxx). As our analysis concerning the ethical substance has illustrated, the matter of ethical work is unsustainable food consumption practices and the emotions connected with them. Thus, the moral rule of food waste practices could be 'do not waste food'. Based on this, the central moral commitment in our data is to avoid wasting food and thus make consumption volumes more reasonable. This has to be done in order to maintain the world that we live in – in other words, take care of the planet so that both we ourselves and future generations can live on it.

The relation to this moral obligation to avoid food waste is formed through the modification and observation of one's own and other people's behaviour. In the food waste diaries, this became particularly apparent when our participants told us about observing the actions of their family members and educating them. Many of the participants described irritation or frustration with how their family members, friends or acquaintances treated food. Thus, acting as an educator or observer is part of forming the relationship to the moral obligation to avoid wasting food. A participant describes her frustration with her children as follows:

[...] The way our children treat food sometimes makes me angry. They do not scrape kettles etc. properly and always leave a little food in the bottom of the kettle. They might also take too much food [...] I persistently try to eat their leftovers, even though I am 100% vegetarian and occasionally on a vegan diet. I also try to remind my children that they should not dispose of food. (Diary entry, a 40-year-old woman living with her husband, three children and three cats)

It is important for the participant to train her children to consume food wisely and make a note of it if they do not act in the right way. Unfortunately, her children do not always act in the way she wishes, and she thus eats their leftovers, even though they do not fit in her diet. Through these actions, she creates her ethical relation to food. Referring to Cappellini and Parsons (2013), revaluing and consuming leftovers is a practice towards food that signals family membership. Thus, while striving for the ethical aim to avoid food waste, the participant also manifests her role as a member of the family by enacting the practice of eating her children's leftovers. In doing so, she is giving up on her other preferences in order to fulfil a greater aim.

In addition to the environmental concerns, the prevention of food waste is important for our participants because they often feel a sense of moral duty towards people who do not have enough food. According to FAO of the United Nations (n.d.), 820 million people are going hungry. Our participants often state that it is immoral to waste food while a large group of the world's population suffers from hunger. For example, one participant in the leftover cooking workshop told that she considers her wasteful food waste practices 'wrong' since 'half of the world' suffers

from hunger. Based on this, a sense of moral duty towards people who suffer from food scarcity is often central to relating to the moral rule of not wasting food.

However, care of the self and family is also deeply connected with eating practices, and this might cause contradictions between the avoidance of food waste and taking care of one's health. It is important that the family's food is not spoiled, for example, and that no one overeats. One participant in a leftover cooking workshop considers the importance of safety:

[...] A participant is concerned about the safety of the food offered for the children. She would not offer the children fish after the expiration date has passed – she also says that she is very careful with what she eats, so if the food is fine for her, it is fine for the children. She also says that she sometimes calls her sister, who is a cook, and asks her opinion on whether some food item is still edible or not. (A field note from leftover cooking workshop)

In this quote, the participant points out three methods for assessing the safety of the food: expiration dates, her own assessments and her sister's expert knowledge as a cook. Assessment of edibility based on expiration dates links food to institutional governance – an authority has provided guidelines regarding the safety of the food, and, since eating spoiled fish is a great risk, the participant relies on this for certainty. Moreover, the participant's own assessment is based on her embodied knowledge regarding the safety of the food – 'If it is fine for me, it is fine for the children'. Finally, if the labelled date or the participant's own knowledge is not sufficiently reliable, she trusts her sister's expertise as a professional cook to assess the safety. These different techniques of assessment show the ethical complexity of acting with surplus food in everyday life – you cannot dispose food if you are not completely sure that it is not edible, but however, there is no room for mistakes regarding food safety when you cook for your family.

Thus, the way the relation to the moral obligation to avoid wasting food is formed has much to do with the unpredictable and complex nature of everyday life. In addition to the avoidance of food waste, there are several other demands that shape everyday requirements related to food, such as caring for children. As Meah and Jackson (2017) have pointed out in their research concerning care and convenience, care can be manifested in many ways, and these manners of expressing care do not all cohere with normative beliefs regarding the 'right' ways to, for example, take care of one's health or environment. Thus, the relation to the obligation not to waste food has to be formed in a flexible manner. The need for this flexibility might emerge, for example, from the production of food waste resulting from the unpredictability of how much the children will actually eat. In our data, this has usually been accepted as an unavoidable part of everyday life. A participant describes a frequent situation in her 2-week diary:

I threw away rice that was left on my child's plate, and when we were having supper,
I threw away a half slice of bread that my child did not eat. I did not feel anything

while doing this, since the food waste was not avoidable. (Diary entry, a 43-year-old woman living with her 2-year-old child)

Child care sometimes leads to food waste, and the participant's acceptance of this is manifested through her statement that she did not feel anything while discarding her child's leftovers. This was because the food waste was not avoidable. Obviously, being a good parent does not involve pressing your children to eat too much.

The willingness to take care of oneself by following a healthy diet can lead to food waste as well. For example, one participant describes in her diary how in their household, most of the food waste results from the jars of food stored in the refrigerator, such as pastes, mayonnaise and jam. She explains that these foods usually spoil, since she and her spouse do not eat them regularly, and thus get discarded. In these situations, the commitment to healthy and diverse eating overtakes the moral obligation not to waste. As Evans (2014) has brought out, convention dictates that people should eat properly, and eating mayonnaise and jam every day or pressing children to eat too much does not fit into 'a proper diet'. All in all, even though there is a moral commitment to prevent food waste, these unpredictable and ethically 'messy' situations illustrated by our participants show how the relation to the moral rule against wasting food is not formed straightforwardly. Instead, it is affected by multiple and sometimes contradictory ethical sensitivities, moral obligations, practices and conventions.

Self-forming activity

Self-forming activity means the techniques we use to become ethical subjects (Foucault, 1994). Our participants pointed out several techniques for modifying their behaviour. These are often different techniques to disrupt the wasteful habits rooted in everyday life, such as notes hung on the refrigerator, remedies learned from the Internet, friends, or family, and an overall sense of respect towards the food. In the leftover cooking workshops, participants described that the attitude towards food is very important – you should respect food and not be too picky. However, eating leftover food does not have to be unpleasant at all. Cooking skills and creativity are the key practical techniques to make leftover food desirable and aesthetic. A participant describes how she cooked from leftovers:

There were some salad, sliced raw red cabbage, and a couple pieces of roasted carrot left from yesterday's meal. At lunchtime, I added some tomatoes, sweet pepper, and leafy greens to the meal. I fried the red cabbage and carrots in a pan with seitan kebab. In addition, I cooked some broccoli from the fridge. (Diary entry, a 34-year-old woman living with her spouse)

The participant knows in detail the ingredients that were left from yesterday and what is needed to cook a new meal using them. Her actions show her knowledge,

skills and creativity in cooking. In the data, participants often write that leftover food actually makes cooking easier, since you can just add some new ingredients to an almost-ready meal. In one of the leftover cooking workshops, the participants also stressed the importance of aesthetics in cooking and serving the leftover food. They claimed that beautiful-looking food even tastes better. This is part of the constitution of the ethical self: Food waste is avoided, but in a manner that is pleasant.

However, leftover food is not always beautiful or aesthetic. Leftovers are sometimes eaten out of a sense of responsibility, not for pleasure. For example, eating children's leftovers was rather usual for our participants. A participant describes how he tries to avoid food waste when cooking for his two children:

I try to cook my children the kind of food they like, and if they do not eat all the food from their plates or they have taken it too much, I usually tell them to leave their plates on the table, and I then eat their leftovers. (Diary entry, a 51-year-old man living with his two children)

The avoidance of food waste requires knowledge of family members' preferences. Previous studies on food consumption show that feeding children is demanding work – the food provided cannot be just any food; it has to satisfy the family (DeVault, 1991: 40). Furthermore, eating children's leftovers is a practice that shapes the family's relations – you would not eat leftovers from a stranger's plate, and it is usually one of the parents who eats the leftovers. Eating leftovers is thus an expression of affection (Cappellini and Parsons, 2013). Based on this, in this quote, eating the children's leftovers constructs the ethical self in relation to food and family. This quote does not tell whether this is pleasant for the father or not, but in some parts of our data, food is eaten rather than discarded even if it is unpleasant. In these situations, disciplined elements define the ethical actions in relation to food. A participant describes eating spoiled food:

I ate the food that was left at room temperature overnight, and now my stomach hurts... It was worth it anyway, since I left the food there myself. (Diary entry, a 26-year-old woman living with her husband and dog)

In the quote above, the participant seems to consider that she is responsible for letting the food spoil and thus it is morally right to suffer from the illness that is caused by it. Thus, the mistake of forgetting the food on the table is compensated by taking the risk of falling ill. The sensitivity and intimacy of eating are revealed in a very harsh manner when the food we eat makes us fall ill. However, it is not that usual in our data that the participants would eat spoiled food. Because of the risks and disgust, we have a need to separate from spoiled food to maintain our self, our own being. Thus, it is also important to note that discarding the food that is not edible is an ethical act that constitutes the self (Hawkins, 2006). Based on this, disposing of spoiled food is an inseparable part of domestic practices (Evans,

2011) and cannot be defined only as ‘unethical’ or careless behaviour. Even though wasting food is morally problematic, separating from the spoiled food can be a revealing experience:

We cleaned our fridge and disposed of a bit of spoiled yoghurt, the remainder of the iced tea, a couple of mouldy sweet potato balls, a bit of tofu, and a last piece of pastry forgotten in the fridge. Cleaning the fridge felt good, even though it is a pity to throw food away. (Diary entry, a 26-year old woman living with her spouse and dog)

In the above quote, separating from spoiled food cleanses the personal environment and the self. This kind of need to separate from the spoiled and dirty food is a technique of the ethical self that might sometimes be contradictory with the moral logic of the CE. The disposal of food is unpleasant and problematic, but it is sometimes necessary. Thus, the practices related to our conceptions of cleanliness might sometimes contradict with the ethical aim to prevent food waste (Hawkins, 2006). Moreover, conventions related to cleanliness, such as keeping the refrigerator free of spoiled products, are a normalized part of everyday practices (Shove, 2003). Thus, disposal is also significant for the practices of forming the ethical self (Hawkins, 2006). Most of our participants have the option to recycle their food waste with their condominium’s biowaste recycling bin. However, some of the participants have their own compost bins. A participant tells about her recycling habits:

My relationship to shrivelled carrots and dried bread might be of interest to you: I think that they are material for my bokashi compost bin. They will transform into self-made, nutritious soil for my vegetable garden. They are not worthless waste. I use the bokashi around the year, and I use my condominium’s biowaste bin only for the waste that emerges from my dog’s meat-based foods, such as chicken legs. Thus, the carbon emissions are really low, since using bokashi is a closed-circle activity. (Diary entry, a 67-year-old woman living with her three dogs)

The quote above shows how different recycling practices transform the relation to food and moreover the ontology of the food itself: The food that cannot be used as human nourishment turns into nourishment for plants that are to be eaten. This constitutes a closed circle for food waste. Here, food waste is not shut out of the personal environment to the system of waste management; instead, its transformation becomes part of the daily routine. Thus, some new technologies and material arrangements of living with food waste have potential for transforming food waste practices towards the acceptance of waste, rather than its avoidance (Hawkins, 2006).

Telos

Telos refers to the ultimate goal of the moral behaviour (Foucault, 1994). In our data, climate change is sometimes explicitly given as a major influence on the

willingness to transform wasteful food consumption practices. However, the reasons for the willingness to avoid food waste are not usually stated clearly or explicitly in our data – instead, participants often merely say, for example, that avoiding food waste is important for them, that they have learned at home that food does not belong in the bin, that they avoid food waste for ethical reasons, or that they have an ‘inner will’ to avoid food waste. The following quote illustrates this in more detail:

When asked about the reasons for participating in the leftover cooking workshop, the participant responds that she felt a sense of responsibility towards the subject. (A field note from a leftover cooking workshop)

It seems that the appreciation of food by not throwing it away is a moral aim that connects the food to several different factors, such as environmental concerns, care for distant others, and overall emotional commitments related to food. Thus, we define the *telos* of the moral behaviour as ‘becoming a responsible citizen by avoiding or recycling food waste’ in the context of the CE. In more detail, such a ‘responsible citizen’ aims to create a balanced relationship to the self, other people, and the environment. Through this, the aim is to create a thrifty ethos by doing everything that is possible to avoid the disadvantages of food waste. The following quote illustrates this:

Avoiding food waste has always been important for me. If I go to a restaurant and do not eat all of the food, I always take the leftovers with me. I buy only as much food as I eat. 10 years back, I was a regular dumpster diver, due to my small income and environmental reasons. It felt at the same time good and bad to find raw fruit and cakes in neighbours’ bins. (Diary entry, a 32-year-old woman living with her rabbit)

The prevention of food waste is not limited only to the above participant’s own domestic practices. Utilizing other people’s waste through dumpster diving reveals objects that have been shut out, such as raw fruit and cakes. The participant writes how it felt simultaneously good and bad to find completely edible food from the bin: It is nice to find something useful, but at the same time it reveals the magnitude of wastefulness. Dumpster diving is a radical practice that constitutes the relationship to food and waste in a completely different way from the usual practices of use and disposal. The participant presents herself as a responsible consumer who does everything possible to avoid food waste. She thus points out the practices through which she aims to constitute herself as a responsible citizen in the context of the CE.

Concluding discussion

Based on Foucault’s ethical theory, our analysis has explored through four different dimensions how the work on ethical subjectivity enables the transformation of

food consumption practices into more sustainable and circular ones. Foucault's theory on ethical subjectivity, in combination with practice-theoretical research, provides a useful analytical framework for consumer researchers to address various aspects of ethical consumption, including energy consumption or air travel. Furthermore, the CE literature currently lacks in-depth understanding about consumer culture, which provides consumer researchers an opportunity for cross-fertilization, following the path set by this study.

Our analysis reveals that the ethical substance in our data is the unsustainable food consumption practices and the emotions related to them. Both are modified through ethical work. However, habits are sometimes rooted deeply in everyday routines and thus are not always changed easily. Our analysis suggests that the transition to a CE cannot be carried out only by teaching consumers the 'right' way to do things and providing infrastructures to implement the CE – rather, changing consumption practices is a process of constant transformation and modification.

Moreover, the mode of subjectivation to the moral rule not to waste food is formed through observing and acting as an educator to the family and others. Our participants felt a moral conviction to avoid food waste for environmental reasons and because many people live with a shortage of food. However, as our analysis suggests, concerns about the safety and healthiness of the food, as well as the unpredictability of everyday life with children, result in competing moral principles. Thus, the relation to the moral obligation to avoid food waste has to be formed in a flexible manner.

The self-forming activity in our data is based on creativity, skills, learning new things, anticipation and a right attitude towards food. The creative practices of living with excess food bring joy to everyday life, but however, avoiding food waste also sometimes involves strict self-discipline. All in all, the self-forming activity aims to transform the food consumption process through different techniques of disrupting wasteful consumption practices. However, separating from food waste is also crucial for forming the ethical self. Finally, based on our analysis, the *telos* of the ethical action is to become a responsible citizen in the CE. Through the ethos of thrift, the aim is to create a balanced relationship to the self, others and the nature.

In contrast to those sampled in our data, it is crucial to note that there are plenty of people who are not interested in transforming their practices into more sustainable ones. This is problematic, since the transition to a CE requires, that consumers take the CE as their moral project. It would also be important to research the practices of people who are not that concerned about the sustainability issues of food consumption.

It is crucial to note that if we want to take seriously the moral complexity of everyday life, we cannot assume the CE as a moral economy of simple 'rights' and 'wrongs'. Thus, we must consider that if we want to have a clear view of the CE, we cannot perceive the role of citizens only through the acceptance or rejection of practices that have been designed on their behalf (Hobson, 2016). This is in line

with Mylan et al.'s (2016) notion that 'consumption in the home is far more complex than securing the "right" flow of goods and disposing of the waste in the "right" way' (p. 10). Thus, the discourse on the CE should not slip into moralizing and blaming overspending consumers (Evans, 2011). Instead of such sanctimony, it is important to pay attention to the need for changes in political decision-making and our whole way of life.

Finally, we want to present some possible policy implications related to food waste reduction and the implementation of the CE. Political programmes, such as the EU's CE Strategy mentioned in the 'Introduction' section, appear quite distant from the perspective of everyday life. Thus, more local initiatives to promote the CE are needed. The leftover cooking workshop organized with the Finnish Martha Organization and food waste diaries that were used as research material in this article provide examples of this kind of local means of influence. Finally, although we do not claim that current volumes of disposal are reasonable, our results are in line with sociological research's findings that disposal and waste are necessary for the enactment of domestic practice (Evans, 2011). This is an inescapable impediment to the CE's ideal of ending the production of waste.

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Notes

1. However, our aim is not to claim that all people live in abundance of food – scarcity is part of everyday reality for many people (FAO of the United Nations, n.d.).

2. The Finnish Martha organization was founded in 1899 to promote education regarding home economics, mainly related to food and nutrition, home gardening, and environmental protection, as well as household economics and consumer issues (The Finnish Martha Organization, n.d.).
3. EthOS is an ethnographic observation application available for mobile phones. It allows users to create field notes and add pictures and videos taken and recorded in the field.

References

- Alaszewski A (2006) *Using Diaries for Social Research*. Thousand Oaks, CA; London; New Delhi, India: Sage.
- Alexander C, Gregson N and Gille Z (2013) Food waste. In: Murcott A, Belasco W and Jackson P (eds) *The Handbook of Food Research*. London: Bloomsbury, pp. 471–484.
- Cappellini B (2009) The sacrifice of re-use: The travels of leftovers and family relations. *Journal of Consumer Behaviour* 8: 365–375.
- Cappellini B and Parsons E (2013) Practising thrift at dinnertime: Mealtime leftovers, sacrifice and family membership. *The Sociological Review* 60(S2): 121–134.
- Corsini F, Laurenti R, Meinherz F, et al. (2019) The advent of practice theories in research on sustainable consumption: Past, current and future directions of the field. *Sustainability* 11: 341.
- DeVault ML (1991) *Feeding the Family: The Social Organization of Caring as Gendered Work*. Chicago, IL; London: The University of Chicago Press.
- Emerson RM, Fretz RI and Shaw LL (1995) *Writing Ethnographic Fieldnotes*. Chicago, IL; London: The University of Chicago Press.
- EU Commission (2014) Towards a circular economy: A zero waste programme for Europe. Available at: <https://ec.europa.eu/environment/circular-economy/pdf/circular-economy-communication.pdf> (accessed 28 January 2020).
- Evans D (2011) Beyond the throwaway society: Ordinary domestic practice and a sociological approach to household food waste. *Sociology* 46(1): 41–56.
- Evans D (2014) *Food Waste: Home Consumption, Material Culture and Everyday Life*. London: Bloomsbury.
- Evans D, Welch D and Swaffield J (2017) Constructing and mobilizing ‘the consumer’: Responsibility, consumption and the politics of sustainability. *Environment and Planning A* 49(6): 1396–1412.
- Food and Agriculture Organization (FAO) of the United Nations (n.d.) Hunger and food insecurity. Available at: <http://www.fao.org/hunger/en/> (accessed 21 January 2020).
- Foucault M (1994) *Ethics: Subjectivity and Truth (The Essential Works of Michel Foucault, 1954–1984)* (ed P Rabinow). New York: The New Press.
- Foucault M (2003) The ethics of the concern of the self as a practice of freedom. In: Rabinow P and Rose N (eds) *The Essential Foucault*. New York: The New Press, pp. 25–42.
- Geissdoerfer M, Savaget P, Bocken NM, et al. (2017) The circular economy – A new sustainability paradigm? *Journal of Cleaner Production* 143: 757–768.
- Ghisellini P, Cialani C and Ulgiati S (2016) A review on circular economy: The expected transition to a balanced interplay of environmental and economic systems. *Journal of Cleaner Production* 114: 11–32.
- Gram-Hanssen K (2011) Understanding change and continuity in residential energy consumption. *Journal of Consumer Culture* 11(1): 61–78.

- Gregson N, Crang M, Fuller S, et al. (2015) Interrogating the circular economy: The moral economy of resource recovery in the EU. *Economy and Society* 44(2): 218–243.
- Hargreaves T (2011) Practice-ing behaviour change: Applying social practice theory to pro-environmental behaviour change. *Journal of Consumer Culture* 11(1): 79–99.
- Hawkins G (2006) *The Ethics of Waste: How We Relate to Rubbish*. Lanham, MD: Rowman & Littlefield.
- Hobson K (2016) Closing the loop or squaring the circle? Locating generative spaces for the circular economy. *Progress in Human Geography* 40(1): 88–104.
- Korhonen J, Nuur C, Feldman A, et al. (2018) Circular economy as an essentially contested concept. *Journal of Cleaner Production* 175: 544–552.
- Koskinen O, Mattila M, Mesiranta N, et al. (2018) Hoiva ruokahävikin vähentämisen arkisissa käytännöissä. *Alue ja ympäristö* 47(2): 17–31.
- Mattila M, Mesiranta N, Närvänen E, et al. (2019) Dances with potential food waste: Organising temporality in food waste reduction practices. *Time & Society* 28(4): 1619–1644.
- Meah A and Jackson P (2017) Convenience as care: Culinary antinomies in practice. *Environment and Planning A* 49(9): 2065–2081.
- Mylan J, Holmes H and Paddock J (2016) Re-introducing consumption to the ‘circular economy’: A sociotechnical analysis of domestic food provisioning. *Sustainability* 8: 794.
- Närvänen E, Mesiranta N and Hukkanen A (2016) The quest for an empty fridge. In: Cappellini B, Marshall D and Parsons E (eds) *The Practice of the Meal: Food, Families and the Market Place*. Abingdon: Routledge, pp. 208–219.
- Natural Resources Institute Finland (Luke) (n.d.) *Ruokahävikki ja ruokajärjestelmän kiertotalous*. Available at: <https://www.luke.fi/tietoa-luonnonvaroista/ruoka-ja-ravitsemus/ruokahavikki/> (accessed 27 January 2020).
- Ness D (2008) Sustainable urban infrastructure in China: Towards a factor 10 improvement in resource productivity through integrated infrastructure system. *International Journal of Sustainable Development & World Ecology* 15: 288–230.
- Plessz M, Dubuisson-Quellier S, Gojard S, et al. (2014) How consumption prescriptions affect food practices: Assessing the roles of household resources and life-course events. *Journal of Consumer Culture* 16(1): 101–123.
- Prieto-Sandoval V, Jaca C and Ormazabal M (2018) Towards a consensus on the circular economy. *Journal of Cleaner Production* 179: 605–615.
- Raippalinna L (2019) Mobilising consumers for food waste reduction in Finnish media discourse. In: Närvänen E, Mesiranta N, Mattila M, et al. (eds) *Food Waste Management: Solving the Wicked Problem*. London: Palgrave Macmillan, pp. 289–317.
- Reckwitz A (2002) Toward a theory of social practices: A development in culturalist theorizing. *European Journal of Social Theory* 5(2): 243–263.
- Sahakian M and Wilhite H (2014) Making practice theory practicable: Towards more sustainable forms of consumption. *Journal of Consumer Culture* 14(1): 25–44.
- Sayer A (2015) Time for moral economy? *Geoforum* 65: 291–293.
- Shove E (2003) *Comfort, Cleanliness and Convenience: The Social Organization of Normality*. Oxford; New York: Berg.
- Shove E (2010) Beyond the ABC: Climate change policy and theories of social change. *Environment and Planning A* 42(6): 1273–1285.
- Sirola N, Sutinen U-M, Närvänen E, et al. (2019) Mottainai! A practice theoretical analysis of Japanese consumers’ food waste reduction. *Sustainability* 11(23): 6645.

- Southerton D and Yates L (2015) Exploring food waste through the lens of social practice theories: Some reflections on eating as compound practice. In: Ekstrom KM (ed.) *Waste Management and Sustainable Consumption: Reflections on Consumer Waste*. London; Chicago, IL: Routledge, pp. 133–149.
- The Finnish Martha Organization (n.d.) About the Martha Organization. Available at: <https://www.martat.fi/in-english/about-the-martha-organization/> (accessed 28 October 2019).
- Valkonen J, Kinnunen V, Huilaja H, et al. (2017) Jätehallinta ja ympäristönsuojelu. *Sosiologia* 54(1): 23–40.
- Valkonen J, Pyyhtinen O, Lehtonen T-K, et al. (2019) *Tervetuloa jäteyhteiskuntaan! – Aineellisen ylijäämän kanssa eläminen*. Tampere: Vastapaino.
- Warde A (2014) After taste: Culture, consumption and theories of practice. *Journal of Consumer Culture* 14(3): 279–303.
- Watson M and Meah A (2012) Food, waste and safety: Negotiating conflicting social anxieties into the practices of domestic provisioning. *Sociological Review* 60(Suppl. 2): 102–120.
- Woolgar S and Neyland D (2013) *Mundane Governance: Ontology and Accountability*. Oxford: Oxford University Press.

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