Combating Food Waste:
Three examples of how to save food in Munich

Context Paper

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Outline

This final project plans, implements and evaluates a real life project with the contributions of all three authors and thus goes beyond a merely academic paper. Using the methods we have learned throughout our undergraduate and graduate studies for research and information gathering, we decided to organize an exhibition about food waste. By displaying photographs and explanatory texts we want to show and question how three different groups in Munich save food from being wasted. As a final step, we incorporated an interactive part into our exhibition in order to get our audience actively involved.

For all three of us, food waste is a subject of crucial importance since the wasting of food is contradicting the concept of sustainability. As the Brundtland Commission states in 1987, sustainable food security should be aimed at in a way, "which satisfies the needs of the present generations without compromising the satisfaction of needs of future generations" (RISE Foundation, 2014). Wasting food that is still suitable for human consumption has also become an important policy issue. In 2011, for example, the European Commission included the topic in its "Roadmap to a Resource Efficient Europe". Their objective is to cut the disposal of edible food waste in the EU in half by 2020, mainly by raising consumer awareness.

In the context of food being dumped and not eaten, there are two issues coming to mind: surplus production and food shortage. Even if this connection sounds obviously contradicting at first, it does follow the logic of a market economy on a global scale. On the one hand, without an immense surplus production, foods would be more valuable, thus, in an economic logic, more expensive and, consequently, less of it would be wasted. On the other hand, with a higher purchasing power, richer countries withdraw food from the global market that is missed somewhere else causing food shortages and, thus, hunger in poorer countries.

Contemplating the ethical implications that come with the wasting of food on a personal level, all three of us started questioning this behaviour and the affluent society we live in: Germany. As the national or even the global scale of the food waste problem goes beyond the scope of our final project we focus on the food surplus that is wasted in the city we live in: Munich.

The practice of wasting food in private households or on a retailer’s or wholesaler’s level seems to be fairly accepted in the German society. Nevertheless, different forms of urban reactions have developed during the last decades: the Münchner Tafel (a food bank based in Munich), foodsharing e.V. (a registered association in Germany with a subdivision in Munich) and the practice of dumpster diving pursued by some individuals and smaller groups. What exactly is behind these forms of reactions to food waste? How exactly do these organisations
This paper has three objectives: 1) to answer the questions we have just asked, 2) to explain the organisation and the content of the exhibition we plan to implement during the Environmental Studies Certificate Program Graduation Forum in July and 3) to refer to the broader context of our topic.

**The Exhibition**

With the questions we pose and by the format we have chosen to present our findings, we want to address both people who already think critically about food waste and people who haven’t scrutinized the amount of food thrown away in Germany every day. The exhibition will consist of three parts. 1) Initially, we want to raise awareness to the food waste problem in a more general way by triggering the audiences’ emotions – the opening of every good and captivating tale. Therefore, we have written three short stories changing the narrator’s perspective and personifying foods. 2) Following the emotional beginning is the more objective main body of the exhibition. To not lose our audiences’ attention, we use a visual approach for easy content. To answer the question of how the chosen organisations and individuals combat food waste, we display picture stories of all three examples combined with excerpts of conducted interviews. 3) The third step of our exhibition is methodically more advanced, where we invite our audience to be part of the exhibition themselves and contribute their opinions, fears, ideas and possible solutions to the issues we raise by asking three questions. But before involving our audience, in the end of this paper we address the less personal issues ourselves first.

**1) Food perspectives**

We begin the exhibition with three stories¹ written from the perspective of wasted food items personifying them. Through a personal story of how and where the food was grown or invented, how it was transported to the supermarket in Germany or how it feels being neglected by the average consumer, we aim at addressing an emotional level with our audience. Our goal with this first part of our exhibition is to show the abstruseness and the perversity of how food is shipped from all over the world to its final destination – just to be wasted in the end.

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¹ The three stories are attached to this paper.
2) Combating food waste or how to save food in Munich

In Munich, as our research location, there seems to be a manifestation of reactions to the wasting of food by retailers and wholesalers. Food that is or would have been thrown away gets “rescued” by a certain group of people in order to eat it themselves or to re-distribute it. In our study we focus on foodsharing e.V., dumpster diving and the Münchner Tafel, a Munich food bank. In the main part of our exhibition, it will be explained how these three urban reactions to food waste save still edible food. To give an insight into the practices, we created three exemplary picture stories\(^2\) of people who are involved in one of the two organisations or in the more personal pursuit of dumpster diving.

As can be observed in the supplement to this paper, our pictures are generally black and white. To indicate two different levels of the food saving process, we decided to use two different types of colour coding. The more pastel-coloured fruits and vegetables are saved by someone to be shared (foodsharing) or distributed (Münchner Tafel). The food which is displayed in bright colours is taken by a person who will consume it and, thus, save it from being wasted in the end. The colour itself emphasizes that there is hope for unsold or unwanted food to be saved in order to fulfil its purpose – to be eaten. We thereby lay a clear focus on the food which is our greatest concern.

With our visual approach we want to address people who have never heard about the possibility of saving food from being wasted or who have heard about them but have never had the chance to get an idea of the practice itself.

In order to show the stance of people engaged with the Münchner Tafel, foodsharing e.V. or in dumpster diving towards the wasting of food and the motivation for their engagement, we use text labels, explanations and excerpts of the ethnographic interviews we have conducted during our field trips. This information on a text basis opens up the possibility to get a deeper understanding of the way how and the reason why people combat food waste.

3) Taking action

After giving an insight into the way wasted food is “rescued” in Munich, we want to give our audience the chance to contribute to the exhibition and at the same time get more involved into the whole topic of food waste. Consequently, the questions reflect the personal level as well as the broader context of foodsharing, dumpster diving and the Münchner Tafel.

The method we use is called World Café and resembles a silent or written discussion. We will assemble three pin boards with questions written on brown paper. Sharpies will be facilitated so that the visitors of our exhibition can write their response, remark or idea directly on the paper. Others can, in turn, comment other peoples’ answers. The forming branches of a mind map represent the discussion’s different trains of thought. This method gives our audience the chance to be an active part in the exhibition. Depending on the format of the ESCP Graduation Forum, we would also like to offer merging the contributions

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\(^2\) The pictures of the three stories are attached to this paper.
to our World Café. Therefore, we plan to moderate a discussion based on comments, ideas and thoughts expressed by the audience, in order to facilitate the advancement of the debate.

The following questions will be part of the World Café:

1) **What do you do to combat food waste and why?**
   This question facilitates the exchange of ideas and solutions on an everyday personal level, creating a collection of ideas from which all visitors can draw.

2) **Can dumpster diving, foodsharing or the Münchner Tafel significantly reduce the amount of wasted food in Munich/Germany? Why? Why not?**
   This question animates the audience to give further thought to the problem on a national level trying to grasp its scale and the entanglement of food waste with the economic and the political system. In the analysis part of this paper we refer to this question in particular and try to answer it by ourselves first based on the results of our field research.

3) **In a utopian world food waste is minimized. What would need to have happened regarding a personal, political, economic, national or global level of action and how would the life of all of us look like?**
   This question collects ideas for action and spreads a creative, positive feeling concerning the food waste situation. It implies that change is possible if we opt for it and take action.
Facts about food waste or the broader context

In order to address ways of combating food waste, it is necessary to understand and be aware of the broader context of how and why food is wasted. The following chapter is aimed at giving some detailed information, insights into statistics, causes and consequences of wasting food in Germany and the world.

Scaling the food waste

According to studies from the FAO (Gustavsson, 2011), approximately one third of all foods produced for human consumption are wasted annually. In the European Union, over 100 million tonnes of food is wasted every year (2014 estimate) and the amount is expected to rise to about 126 million tonnes by 2020 if no measures are taken.

Until a few years ago, there were only vague estimates about the amount of food waste in Germany, ranging between 6.5 and 20 million tonnes per year. According to a study by the University of Stuttgart in 2012, every year almost 11 million tons of food is dumped either through the industry, trade, major consumers and/or private households (iswa, 2012).

The wasting of food takes place along the entire supply chain, from those who produce and process foods (farmers, food manufacturers and processors) to those who make foods available for consumption (hospitality sector, retailers) and ultimately consumers themselves. Diagram 1 shows the distribution of food waste in Germany through the different sectors involved.

The Federal Ministry of Food, Agriculture and Consumer Protection determined the amount of food waste from households in Bavaria in 2011 (Forsa Survey, 2011). Results show that every year, a total of about 644,000 tons of food waste gets into the municipal waste collection system. This corresponds to about 51.4 kg per inhabitant and year. Out of these, around 65% ends up in the residual waste and 35% are found in the compost bin.

The comparison between the different regions in Germany shows that Bavarian consumers waste less food than the average German citizen. With an average of 65 kg of discarded food per capita and year Bavarians are below the national amount of 82 kg (iswa, 2012).
Diagram 1: Distribution of food waste in the supply chain in Germany. Modified after iswa, BMELV study, 2012.

Moreover, in rural regions of Bavaria over 30% less food is wasted than in urban regions. Almost three-quarters of the Bavarian population lives in rural and densely populated rural areas, only 18% in cities. Reasons for the different amount of wasted food between urban and rural areas could be a difference in perception and appreciation for food, coupled with a stronger connection to primary production. In alignment to this argument is the fact that the reactions to food waste we have studied are predominantly taking place in an urban environment.

Looking at the Bavarian food waste by product groups, it has been shown that fruit and vegetables account for the largest share with 40%. This result is consistent with the nationwide survey in March 2012 by the BMELV. Dairy products, leftovers and pastry in Bavaria account each for about one third of also about 40% of wasted food in this region.
Interestingly, 65% of the food wasted in Bavaria is either completely or partially avoidable. Diagram 2 shows the division of these foods in product groups. Fruit (15.9%) and vegetables (21.8%) end up in the garbage bin most frequently, followed by pastry (14.6%), dairy products (12.6%) and residual food waste (12.5%).

**Causes and Consequences**

**The food industry and trade**

Before the customer can purchase foods from the supermarket shelves, it passes through a global network consisting of many stations. From agricultural production through further processing and the wholesale trade to retailers, foods are transported over and over again. Besides the complex logistics chain of transportation, factors such as market policies and the foods life cycle are reasons why tons of food end up wasted every year. Diagram 3 displays the different actors of the supply chain that can lead to food waste. An example of market policies affecting waste is the price stability. In order to maintain the market price of a certain product, surplus production – even if the product is ready for sale having passed all processing and packaging steps – is withheld from the market. This leads to the situation that perfectly fine and edible food is thrown away.

In the trade sector, full shelves until closing time cause a loss in freshness and, thus, in the value of goods, especially in the product groups pastry, fruits and vegetables. Apart from this, the damage of perishable foods (e.g. dented fruit), incorrect storage, damage during transport and exceeded “best-before” dates lead to food waste.

Private households

From private households originates 61% of the food waste in Germany. This makes 6.7 million tons per year nationwide. There are 40.3 million households with around 81.8 million household members (Federal Statistical Office, 2010) in Germany. On average this results in 81.6 kg of food being dumped by every citizen per year. This means that about 21% of foods in German households are discarded and thus about one in five purchased food products ends up in the bin. One fifth of these are dumped while still originally packed.

One of the main reasons for avoidable and partially avoidable food waste in German household is the lack of appreciation of food, also due to continuous availability and extremely low prices compared with the EU level (KErn, 2013). Mis-buys, poor planning and a lack of overview of household food stocks are responsible for the wasting of food. In addition, many consumers do not store foods appropriately and throw away foods after exceeding the “best-before” date, although they are still good for human consumption. Diagram 4 shows that even statements such as not being in the mood for consuming the available foods or having cooked too much plays a crucial role.
In summary, there can be identified seven key causes that lead to food waste along the supply chain (NRW survey, 2012):

1. Process and market-driven standards and quality requirements
2. Legal framework
3. Regulations to ensure food safety
4. Practices of the market, such as high variety of products available until closing time
5. Inappropriate end consumer behaviour
6. Disturbances in technology or logistics
7. Cultural influences

Food waste and capitalism

In a capitalist system, success is measured through the amount of products sold, no matter what happens to the product after it has been bought. However, sales include vast quantities of products that are lost, wasted or discarded as a result of inefficiency in the human-managed food chain. It all contributes to profits and, thus, to the growth of capital and that is what counts in an economic world. By preventing food waste there is no profit to be made and hence, in our capitalist system waste continues to exist.
The EU and the German *Federal Ministry of Food, Agriculture and Consumer Protection* call for education and awareness campaigns and, hence, shift the entire responsibility for action upon the consumer. Certainly, regarding the cumulative quantity, most of the food waste is produced in private households. But on an individual level, the consumers waste far less food than the vast majority of restaurants, supermarkets and food retailers (*Federal Ministry of Food, Agriculture and Consumer Protection, 2013*).

The statistics shown above suggest that food waste is an inherent part of our food distribution system. It seems to be tied to the excess quantities of available food on the market as well as to standard commercial food practices, like restaurants and diners filling plates with more food than a person is likely to finish. Although the food industry has been able to improve the prediction of consumers’ behaviour, opening the possibility to adapt supply to demand more accurately, it profits immensely from food waste, as it artificially increases demand and the amount of supposedly sold items.

In this context, if a food company wants to grow faster than the annual growth rate of the population – which would be the natural growth factor of a product with inelastic demand (even if there is more food available on the market, a person is only apt to eat so much food as to satisfy his or her needs) – it has to either process primary food resources further to add value or insert mechanisms, as for example short best-before dates, in hope that a lot of its products is thrown away. (c.f. Pollan 2006: 94)

Summing up, the quantity produced and sold seems to be the most important focus within the boundaries of a capitalist market economy. Food waste is therefore linked to the ethos and underlying driving forces of capitalism. To reduce the amount of wasted food not quantitative growth, but qualitative changes in the respective policies, in the market strategies and the economic system might be possible solutions. Another starting-point, however, are consumers and consumer behaviour. In this context, our exhibition is displaying three creative ways how to reduce food waste on a smaller organisational level and a very personal one.

Nevertheless, the pressing question about the possible impact of these approaches on public awareness and the reduction of food waste will be addressed in the analysis of this paper.

**Environmental and social consequences**

A German consumer throws away 82 kg of food per year on average, each Bavarian consumer 65 kg. This behaviour has far-reaching consequences for our environment, since the production of food requires valuable resources. Besides the required arable land and sufficient water supply, energy is needed for the cultivation, processing, transportation and storage of foods. Moreover, emissions are generated along the entire supply chain, impacting the global climate.
The FAO estimates that every year, the production of food which is wasted generates “3.3 billion tonnes of greenhouse gases” and uses up to “1.4 billion hectares of land – 28 per cent of the world’s agricultural area”. Globally, “the blue water footprint for the agricultural production of total food waste in 2007 is about 250$km^3$, which is more than 38 times the blue water footprint of USA households” (FAO, 2013). In addition, the disposal of food wastes, for example in the form of combustion, generates greenhouse gases and uses even more resources. Summing up, the replacement or new procurement of foods has a negative effect on our environment.

There are many ways to calculate the amount of food being wasted every day. A study in 2009 showed that out of the 4600 kilocalories of food that are harvested for every person on the planet per day; only around 2000 of these are eaten. More than half of it is lost on the way from field to mouth (Concern Worldwide, 2014). By looking at the huge wastage level of end consumers in Europe, it has been calculated that 10 per cent of all greenhouse gas emissions in these countries comes from producing, transporting, storing and preparing food that is never eaten (Concern Worldwide, 2014). Most of the food waste ends up in landfill sites where it rots and releases methane, a damaging greenhouse gas. According to Doug Rauch, former president of Trader Joe’s and current CEO of Conscious Capitalism, “Food waste, if it were a country, would be the third largest emitter of CO2 and methane in the world, behind China and the U.S.” (FAO, Gustavsson, 2011).
Three examples of how to combat food waste

Dumpster diving

The practice of sifting through commercial or residential waste in order to find items that have been discarded by their owners, but might be still useful to the performer, is called dumpster diving. Dumpsters can be foraged for objects such as clothing, furniture or food. The choice items can be used by the dumpster divers themselves or given away. “Timing is important to dumpster divers. Urban dumpster diving is often done in the evening after businesses close and people put out their trash.” (Zimring/Rathje 2012: 196-8) In this paper we will describe and analyse only dumpster divers looking for food. Moreover, our focus group are people who dumpster dive for other reasons than economic necessity, i.e. the ones consciously combating food waste by saving food and, thereby, reducing the waste flow.

Arguments against dumpster diving often focus on health and cleanliness issues of people sifting through garbage. Dumpster divers are exposed to potential health risks, as food poisoning or stomach upset, and if they do not return the non-usable items to their previous location, may leave trash scattered around the dumpsters. Since dumpsters are usually located on private premises, divers need to trespass private property in order to dive for food. Although dumpster diving definitely has legal implications (trespassing, theft and damage to property) in Germany, the laws are enforced with little rigor in this context. Some supermarkets lock dumpsters to prevent trash pickers from gathering on their property or vandalism and to limit potential liability, if a dumpster diver is injured while on their property.

Foodsharing

Foodsharing e.V. is a nationwide grass-roots initiative in Germany and registered association with the objective to save food that otherwise would have been wasted. This example of combating food waste is a more organised one than dumpster diving, but it is an urban phenomenon, too. Organisation, communication and interchange happen via an online platform. Since the launching of foodsharing.de in May 2013, more than 10,000 people interested in saving food have registered and play their part in the movement. In general, there are two ways of saving food, from “private to private” and from “retail to private”.

The idea behind foodsharing on a “private to private” level is simple: Whoever has food which is not needed anymore (bought too much, got an unwanted gift of chocolate, leftovers after a party, etc.), can make it available for other people through the online platform. The moment a registered person offers a so called food basket online, it appears on the platform’s internal map. Another registered person can then see a list of the offered
food items, get in touch and pick the *food basket* up. The interchange happens on a first-come-first-serve basis.

Moreover, food waste is combated earlier in the supply chain on a much larger scale through a “retail to private” transfer. *Food savers* and ambassadors in a broader sense volunteer to save food. They get in touch with small vegetable retailers, organic supermarkets or single supermarkets from a certain chain and establish a co-operation. This entails that food savers come by every day or once a week to collect all the food that the supermarket couldn’t sell and would have been thrown away if not for them. Reasons differ from fresh food which does not look so fresh or yogurts and other dairy products which have surpassed the best-before date. *Food savers* use some of the saved food for their own consumption and distribute the rest through private channels and via the online platform as described above. Ambassadors coordinate the co-operations and the *food savers* in the different regions and cities.

Just as the concept of sharing saved food, the platform is open source and free. The idea is to continually develop, optimize and expand the platform together with volunteer programmers, designers and translators.

**The Münchner Tafel**

The *Münchner Tafel* is a local food bank and was founded in 1994 as one of the first of its kind in Germany. Even if the name implies a connection to the nationwide operating *Bundesverband Deutsche Tafel e.V.* (an umbrella organisation for the most famous German food bank), the *Münchner Tafel* is nevertheless a separate organizational unit. Its purpose is to distribute still enjoyable food that otherwise would have been wasted. On the first glance, it appears to be similar to the *foodsharing* approach, but the focus is completely different. Whereas foodsharing and dumpster diving, too, emphasize the act of saving food, the *Münchner Tafel’s* core concern is the distribution of saved or, in their own words, donated food among those most in need. This aspect is reflected in their slogan "distribution instead of wasting".

Every week, about 18,000 inhabitants of Munich who cannot afford to buy the most elementary things due to increasing costs of living and due to their current situation in life receive charity this way. More than 160 company sponsors support the *Münchner Tafel*, so that people affected by poverty in old age, uprooted people, refugees, socially deprived, alcohol and drug addicts, large families, single parents and unemployed amongst others are supplied with basic foods. The existence of the *Münchner Tafel* is based on donations and on voluntary work. Fresh vegetables, fruit, dairy products, bread, baby food and other products
are collected and distributed to the Tafel guests by 500 volunteers (so called Tafelers). Every week, around 100,000 kg of foods are prevented from being wasted this way.

Summary

In a nutshell, all three examples combat food waste in an urban context. Nevertheless, they differ in approach, organisational level and attitudes. Whereas dumpster divers save wasted food in a very individualistic way and mainly on a personal level, foodsharing e.V. is organising people through an online platform and operating on larger scale by including food retailers. They do not wait until the food is thrown away, but save it before it gets wasted. Although dumpster divers and people engaged in foodsharing pursue the same goal – to save as much food as possible – foodsharing seems to be the development of dumpster diving, lifting a personal endeavour on an organisational level. Foodsharing e.V. is operating in the entire country and, in contrast to dumpster diving which is practiced in many countries, its scale and form of organisation is quite unique in Germany. The idea, however, is indeed expanding to neighbouring European countries. The Münchner Tafel is working on an even more institutionalised level. Professionally, hundreds of people are supplied with basic foods every week following high standards regarding hygiene and food safety. The complex logistics and the voluntary workers make it special. In contrast to most dumpster divers and people engaged in foodsharing, ecological aspects are no primary concern of the Münchner Tafel as an organisation. All three examples, however, agree on the ethical implications of wasting food. Dumpster divers and food sharers refer to food shortage and malnutrition in a very distant and general way, whereas the Münchner Tafel helps locally and targets concrete benefits at those most in need, in addition and foremost to combating food waste.
**Analysis of dumpster diving, foodsharing and Münchner Tafel**

In the last chapter we gave a short description about what is behind the three forms of “rescuing” food in Munich. To create an even bigger picture, we have conducted a series of ethnographic interviews with a focus on the attitudes towards the wasting of still edible food and on the motivation of the people engaged in saving it. Furthermore, we engaged in participating observation in Munich. We accompanied some of our interview partners to *dumpster dive* at night, to a food pickup at an organic supermarket of *foodsharing* and to a food distribution site of the *Münchner Tafel*. On site we helped with the installation of the tables, the sorting of the donated food and the distribution of the foot, too. Besides the results of the interviews conducted, this chapter is also dedicated to the question if the work and engagement of *dumpster divers* and people engaged in *foodsharing* and the *Münchner Tafel* have the power to influence or change the depreciatory relationship many Germans have to food and stop or reduce the wasting of it.

**Attitudes and motivation**

In the interviews a wide range of motives could be distinguished. The motivation is divided into five different typological categories: ecological, social, financial, personal, ethical and political motives. It is important to mention that it is always a combination of these categories that motivates people to engage in *dumpster diving*, *foodsharing* or the *Münchner Tafel*.

The most prominent motive throughout all interviews is to save food that would have been wasted otherwise. In the words of one of our interview partner: “I am happy because [as a *dumpster diver*] I can save food that has been thrown away, but it would be even better, if it did not end up in the dumpster at all.” The fact that all the wasted food, in the case of the *dumpster divers*, or the food about to be wasted, in the case of the people engaged in *foodsharing* and the *Münchner Tafel*, was cultivated, produced, packed and transported and stored various times travelling the supply chain for our consumption. Consequently, on a personal level, ecological considerations seem to value the most. One of our interviewees (*foodsharing*) refers to the broader ecological context: “The point is to reduce food waste and to increase the appreciation for food itself. I wish for a greater awareness within society and more appreciation for all the resources that we have on earth, which belong to all of us together.”

While for *dumpster divers* and *food sharers* the second most mentioned motivations have personal and financial origin, for *Tafelers* the motivation comes from social reasons. On the one hand, interviewees engaged in *dumpster diving* or *foodsharing* aim at increasing the
awareness of the incredible scale of food waste through their action and at calling for greater appreciation of food itself. On the other hand, they are strongly motivated by the money they save on food from the supermarket. In contrast, Tafelers focus more on the social aspect and the charitable work they are able to perform by volunteering and distributing food to people in need. “It’s important that the food is distributed and eaten, and not wasted. However, for me the social aspect is even more important” (a Tafeler at a distribution site in Munich).

Most of our interviewees referred to ethical implications and mentioned the connection of food waste in these parts of the world and food shortage and hunger in others. As one dumpster diver puts it: “In the Third World people are starving and in Germany some people are at least malnourished, while at the same time food is just thrown away.” The incomprehension regarding the wastefulness of the German society was clearly perceptible during the statements.

Regarding dumpster divers, it became clear that the practice of dumpster diving is fun. More than one interviewee called it a “treasure hunt”, because “you never know what you are about to find in the dumpsters”. A woman volunteering at the Münchner Tafel, too, described the pleasant atmosphere at a distribution site and how nice it is to help and to do something and not sit in front of a computer all day. Moreover, an interviewee engaged in foodsharing explained that it gives her a good feeling to share the food she saved with other people and sometimes they even cook a huge dinner together. The fun seems to be an important drive on a personal level.

Especially the representatives of foodsharing e.V. cultivated a slightly political motive. Some of them work for a political influence in the future in order to raise even more awareness in the society and to save even greater quantities of food. Some dumpster divers argue that, even if they are no politically motivated person, they send a political statement preferring dumpster diving to groceries in a supermarket. In the words of a food saver: “I have read a quote which says that I can vote three times a day, just with the decisions about where I buy my food, how I prepare it and what I eat.”

Possibilities for change

In this chapter we address the most pressing and interesting question of all: Does the work and engagement of dumpster divers and people engaged in foodsharing and the Münchner Tafel have the power to significantly reduce the amount of wasted food in Munich and influence or change the depreciatory relationship most Germans have to food?
Most dumpster divers believe that their way of combating food waste is not sustainable: it is an illegal action and depends on the food waste generated by the surplus production of the present food system on the one hand and the current consumer behaviour on the other. In the long run, a different – more conscious and considerate – way of consuming not only food but consuming in general is needed to reduce the (food) waste. In regards to finite resources and food shortages in poorer countries a more provident production and supply system should be implemented on a global scale. In order to achieve a change in consumer behaviour, dumpster divers try to raise more awareness to the quantity of food wasted by the society and by every single person. They see their part in involving other people and media, spreading the ideals behind their practice and initiate discussions. Even if the action of dumpster diving has existed for many decades already, especially online media and juridical cases filed suggest that the knowledge is indeed spreading and ever more people engaging in dumpster diving. It has become crowded all around the dumpsters in the backyards of Munich supermarkets. Many of our interviewees prefer to undertake a longer trip to the dumpster, because the selection of food items is more divers in the rich outskirts of Munich.

A more promising possibility to change the depreciatory relationship most Germans have to food and to reduce the wasting of food seems to be foodsharing. This organisation gives the impression to have a greater future orientation, since it lifts dumpster diving onto a legal platform and does not only address individuals but involves food retailers and, thus, a greater part of the society and the food system. In the last couple of years, foodsharing has received growing attention and has appeared in online media, newspapers, radio broadcasts and documentary films\(^3\). Representatives have also been invited to give talks and participate in podium discussions. Moreover, the amount of supermarkets cooperating with foodsharing has been constantly growing as has the number of their members. As we know from an inside source, one of the most established high-end supermarket chains in Germany approached foodsharing e.V. officially to talk about a nationwide co-operation. Interviewed food sharers, which have been dumpster diving before, said in the interviews that it is a more gratifying feeling to be in contact and cooperate with supermarket employees, store managers and supermarket owners hoping to begin a dialogue that spreads through the supply chain.

The Münchner Tafel differs from dumpster diving and foodsharing quite astonishingly. Their focus lies clearly and almost exclusively on the distribution of food to those most in need. For the organisation itself saving food that would have been wasted otherwise seems to be only a secondary action, while the attention is decidedly turned to the charitable aspect of distributing donated food. The Münchner Tafel may be the ones saving the largest quantity of food in Munich from being wasted (100,000 kg per week), but they never consciously try to raise awareness to the topic of food waste itself. If they engage in awareness building,

\(^3\) E.g. „Taste the Waste“, Valentin Thurn
they do it in regards to social injustice and inequality in our society, even if the reduction of food waste plays an important role for members and volunteers of the organisation. This attitude is reflected in the fact that potatoes and onions are bought, because they are never donated in sufficient quantities to guarantee the supply with basic foods, which is the self-set objective of the Münchner Tafel. In addition, the quality of the distributed food is another aspect of differentiation. All the food handed out to those most in need is of first-class quality, since the Münchner Tafel is bound to food regulations. Consequently, at the distribution site food is wasted in order to align with regulations and not to lower the Tafel guests to the level of petitioners who have to accept second class goods. The aim of the Münchner Tafel with this behaviour is to give the Tafel guests the feeling of acceptance in society rather than discriminating them. As one of the volunteers puts it: “I prefer to throw away more food, before the Tafel guests sense that they have to accept scruffy scraps.” The work of the Münchner Tafel, hence, significantly reduces the amount of wasted food in Munich, but it probably does not influence or change the depreciatory relationship many Germans have to food.

**Summary**

Summing it up, dumpster diving might have a tiny influence on the consumer behaviour of some Germans, especially students, as they make up for the biggest group of active dumpster divers. But this practice reduces the quantity of wasted food only minimally and, worse, it has no influence to change neither the surplus production nor the design of the supply chain.

Foodsharing seems to be the more promising approach, because it is a registered organisation in Germany, its members are organised and their numbers are growing. It has a greater potential to bring along change, because people engaged in foodsharing start a dialogue with food retailers and their staff, thus involve not only more people but also people with a different role in the market economy, consumers and vendors. Consequently, foodsharing has a greater power to reduce food waste even within the supply chain. Nevertheless, foodsharing as well as dumpster diving are practices which draw only at the end of the food supply chain, hence, on the symptoms of a morbid economic and consumer system. Both approaches reduce food waste on a small scale, but they do not get down to the root of the problem: the surplus production, the uneven distribution of food and the ever greedy and profit-oriented food industry.

In contrast, the Münchner Tafel does reduce food waste significantly in Munich, even if the primary focus is the charitable work supplying those in need with basic foods. It might have some influence on the awareness regarding social inequality and injustice, but the work of the Münchner Tafel does not show an influence on the Germans regarding their consumer behaviour or their depreciatory handling of food. Stephan Lorenz, a sociologist from the University of Jena, criticizes food banks arguing that they “are symptoms of social and
ecological problems of the affluent society, but do not contribute to overcome it.” (Unrau/Lorenz 2014) Therefore, they have no power to change the society itself or social inequalities or marginalization.

In the end, neither dumpster diving, nor foodsharing or the Münchner Tafel have the means to change the surplus production or a way of life based on this surplus, thus, the core problem of food waste. Nevertheless, they might contribute to raise awareness to the problem and, hence, influence some of the Germans in terms of food waste.
Conclusion and outlook

The wasting of food is contradictory to our understanding of sustainability with regards to the livelihood of future generations and to our ethical attitude. Therefore, food waste is a subject of crucial importance to all three of us. Contemplating especially the ethical implications that come with the wasting of food on a personal level, we started questioning this behaviour and the affluent society we live in. In compliance with our aversion to the wasting of the essence of our life, three different reactions to food waste have developed during the last decades: the Münchner Tafel (a food bank based in Munich), foodsharing e.V. (a registered association in Germany with a subdivision in Munich) and the practice of dumpster diving (sifting through commercial waste in order to find food which is still edible).

After a deeper look into the scale of the food waste on a German national and a global level, in the theoretic part of this paper, we examined how and why the two described organisations and the individuals pursuing the practice of dumpster diving combat food waste. Moreover, we aimed at determining if their work and engagement have the power to influence or change the depreciatory relationship many Germans have to food. The ethnographic interviews, we have conducted during our field trips, have shown us that need, perception and appreciation for food play a crucial role when it comes to the wasting or saving of food.

Concluding our analysis about whether or not dumpster diving, foodsharing or the Münchner Tafel significantly reduce the amount of wasted food and whether their work and engagement have the power to influence or change the depreciatory relationship many Germans have to food, we can state the following: the existence and actions of all three reactions to food waste are symptoms of a morbid economic system and of the social and ecological problems of an affluent society. Food waste is reduced on a small scale, but neither dumpster diving, nor foodsharing or the Münchner Tafel do get down to the root of the problem: the surplus production, the uneven distribution of food and the lack of appreciation for food by most consumers.

Appreciation for food is linked closely to its production. But nothing could be more alienated from the way food is produced than the modern experience of doing groceries at a supermarket. There is no connection or relation between the consumer and the producer anymore. Particularly in an urban environment, a direct reference to the food’s origin is no longer existent and, thus, the accepted value for food is decreasing. Purchasing food directly from the producer, at a farm or a local market, however, allows an interconnection which can lead to a better understanding of farming, the resources used and the ecological implications of agriculture. Food is not just any commodity – it is the essence of our all existence.
Nevertheless, the supermarket is the preferred site for food purchases in Germany. 82% of the Germans buy their groceries mainly in big supermarkets, 15% buy more often on local markets and only 8% buy directly from the producer (Forsa Survey, 2011). A conscious decision to buy local and seasonal products is hence needed to change the attitude towards food. Maybe the practices of *foodsharing* and *dumpster diving* could alert people and point to the immense scale of food being wasted in German society, whereas the *Münchner Tafel* could call attention to the social and ethical implications. We believe that the goal to achieve is a greater appreciation for foods and that this would bring our generation a step closer to sustainability.

“Appreciation for food is a very crucial factor that I want to entrust to the next generation.”
(Matthias von Miller, *Münchner Tafel*)
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FOOD PERSPECTIVES
The Indios called me „Nana Meant”,
the exquisite fruit,
Way before Columbus discovered me, back in Guadeloupe.
Inspired by him, I made my way
Conquering the world unto this very day.
I sailed the seven seas and broke the densest cloud
No hurricane, no thunderstorm out there to get me cowed!
From Costa Rica, Thailand or Uganda to your nearest,
I make my way: relentless, reckless, fearless!
Travelled so far, I have only one plea:
Don’t dump me in there ➔ it creeps the shit out of me
All for nothing?

We are sitting in a supermarket shelf. Beside us the spring onions look a bit dried out and the mushrooms stopped talking to us a few minutes ago. The babble of excitement after being first put onto the displaying shelf in the morning has long before ceased.

The room is well-lit, a strange kind of light compared to the pure sun light I’m used to. The roaring of the fridge me and my brothers and sisters are sitting on, is soothing, but I don’t really like the cold as I was grown in a very sunny and warm place called Kenya. Still, I have heard that there is snow on Mount Kenya during winter time, but I’ve never seen it.

Kenya lies in east Africa and calling it by name, I’m getting homesick. It remembers me of my childhood, which had an abrupt end 3 days ago. A Kenyan farmer handpicked me without any warning and threw me into a basket, together with all my green bean brothers and sisters. I left my mother plant and soil without a chance to say goodbye, was carried to the next truck and unloaded.

Off we went to the exporter’s pack house, where I was lucky being wrapped into plastic. But some of my brothers and sisters, who had not yet had the adequate time to grow and mature, were carelessly thrown onto the ground and forgotten. Because just the best looking and biggest of us pass the high-quality standards to be sold on the German market, I’ve lost my little brother who was so dear to me.

After this grading process and the final packaging, we were put into big boxes, driven to the airport, loaded onto planes and shipped to Germany. During the flight it was dark and cold. I so missed the sun light which made me strong and gave me my spring green colour.

After endless hours on a truck and a short stop at a wholesaler – where I’ve met an unseen assembly of fruit and vegetables from all over the world – I finally arrived at a supermarket in a city called Munich. An employee rolled me into another cooling house. The Germans seem to like the cold...

In the morning, I saw that my sister beside me had a pale, grey-green colour. Well, we all had a very unhealthy complexion. The oxygen was and is quite low here in this plastic wrapping. It makes me feel claustrophobic. But at least I have some friends with me, the cucumber two spots away from ours was tightly wrapped in a plastic hose – doesn’t she have to breathe?
Even if I don’t feel very well, I’m pretty excited to be in a German supermarket. Having braved all opposition, quality standards and European food regulations, I’m proud to be here. I don’t understand why the people doing their grocery shopping ignore us. After all, we arrived from so far away. Why would they bring us here, if people don’t want us?

In the end of the day, it is pretty smelly in our plastic wrapping. One of the supermarket’s employees picks us up and my mood lights up. She puts us in a trolley, drives us out the door and without so much as looking at us, throws us in a huge black container and closes the lid. Incomprehension and sadness on my brothers and sisters faces – and on mine.

Soil, nitrogen, energy, oxygen, water and labour – all for nothing?
Resource exploitation, overfertilisation, soil erosion and degradation, desertification, water scarcity, carbon dioxide emissions, food shortages in my home country and a waste problem in yours – is that really your choice?
Who am I and why have I come such a long way?

The first to taste my sour, soft and delicious flavour? An old Anatolian farmer put milk into his lambskin sack to not suffer thirst during a journey and held it very dear. Close to his body it was so nice and warm, the milk fermented! And by accident in the Balkan Peninsula around 500 B.C., my ancestor was born.

After traveling through Persia and the Ottoman Empire for hundreds of years, in the sixteenth century the king of France introduced me to the western world. My exquisite taste and my positive health benefits made me loved by ever more people, paving the way for the industrialization of my products. I arrived in Germany in 1907 and since then I have become the most popular dairy product. The annual consumption per capita is as high as 13 kg, and women especially can’t get enough of me!

However, things have changed since people first cultured milk into a creamy, tangy snack. Sadly, people keep throwing me away. More than one out of every ten of my kind ends up in the garbage bin, most of them being perfectly edible. That makes over 12 billion pots every year, in Germany alone! Why? Oh, you wouldn’t believe me even if I told you. Sometimes people just aren’t in the mood to eat me, other times the best-before date has expired. Let me explain myself: after a couple of days I can’t hold my whey anymore… But no worries, just stir me up a bit and I’ll be as good as always!

I have come a long way. From a cow’s udder through the complex process of pasteurization, homogenization, inoculation and acidification, until finally I can get all packed, ready for your consumption - and then wasted?
DUMPSTER DIVING
**Camouflage**

Dumpster diving takes place at night, when there is no staff on the supermarket premises. Sometimes, agreements are made with the security service in order to elude them and to be undisturbed. Divers are rarely on their own, it’s a rather collaborative action.
**Dumpster road**

Approaching the dumpsters in the backyard of a supermarket. Among dumpster divers, it is common to bring enough bags, a flash light as well as rubber gloves and rain pants for protection.
Breaking into the safe

Since most of the supermarkets lock their dumpsters nowadays, they need to be opened with a male triangular wrench.
The Scuba Diver

A dumpster diver in action. After jumping in, trash bags are examined for potentially savable food and placed in front of the dumpster for closer inspection.
Happy?
The Harvest

Still edible food is removed from the trash bags and sorted. Every diver involved takes what she or he wants, usually taking the other’s needs and wishes into account.
**Way home**

Non-edible food and any kind of garbage are thrown back into the dumpsters. A dumpster diver should not make any noise, be inconspicuous and always leave the place clean.
What motivates you to dumpster dive?

“As long as food is wasted, I cannot and do not want to buy fresh food off the shelf, because I think that we should eat everything we have produced – for ecological and ethical reasons.” (Philipp)

„With all the little surprises awakening my treasure hunting instincts, dumpster diving is just fun. And I’m happy to save some of the food from being wasted, but still, I would be even happier if I did not find any food in a dumpster.” (Marius)

„Dumpster diving is part of my concept of life: I want to live consciously and consume correctly or respectively avoid consumption at all, what I do by avoiding payment at the supermarket checkout.” (Kerstin)

“In Munich, where the costs of living are high, money is quite an incentive to go dumpster diving. Out of the dumpster, I get the food for free.” (Kerstin)

“There is also something playful in it, the violation of the law, following your hunter-gatherer instincts and being better than your friends. All that is just fun!” (Vincent)

“We’re wasting so much food, it’s just sick.” (Vincent)
FOODSHARING
The Food Saver

Volunteers collect food from supermarkets, bakeries and smaller fruit and vegetable retailers to save it from being dumped into the garbage.
The Deal

Both, retailers due to lesser costs for garbage plus a possible gain of reputation and foodsharing e.V. due to the food donation, benefit from an official cooperation. For individuals it often is a matter of the heart not having to waste unsold food, but to give it away for free just so that it is consumed.
The Rescue

Unsold food is inspected for edibility by the food saver. He saves as much as possible, some of it for his personal use and the rest for sharing it with other people.
The Fleet

With more than 7,000 volunteers foodsharing e.V. is able to conduct numerous smaller food savings all around the country, preferentially eco-neutral via bicycle.
Food savers as well as private persons can donate food to or get food from a so called “Fair-Teiler”. Currently, there are four of them in Munich. These distribution sites are usually located at public buildings and this one here, for example, is at the “EineWeltHaus”.

*Fair-Teiler*
The Website

It is also possible to offer surplus food in so called food baskets via the internet platform foodsharing.de. Whether the offered food is saved from a retailer or a dumpster or whether it is simply leftovers of one’s own fridge, doesn’t matter.
Handing over

Everyone registered on the online platform can indicate interest and is allowed to come by to pick up an offered food basket. The objective is to save as much food as possible from the garbage.
What motivates you to engage in foodsharing?

“Hey, food waste is a no go!”, that’s our most important message. Our prior aim is not to fight poverty, even if this sounds heartless. We want to save food from being dumped and wasted and I want to play my part in this. (Anne)

“Foodsharing is really moving something. I can watch how there is food saved from the garbage every day and the foodsharing platform gives me the opportunity to do public relations work and awareness-raising.” (Brigitte)

Foodsharing is less nerve-racking than dumpster diving and it’s by far nicer to be in touch with retailers. It’s a huge difference compared to those cloak-and-dagger operations behind their backs, which is still simply theft. I enjoy the contact with people who think similar than I do and who want to do something in their power to reduce food waste. (Marius)
Waste?

A generic image of a central market retailer’s donation. Only a few of the many fruits per batch are foul or damaged. Volunteers pre-sort good from bad and send it to one of the distribution sites.
Making it happen

About 20 volunteers prepare and organise the food distribution to those in need at the „Großmarkt“-site. In total, the Münchner Tafel has about 500 volunteers helping with the saving of food and the distribution itself.
A 2nd sorting process

In order to ensure food safety, the so called Tafelers conduct a second sorting at the distribution site itself. This process has also been implemented to prevent the image of giving away “second class food”. Thereby, the Tafelers want to create an atmosphere of equality and integrity. Nevertheless, one consequence of this sorting is the wasting of food, which theoretically would largely be still edible.
Transition

Food, formerly condemned to waste, is given to the people in need. Despite the seriousness of the situation, the atmosphere is cheerful and friendly.
Leftovers

Despite of the still growing numbers of people in need (currently about 18,000 in Munich), on some days even the Tafelers reluctantly have to throw away leftover food after a distribution has been taken place. Still edible food which is less perishable can be transported to other distribution stations or cooperating aid organizations. Some of the volunteers may save some food on an individual level for their own consumption as well.
What motivates you to engage in the Münchner Tafel?

“I want to use my free time meaningfully. The distribution of food does make sense to me. It is my intention, to offer help and to see where help is needed, as I have time and I’m not working currently. In addition, it is great fun to volunteer at the Münchner Tafel. The people are motivated and nice and it’s amazing how much comes back.” (Claudia)

“I’m motivated by the idea that surplus production of food is distributed reasonably instead of being thrown away on a grand scale.” (Claudia)

I think the Münchner Tafel is a good thing! On the one hand food that would otherwise have been thrown away, is distributed and consumed and on the other hand one can also help people in need.” (Tanja)

“I think it’s great that there are so many volunteers who participate and that the Münchner Tafel has grown so much. Indeed, it’s a real institution which is very important to many people. If the organisation was lost, it would be a great loss for many people. They depend on the food donations, they get here. Therefore, I think it's very important that the organisation continues.” (Tanja)

"My main motivation was and still is that we do not throw away food which is still good and edible, but to distribute them to those most in need." (Matthias von Miller, head of a distribution site, Münchner Tafel e.V.)

I have a decent education and fortunately I can afford a great deal. I’m glad that I can give something back to the society.” (Matthias von Miller, head of a distribution site, Münchner Tafel e.V.)