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Where they taste the waste –  
An analysis of the distribution of participation in  
Foodsharing e.V. in Cologne, Germany

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## ABSTRACT

The aim of this research is to unravel drivers and disincentives to partake in social innovations dealing with food waste. Bearing a potential to challenge the contemporary unsustainable food system, a broad accessibility to these movements must be ensured when aiming to reach a critical mass. Therefore, by interviewing Foodsharing participants from WhatsApp groups, this research examines 'what factors contribute to which degree to the unequal distribution of participation in Foodsharing e.V. in Cologne, Germany'. It shows that participants with mainly ideological motivations participate in Foodsharing the most, whereas those primarily guided by instrumental factors engage the least. Results also reveal that both, participants' direct social circles as well as neighbourhood characteristics can have an influence on participation which result in unequal distribution outcomes. The findings partly resemble previous studies but also provide new, qualitative knowledge, especially on participants outside the official Foodsharing framework, raising new questions on the usage of ICT in social innovations and equity and privilege in environmental movements.

Ziel dieser Forschung ist es die Push- und Pull-Faktoren für ein Engagement in sozialen Innovationen, die sich mit dem Thema Lebensmittelverschwendung befassen, zu identifizieren. Soziale Bewegungen wie Foodsharing e.V. bergen das Potenzial, das jetzige, nicht nachhaltige Ernährungssystem herauszufordern. Daher muss ein niedrigschwelliger Zugang zu ebendiesen garantiert werden, um eine kritische Masse zu erreichen. Diese Forschungsarbeit zielt darauf ab, mit Hilfe von Interviews der Frage nachzugehen, „welche Faktoren zu welchen Teilen zur ungleichen Verteilung von Engagement in Foodsharing e.V. in Köln, Deutschland beitragen“. Es zeigt sich, dass Teilnehmer:innen mit hauptsächlich ideologischer Motivation eine größere Beteiligung zeigen als solche, die primär von instrumenteller Motivation angetrieben werden.. Zusätzlich stellt diese Arbeit heraus, dass sowohl das direkte soziale Umfeld der Teilnehmer:innen, als auch Stadtteilcharakteristika einen Einfluss auf die Einsatzwilligkeit haben. Daraus resultiert eine ungleiche Verteilung. Diese Erkenntnisse spiegeln den jetzigen Forschungsstand wider, bieten allerdings auch eine neue qualitative Datengrundlage, insbesondere im Bezug auf Teilnehmer:innen außerhalb des offiziellen Foodsharing Rahmen. Dies wirft Fragen zum Umgang mit ICT in sozialen Innovationen sowie Fragen nach Gerechtigkeit und Privilegien in umweltpolitischen Bewegungen auf.

## Abbreviations and explanations

|            |                                                                                                                             |
|------------|-----------------------------------------------------------------------------------------------------------------------------|
| BV         | Store coordinator (German: Betriebsverantwortlicher)                                                                        |
| BOT        | Ambassador (German: Botschafter)                                                                                            |
| Fairteiler | Public pickup station, often accessible 24/7,<br>the word is a pun between “verteilen” meaning to distribute and “Fairness” |
| FS         | Foodsharing e.V.                                                                                                            |
| Int.       | Interviewee(s)                                                                                                              |
| Pickups    | Picking up FS food, either from stores as a Foodsaver or from individuals                                                   |

## Inhalt

|                                                       |                                           |
|-------------------------------------------------------|-------------------------------------------|
| AKNOWLEDGEMENTS .....                                 | <b>Fehler! Textmarke nicht definiert.</b> |
| ABSTRACT .....                                        | 1                                         |
| Abbreviations and explanations .....                  | 2                                         |
| 1 - INTRODUCTION .....                                | 5                                         |
| 2 - LITERATURE REVIEW .....                           | 8                                         |
| 2.1 - The dimensions of food .....                    | 8                                         |
| 2.2 - Food as a means for capital accumulation .....  | 9                                         |
| 2.3 - Commons .....                                   | 10                                        |
| 2.4 - Community Based Economies (CBEs) .....          | 13                                        |
| 2.5 - Neoliberalism and social innovations .....      | 13                                        |
| 2.6 - Food initiatives .....                          | 14                                        |
| 2.7 - Movements around food waste .....               | 15                                        |
| 2.8 - Food sharing movements .....                    | 16                                        |
| 2.8.1 - Donors .....                                  | 16                                        |
| 2.8.2 - Recipients .....                              | 17                                        |
| 2.8.3 - Transformational potential .....              | 17                                        |
| 2.8.4 - ICT .....                                     | 18                                        |
| 2.9 - Foodsharing e.V. ....                           | 18                                        |
| 2.9.1 - Recipients Motivation .....                   | 19                                        |
| 2.9.2 - FS as a commons .....                         | 20                                        |
| 2.9.3 - Diffusion of FS .....                         | 20                                        |
| 2.10 - Research aim .....                             | 23                                        |
| 3 - THEORY .....                                      | 23                                        |
| 3.1 - Diffusion of innovations .....                  | 23                                        |
| 3.2 - Motivation .....                                | 24                                        |
| 3.3 - Final research framework .....                  | 26                                        |
| 4 - METHODOLOGY .....                                 | 27                                        |
| 4.1 - Research Question .....                         | 27                                        |
| 4.2 - Methods used .....                              | 28                                        |
| 4.3 - Why WhatsApp? .....                             | 29                                        |
| 4.4 - Problems and limitations .....                  | 29                                        |
| 5 - CASES .....                                       | 30                                        |
| 5.1 - Foodsharing e.V. ....                           | 30                                        |
| 5.1.1 - Collective Action Framework (CAF) of FS ..... | 32                                        |

|                                                                         |    |
|-------------------------------------------------------------------------|----|
| 5.1.2 Why Foodsharing? .....                                            | 33 |
| 5.2 - Why Cologne? .....                                                | 35 |
| 5.3 - Why Neustadt/Süd and Merkenich? .....                             | 36 |
| 6.1 - FINDINGS AND ANALYSIS NEUSTADT/SÜD .....                          | 40 |
| 6.1.1 - Motivation .....                                                | 40 |
| 6.1.1.1 - Instrumental .....                                            | 40 |
| 6.1.1.2 - Identificational .....                                        | 41 |
| 6.1.1.3 - Ideological .....                                             | 42 |
| 6.1.2 - Personal social environment and the effect on diffusion .....   | 44 |
| 6.1.3 - Neighbourhood characteristics and the effect on diffusion ..... | 45 |
| 6.2 - FINDINGS AND ANALYSIS MERKENICH .....                             | 47 |
| 6.2.1 Motivation .....                                                  | 47 |
| 6.2.1.1 Instrumental .....                                              | 47 |
| 6.2.1.2 - Identificational .....                                        | 48 |
| 6.2.1.3 - Ideological .....                                             | 49 |
| 6.2.2 Personal social environment and the effect on diffusion .....     | 50 |
| 6.2.3 - Neighbourhood characteristics and the effect on diffusion ..... | 51 |
| 6.3 - COMPARISON BETWEEN NEUSTADT/SÜD AND MERKENICH .....               | 53 |
| 6.3.1 - Motivations .....                                               | 53 |
| 6.3.1.1 - Instrumental .....                                            | 53 |
| 6.3.1.2 - Identification .....                                          | 54 |
| 6.3.1.3 - Ideology .....                                                | 55 |
| 6.3.2 - Personal social environment and the effect on diffusion .....   | 56 |
| 6.3.3 - Neighbourhood characteristics and the effect on diffusion ..... | 56 |
| 7 - DISCUSSION .....                                                    | 57 |
| 7.1 - Motivation .....                                                  | 57 |
| 7.2 - Social influence and neighbourhood characteristics .....          | 59 |
| 7.3 - Effectiveness for the desired change .....                        | 60 |
| 7.4 - The social question .....                                         | 61 |
| 7.5 - Achievements of FS .....                                          | 62 |
| 8 - CONCLUSION .....                                                    | 63 |
| 8.1 - Findings .....                                                    | 63 |
| 8.2 - Recommendations .....                                             | 65 |
| 9 - BIBLIOGRAPHY .....                                                  | 66 |

## 1 - INTRODUCTION

Food waste is a topic that has caught my interest for more than 18 years now. Back then, during my high school years, I had my first job in a supermarket which belonged to one of Germany's biggest retail groups. I filled up shelves, sorted empty bottles and also depreciated and threw away food that had either expired or was considered not vendible. The amounts of food that got discarded, despite it was still perfectly eatable but just didn't fit the norm which the supermarket manager decided upon was shocking to me. Even worse, employees were not allowed to take this food home but had to actively destroy it before it went into the supermarket's bins, leaving me behind confused and distraught.

During my bachelor I started to get into contact with dumpster diving, reviving the shock I experienced as a teenager over the enormous amounts of good food getting tossed into supermarket bins. For over two years, I didn't need to enter a supermarket but instead lived in kinglike manner from this abundance of food and other things alone, engraving the ridiculous state of this wasteful food system in my consciousness.



**Fig. 1:** Dumpster-dived bread from one supermarket bin  
Source: Author's own



**Fig. 2:** Dumpster-dived food, drying after being washed  
Source: Author's own



**Fig. 3:** It is also possible to dumpster-dive non-food items, like cigarettes  
Source: Author's own

Similarly, during 4CITIES, I frequently dumpster dived in Brussels, Vienna and Copenhagen, or went to organisations dealing with food waste like 'LaMAB' and 'No Javel' in Brussels or 'Foodsharing CPH' in Copenhagen. The procurement here was sometimes done alone, but often with fellow 4CITIES students or local friends and became a social event including the distribution of the food as well as common cooking and eating events.



**Fig. 4:** Food saved through dumpster-diving in Copenhagen, together with my 4CITIES study colleague Claire  
Source: Author's own

During travels and living in different places around the world I've seen and met many people who could not afford an adequate diet, making the knowledge of the large amount of food waste in the global north even less bearable. Practicing dumpster diving and food sharing throughout my studies was a good way to turn negative emotions into something positive and communal.

Foodsharing e.V. (FS) is an organisation in Germany that follows exactly this approach. Volunteers save food from shops which then is distributed and consumed by everyone who likes to join the movement. However, when I intended to join the movement, I noted that in my neighbourhood there were only few FS activities whereas in other parts of my hometown Cologne numerous FS actions took place. From this, the motivation for this paper derived, researching FS and its distribution in Cologne.

Aiming to shed light on diffusion processes which determine distribution outcomes, this research will (1) present the current lines of scholarship around topics of the commons, social innovations and food sharing movements like FS, (2) present theories regarding diffusion as well as participants' motivations, (3) present my research questions and explain my choice of methods, (4) present my cases and explain their choice, (5) demonstrate my findings and analyse these with the help of the theories presented earlier, to finally compare both cases on similarities and divergences, (6) discuss my findings by putting my findings in the wider academic context and presenting outstanding

findings, (6) to finally draw a conclusion of this work, including some advises for FS and further research.

## 2 - LITERATURE REVIEW

In this Literature review I will describe the current state of knowledge around the topic of food sharing. First, food as a concept will be outlined explaining its manifold ways to understand and interpret it, including food as a commodity and food as a commons. Next, characteristics of social movements and their potential for systematic change will be explained but also reviewed critically. Then, light will be shed on literature on food movements, as being one sort of social innovations, to then narrow down to specifically examine food sharing initiatives. Lastly, the academic knowledge on FS will be outlined before ending with the aim of this research.

### 2.1 - The dimensions of food

Food is an integral part of the life of all living beings and its presence a precondition for our very existence. Together with the other two essential resources water and air it is an absolute need which can neither be substituted nor negotiated. With its properties of being tangible, visible and graspable its material existence cannot be debated (Ganglbauer et al., 2014). Next to these technical definitions there are more dimensions to be considered. Vivero-Pol (2017) defines 6 attributes food entails, namely food as a tradable good, public good, cultural determinant, renewable resource, essential for humans and a human right. Some of these dimensions are inter-related. For example, the idea that adequate access to food is a precondition for social and cultural practices in all cultures and historical periods (Ganglbauer et al., 2014) resulted in a re-construction of food as a basic human right in the 20<sup>th</sup> century under international law (Vivero-Pol, 2017). Article 25 of the Universal Declaration of Human Rights as well as article 11 of the International Covenant on Economic, Social and Cultural Rights grant all humans the right to feed themselves in dignity by either growing their own food, buying it or through the provision by a welfare system (ibid.). From this as well as the fact that it is a human right, a special treatment and protection of food as well as a universal right to access it are derived; or, to put it in other words, food cannot be denied to anyone under any circumstance.

During the same time these rights were formulated, influential liberal economists had and continue to create a different understanding of food. It is the idea of private ownership over food in form of

products that should be allocated by the market instead of communities or states (ibid.). Focussing on the dimension of being a tradable good, food should be subject to market forces just as any other good. To elaborate this a bit more, in the following sections we will look at the idea of food as a commons versus food as a commodified, private good.

## 2.2 - Food as a means for capital accumulation

The commodification of food, storing it at the individual household level based on a sense of private ownership started already some 6000 years ago and is therefore a well-established cultural practice. Similarly, for centuries food has been traded among humans in exchange for other food, goods, or labour. However, this trade was always monitored closely by those in power under tight regulations. This was accounted for by a consideration of food as a multi-dimensional entity, acknowledging its exchange value being as a means to make a living but also its use value, feeding humanity and fulfilling cultural and social roles. Ferrando et al. (2019) see this mutual appreciation of both, use and exchange value disrupted with the uprising of modernity. Through individualisation and competition not only food, but many other former commons such as land, seeds, labour, knowledge, water, and clean air have been transformed into capital. Following this process of a deepened commodification, such commons are now understood as “abstract, naturalised entities, disembedded from their social relations and places of production and consumption” (ibid., p. 389).

Today, the problem is that food is controlled by an industry that is exclusively driven by profit maximisation, disregarding the multidimensionality of food. Non-market values and the sense that food is a matter to care about emotionally, socially, and culturally are pushed outside the discourse, favouring an emphasis on its tradable features, namely durability, external beauty, standardisation, and the focus on cheap calories. The low-cost production of scale of food products is only ‘cheap’ in the way that the same calory output can be achieved with less labour and capital input (ibid.). This quantitative framing, expressing the value of food in the amount of calories provided is favoured and promoted over a more qualitative and holistic approach (Ferrando et al., 2019). The resulting decreased quality not only means various elements of nutrition are lost but also produces catastrophic results on equity and sustainability. For instance, people’s agency over the food they eat is minimised, degrading it to the “sovereign act of consuming” (Vivero-Pol, 2017, p.4) and an “ultimately pointless choice between food brands” (ibid.) instead of asserting influence over the entire food chain from production, to allocation and access.

According to Vivero-Pol (2017) many scholars have pointed out that this reductionism of food as a tradable good is the root of many contemporary problems in the global food system, being

characterised by inequality, alienation and exploitation (Plank et al., 2020). For instance, the often also called 'corporate food regime', or 'neoliberal global food order' creates unfair trade and social inequalities (Friedmann & McMichael, 1989), with speculation on food prices even for future harvests (Ganglbauer et al., 2014) being one example that is justified with capitalocentric arguments. Seeing food as a private commodity is also one reason for the large amounts of food waste being produced by agribusinesses and multinational retailers who therewith threaten global food security while contributing to global warming (Pritchard, 2009). Similarly, Ferrando et al. (2019) see the cause for the prevalent waste of food rooted in the reductionist emphasis on its exchange value. By mixing up value and price, the consideration of its cultural and social dimensions is suppressed and neglected (ibid.).

To counter this destructive system that incentivises capital accumulation and ignores basic human and planetary rights, it is important to establish more holistic narratives of equal appreciation of all dimensions food carries for which understanding food as a commons can serve (Vivero-Pol, 2017).

### 2.3 - Commons

Just as food as a commodity is not a new phenomenon, nor is the idea of the commons. For thousands of years, traditional communities have supported their livelihoods by establishing a system of solidarity and care within their communities, finding a way to define a non-instrumental relationship to nature. Even today there are examples, in which natural resources and agriculture produce are seen in a context of interdependencies with nature and shared equally in a non-exploitative manner among the community. They don't serve private but public purposes, forming customary forms of tenure and governance of resources (Ferrando et al., 2019). In academia, the revival of the commons can be found in the works of many economic, legal, political, historical and urban scholars as described by Morrow (2019 and Vivero-Pol (2017). Today, the concept helps to overcome static dichotomies of for example public/private, state/market, rural/urban or material/immaterial by acknowledging "dynamic processes through which commons are created and governed" (Morrow, 2019, p. 203). This does not mean that ownership, for example, does not play a role anymore, but is understood as only one of many equally recognised attributes of commons (ibid.).

Morrow (2019) and Vivero-Pol (2017) define the commons to consist of a resource (in the case of food anything eatable) and a governing community of any kind ensuring equal participation in both, the benefits of the resources as well as the governing process. Applied on food, equal access to it regardless of people's financial situation as well as the building up of a community stands in contrast

to the neoliberal profit-maximation dogma. Besides, the participatory element is not only limited to the consumption momentum but start with the decision what to grow in which was on which plot of land, something that is also described as food democracy (Vivero-Pol, 2017) or food sovereignty (McMichael, 2014). Similarly, rules and sanctions, which are still present in all commons, are not externally imposed on individual members of the community but decided upon jointly (Morrow, 2019). But how and where is it possible to find ideas of the commons in practice?

As explained earlier, in international law food is defined as a human right, representing one dimension of the food commons. If taken seriously, food as an absolute human right means that neither the state through bureaucracy, nor the market are allowed to deprive people from the amount and quality of food necessary for human existence but should ensure it. Ferrando et al. (2019) see this line of argument as the least radical approach to actualize the food as a commons framework, because it does not address problems such as the lack of control over production chains, inefficiencies, questions of equity and food waste production. Instead, the human rights approach “tends to prioritise individual over collective rights” (ibid., p. 382), not challenging the capitalist organisation of the food system which has been identified to be the cause of mayor flaws in the system. And indeed, the human rights approach being in place does not seem to work well, as starvation and malnutrition continue to be a global reality tolerated by state and market actors.

Instead, a more radical approach needs to be implemented, to disrupt capitalist narratives which are also just socially constructed. And indeed, societies can change hegemonic systems through debate and policy modifications, as globally proved with numerous examples of water communalisation (Vivero-Pol, 2017). Ferrando et al. (2019) accentuates this example of successful water communalisation to stress the importance of the commons. Both, the market but also the state circumvent the recognition of essential human needs (such as the unrestricted access to water and food) and actively torpedo the establishment of non-capitalist narratives and systems to fulfil these needs. As Ferrando et al. (2019) explain:

*In the commons approach, in fact, the state, just like the capitalist market, is more part of the problem than of the solution. Their centralized knowledge cannot be a substitute for the dispersed knowledge and practices of the actors of food systems, whose relationship to the context in which they operate and ability to adapt to changing local circumstances are an essential element of the resilience of the system. (p. 379)*

Resilience plays a vital role, as the commons provides a way to escape both, bureaucratization and commodification, by creating own rules and therewith democratising the governance and control over essential resources. This is necessary as risks are often assessed by a dominant group in society,

something that is sometimes referred to as the 'white male effect'. This hegemony of rulemaking by one homogeneous group in culturally diverse and pluralistic societies not only leave blind spots, but also reinforce unequal power relations. As Ferrando et al. (2019) continue to explain:

*Recent scholarship has highlighted the extent to which political elites are attentive to the expectations of economic elites, rather than to those of ordinary citizens. (p. 379)*

Both actors, the market and the state reinforce each other through mechanisms such as revolving doors and perpetuate destructive mechanisms in opposition to the interest of society as a whole. Here, the commons "provide an inspirational and aspirational tool of resistance and a theoretical challenge to the binary vision of the state and market duopoly" (ibid., p. 390). In other words, establishing a system of commons is a way to invent a third dimension, regaining control and influence over certain resources and produce that are essential for human existence but denied access to by the two traditional organising forces state and market.

Social innovations are a tangible realisation of the commons idea, actually challenging dominant narratives "of market relationships mediated by prices and the verticality of the state imposing regulations on the individual" (ibid., p. 384). Instead, "individuals relate to one another not as market agents seeking to conclude a transaction, nor as competitors, but as members of a community collaborating in pursuing a collective action for the commonwealth" (ibid.). Applied to food, the authors continue that:

*Food is a 'commons' in that its production and distribution responds to a logic of solidarity and mutual help, rather than to a logic of competition and exclusion, because people recognize mutual neediness and the essentiality of eating. (...) The rules resulting from self-governance replace the rules of the market. (p. 384)*

And indeed, currently 2 ways of commons seem to revive. The first develops in more traditional communities that re-discover customary forms of governance, withstanding the expansion of capitalist market logics. The other "stems from social innovations, which emerged in a relatively recent past, primarily in urban settings and at the initiative of upper-middle class activists" (ibid., p. 381). Examples here are reclaim collective management of urban space growing flowers and food, practicing art and activism, resisting gentrification and creating affordable housing and expressing new forms of urban citizenship inspired by Lefebvre's 'right to the city' (Morrow, 2019). Fs is in line with these initiatives, managing the saved food collectively under a set of principles and rules which

the organisation has decided upon democratically, aiming to grant access to food to everyone based on an innate right to it.

## 2.4 - Community Based Economies (CBEs)

One way of pinpointing urban commons is by looking at the community economy model which has been used in food research. It describes grassroots initiatives aiming for sustainable transitions by providing bottom-up solutions in forms of goods and services fulfilling a community's need (Argüelles et al., 2017). They are often connected with attributes such as enhancing community development and social interactions, promoting low-emission economies, alleviating poverty and try to withdraw from capitalist logics (ibid.).

Politically, CBEs are described as challenging hegemonic capitalist discourses and changing meaning and horizons of possibilities from within the dominating global, neoliberal regime (ibid.). Argüelles et al. (2017) show this exploration of possibilities can also be described as 'nowtopias' or 'liminal social spaces of possibility', materialising "the imagination of what a world that isn't capitalist could look like" (Harvey & Haraway, 1995, p. 519).

## 2.5 - Neoliberalism and social innovations

As outlined, grassroots initiatives, such as CBEs, try to evoke a correction of societal problems through bottom-up activism. This is a mechanism that Argüelles et al. (2017) outlines as one key neoliberal strategy, to "promote collaborative governance models encouraging citizen participation and volunteerism" (p. 32). Instead of addressing and contesting "deeply rooted privileges and power structures" (ibid., p. 31) the neoliberal frame in which social movements act is a mental block preventing individuals from even imagining more fundamental systematic changes (Žižek, 2009 in Argüelles et al., 2017), limiting "the arguable, the fundable, the organizable, and the scale of collective action" (Guthman, 2008 in Argüelles et al., 2017). In that way, grassroots initiatives not only work within neoliberal patterns but even reproduce them by, for example, giving individual consumer citizens the role of transformative subjects in neoliberal market economies (Argüelles et al., 2017). This responsibilisation of citizens in a discursive context of self-help and community eventually shifts responsibility "for well-being and social justice away from the State to individuals" through partnership, participation and good governance initiatives (ibid., p. 32). Neoliberal rule is dependent on such bottom-up grass roots initiatives to ensure the neoliberal status-quo, and consequently encourages activism in such a manner. This mostly counts for grassroots initiatives

providing services, to which FS can be counted, whereas uncivil or disruptive self-organised initiatives are impeded (D'Alisa et al., 2013 in Argüelles et al., 2017).

The case of CBEs is especially interesting here. As CBEs can undoubtedly be considered grassroots initiatives, the same neoliberal trap described above applies to them. However, the CBEs entail political features such as contesting hegemonic power structures objecting the apolitical neoliberal agenda. Subsequently, CBEs can be accounted for being both, a disobedient resistance project and at the same time an outsourced grassroots and often volunteer run social service provider (ibid.). This Janus-headedness means CBEs capabilities for transformation shall not be completely neglected but requires critical analysis and discussion, something this thesis aims to achieve.

Considering the rise of individual-based political actions, Argüelles et al. (2017) raise the concern over the creation of another creative class bubble in CBEs, as a consequence of the individualization of the community economy. One undesired result from this could be the reinforcement of neoliberal structures in which individuals only organise to raise voice for their personal interests, missing out on organisations' potentials to instead bring about a broader and more accessible and redistributive transformation process (ibid.). If the privileged will be able to express themselves and lobby for their interest whereas less privileged individuals will be left to their own faith, the social order, even if unintentionally, is maintained and reproduced. Here, the concept of privileged citizenship plays in, where only those with a certain status (whether inherited or proven through action and conviction) in society or in a community may be entitled to the benefits non-state actors such as CBEs produce (ibid.). Thus, not only the services provided by CBEs become exclusive but the communities themselves too, often resulting in monoculture discourses, visions, and ideas (Alkon & Agyeman, 2011 in Argüelles et al., 2017). This can raise doubt over the claim CBEs are spaces of inherent empowering and transformation as stated earlier (Ghose & Pettygrove, 2014, p. 1092 in Argüelles et al., 2017). Understanding FS as a CBE, I will consider these debates and include them in the discussion part of this work.

## 2.6 - Food initiatives

Considering the importance of food for human survival and its social and cultural nature it is not surprising that social movements evolve around it. There are very different examples in which communities are formed around food, but all of them share the characteristics of a normative orientation, a collective identity as well as an orientation towards a change which should be achieved through collective action (Rombach & Bitsch, 2015). Generally speaking, these food organisations seek to “produce, transform, distribute and consume food differently from the industrial food

system” (Vivero-Pol, 2017, p. 15) and can therefore be classified as counter-hegemonic as they are “innovative in their means, values, governance systems and institutional setup, develop alternative narratives to the dominant regime, and many of them seek to challenge, disrupt, modify or replace the regime practices” (ibid.).

Besides, communities engaging in food practices serve as a facilitator for an exchange of knowledge and experiences both in physical, but some also in digital spaces (Ganglbauer et al., 2014). Social movements concerned with food can also be described as “amalgams of materials, performances, structural factors, and cognitions whose particular time-space constitution is contingent on the agency of actors and is thus open to improvisation and accident” (Jones & Murphy 2010 in Edwards & Davies, 2018). This improvisation means their appearances are manifold “involving contested processes in numerous loci, multiple social groups, diverging narratives of transition, clashing ideologies and vested interests” (Vivero-Pol, 2017, p. 442). This study aims to shed light on exactly these appearances, as FS is one form of such alternative urban food movements.

## 2.7 - Movements around food waste

All alternative urban food movements share common features such as a desire of change fostered through individual and collective action (Rombach & Bitsch, 2015), but within this group, there are various movements primarily dealing with food waste. They act in various forms all along the supply chain, for example rescuing food to be thrown away from supermarkets, restaurants and canteens, fields, shop bins and many more. They all share as their desired outcome to raise awareness of food waste and ultimately aim to reduce it (Rombach & Bitsch, 2015). Accordingly, they are “contributing to an immanent and at times an actualised basis for change in small but substantial ways” (Edwards & Davies, 2018, p. 490), intending to achieve institutional changes in the markets (King & Pearce, 2010).

Again, the effectiveness of alternative urban food waste movements is under the same general critique of reinforcing neoliberal narratives that was previously discussed on CBEs, to which Vivero-Pol (2017) points out four critiques, namely “(a) their discursive emphasis on personal responsibility, voluntary action, competition and efficiency; (b) de-politicizing food politics and placing the transformative agency on the shoulders of conscientious consumers, innovative entrepreneurs and well-intended volunteers; (c) emphasizing entrepreneurial solutions and local market linkages, thus obscuring the importance of state duties and citizen entitlements; and (d) having a local focus rather than a national one, thus contributing to the process of devolution often associated with neoliberalism” (ibid., p. 15).

Food waste movements are also gaining popularity in academia and have been researched differently. According to Schanes & Stagl (2019), research has been conducted on providing a taxonomy of sharing models and on their potentials for transformation. Other scholars have discussed people's motivation on why to engage in such movements, as for example in the cases of dumpster diving, other waste oriented shared economies or food sharing initiatives. Rombach & Bitsch (2015) point to conducted research on their political and organisational aspects. As there are various kinds of movements dealing with food waste, for this paper research on food sharing movements with degrees of clear institutional structures should be considered, demarking them from loose forms such as dumpster diving.

## 2.8 - Food sharing movements

Sharing food has been and continues to be universally practiced in all cultures (Ganglbauer et al., 2014). Whereas the circle of with whom food was shared became smaller in recent decades, sharing food with and inside communities has regained popularity. Among other reasons, this stems from the mere overproduction of food resulting in large amounts of food waste bearing the potential to be reused and shared (ibid.). However, the individualised responsibility to share saved food, and new ways of digital connectivity between individuals are novelties that demand research (Melkonyan & Krumme, 2019).

These connected individuals, or food sharing members of a community, are often volunteers collecting unmarketable food items in frequent intervals from shops, markets, food production sides or other individuals and share, swap, or sell them (Edwards & Davies, 2018). They also carry out other activities, such as events around the topic of food waste or the instalment of local spots to facilitate or expand the saving or sharing process (Rombach & Bitsch, 2015). They can only exist due to "the diverse flows of skills, social connection, shared places and resources, and the variety of communication methods that move between the various actors" (Edwards & Davies, 2018, p. 487) and therewith serve as a platform for exchange and discussions (Rombach & Bitsch, 2015). For the sake of this study, it is worth having a closer look at these actors.

### 2.8.1 - Donors

Few studies have looked at food donors in the food sharing context. Miroso et al. (2016) as well as Schanes & Stagl (2019) state that participating businesses felt joy and pleased to contribute to their local community. This might not only be rooted in the fact that they get a clear conscious about their waste causing practices. In some cases corporate social responsibility images improved leading to an

increase in customers and revenue in addition to a decrease in waste removal costs (ibid.). Rombach & Bitsch (2015) even recommends managers in agri-food to get a better understanding of food movements as they are gaining popularity and “impact consumer trends relevant to value chains” (p. 3). This is criticised by Morrow (2019) who states the inequalities between recipients and donors are perpetuated, only redistributing unmerchandise food and not wealth or power. But such a reallocation would be necessary to overcome structural inequalities of capitalism and the immanent overproduction of food products causing waste in the first place. Food organisations, however, often find themselves in a dilemma, as aiming to change food providers actions, policies or power positions would endanger their cooperation (Schanes & Stagl, 2019). This sharp and unequal donor-recipient relationship was identified to be much weaker in a study by Morrow (2019). The author justifies this with the co-creation of resources participants benefit from, “destabilising the boundaries between donor and recipient” and constituting an “thus exciting ground for exploring the emergence of food commons and alternative ways in which food can be valued, governed, and shared” (p. 202).

### 2.8.2 - Recipients

Most research on participants in food sharing actions has been conducted on those receiving and distributing the food. One attribute is that food sharing facilitates building new social relationships resulting in well-connected networks (Ganglbauer et al., 2014), explaining why participants on the receiver side are often well informed about both, other food sharing initiatives as well as about macro-level issues such as food waste (Rombach & Bitsch, 2015). Participants also desire more sustainable food consumption such as regional, seasonal and plastic-free products, showing an influence of goals of food initiatives on actions in private consumption patterns (ibid.). In chapter 2.9.1, motivations as one of the main lines of research regarding recipients will be discussed further.

### 2.8.3 - Transformational potential

The potentials of all different food sharing movements “to produce an array of emotions, bodily knowledges, social relationships, new identities and understandings” (Edwards & Davies, 2018, p. 489) are some of many reasons why they are seen as transformative. Yet another reason lays in the fact that they often connect horizontally with other initiatives dealing with food sharing and food waste and even happen to foster further movement and actions beyond organisations’ reach (ibid.). Besides, they also connect vertically, not only with common citizens but also with different levels of government and food corporations, creating a robust network contributing to a broader food movement with transformational potential (ibid.). Melkonyan & Krumme (2019) mention that food

sharing being a niche practice, has transformational potential as these niches are typical starting points for societal transformation processes. However, this assertion is contested. Findings suggest that not only does food sharing come with high economic activity costs but rescuing food alone has only a minimal effect in reducing food waste (Miroso et al., 2016). Consequently, in a study on food movements in Germany, Rombach & Bitsch (2015) recommended food saving movements to not only focus on the actual reduction of food waste on the small scale but extend their focus to address the bigger picture. Nevertheless, they can be considered a sustainable social practice simply being an alternative to the disposal of edible food (Melkonyan & Krumme, 2019).

#### 2.8.4 - ICT

Food sharing initiatives are also an example of an innovative logistic system addressing the issue of food waste as a network. Schanes & Stagl (2019) show how ICT brought about new initiatives and explains that technology creates new relationship and pathways. ICT, however, also creates new obstacles, such as hesitation to share your home address with strangers to pick up food baskets or the exclusion of people who are either not familiar with ICT technology or face other barriers such as language, knowledge or disabilities (Edwards & Davies, 2018). To not leave these disadvantaged people behind, reference points of the organisation in the analogue world remain crucial (ibid.). The importance of ICT in food sharing initiatives are highlighted by Davies et al. (2017) who mapped out over 4000 food sharing initiative in 100 cities around the globe, all of them using ICT in one way or another. One of these food sharing initiatives is FS which serves as a case study for this thesis.

#### 2.9 - Foodsharing e.V.

FS is a non-profit food saving and distributing organisation being organised over the website 'foodsharing.de'. Morrow (2019) accurately sums up that FS has been researched as "sites of community economy and neoliberalism (Arguelles et al., 2017), collaborative consumption (Wahlen, 2017, 2018), human-computer interactions (Ganglebauer et al., 2014), and commons (Chies, 2017)" (p. 2014). In addition to that, FS was researched upon participants' motivation (Rombach & Bitsch, 2015; Schanes & Stagl, 2019), the organisation's diffusion (Melkonyan & Krumme, 2019) as well as an example of a digitalised organisation (Klumpp & Ruiner, 2018). In the following I will highlight findings from these multiple works that are of interest for this paper.

### 2.9.1 - Recipients Motivation

The motivation of members of food sharing movements are another body of research, one this thesis aims to add to. First, as participating in food sharing initiatives is more time and energy intensive than obtaining food in shops, Ganglbauer et al. (2014) assert that there must be other motivational factors beyond receiving free food. They found that participants' main motivations laid in the desire to save food from being disposed, driven by the belief in a wider systematic change, alongside the hope to meet new people and form a network around a shared interest. This alters emotional wellbeing through feelings of satisfaction and the notion to make a positive difference in the local community as well as on a macro level reducing waste (Miroso et al., 2016). It is based on the believe that such macro level changes will occur once more people are informed about the problem of food waste resulting in individual change of behaviour and active participation until a critical mass is reached resolving the problem (Schanes & Stagl, 2019). Again, this view on how to achieve transition is criticised, overstating the power of awareness and information, overrating the agency of individuals and dismisses the structural and systemic causes of food waste (ibid.).

Next to these social and environmental values, Ganglbauer et al. (2014) show that economical need also plays a role, even if a minor, as some recipients stated that the food they receive is needed to sustain their life. Rombach & Bitsch (2015) categorised motivations differently, namely into ideological motivations (complying/contrasting societal norms and values, mirroring political stand points), identificational motivations (identifying with other members) and instrumental motivations (pragmatic self-interests). They found that main motivations were reducing food waste, acting against overconsumption and to promote the value of food and that volunteering at FS requires identification, ideological motivation and commitment; a commitment, based on the intrinsic believe to make a difference by engaging in FS. On the contrary, the authors found no signs of economic motivation to participate in food sharing, a finding that deviates from the results by Ganglbauer et al. (2014). The low economic incentive as a motivator to participate is an interesting finding. Whereas in most CBEs instrumental motivations do play a role, in food sharing initiatives participants do not even mind 'free-riding' by others, meaning it is commonly accepted that some participants only benefit from the efforts of others (Rombach & Bitsch, 2015).

Schanes & Stagl (2019) also researched motivations of FS participants and employed motivation frameworks of social psychology and developed five categories, namely: Emotions and Morality, Identity and Sense of Community, Reward, Social influence, and Instrumentality. Their findings in short were first, that participants are motivated as a means to express their displeasure over a violation of personal morals (e.g., that food is thrown away), turning these negative emotions (being shocked by the amount of wasted food) into positive emotions (to share and do something

meaningful). Second, and similar Rombach and Bitsch (2015), Schanes & Stagl (2019) detected strong identification of FS participants towards the organisation and other members, constituting another motivational factor. Third, similar to previous studies, Schanes & Stagl (2019) found very low motivations based on reward. However, the participants interviewed mentioned that they know of other participants who mainly participate for the free food, as they rely on it to sustain their lives. Fourth, most people were motivated to participate in FS by members of their social circle who were already part of it and served as a role model (descriptive norms). In contrast to Rombach and Bitsch (2015), Schanes & Stagl (2019) found that participant's social environments do exercise normative outside pressures on participants which motivates them to engage in FS, something the authors call 'subjective norms'. Lastly, participants were motivated to contribute to a new consciousness around food in society to achieve a bigger goal, namely preventing food waste in the first place. Even though Ganglbauer et al. (2014) also researched the motivation of FS participants by analysing posts in a Facebook group, Schanes & Stagl (2019) call for further research on motivations of FS participants to understand the actors of this potentially system-transformational social action better and in new ways.

#### 2.9.2 - FS as a commons

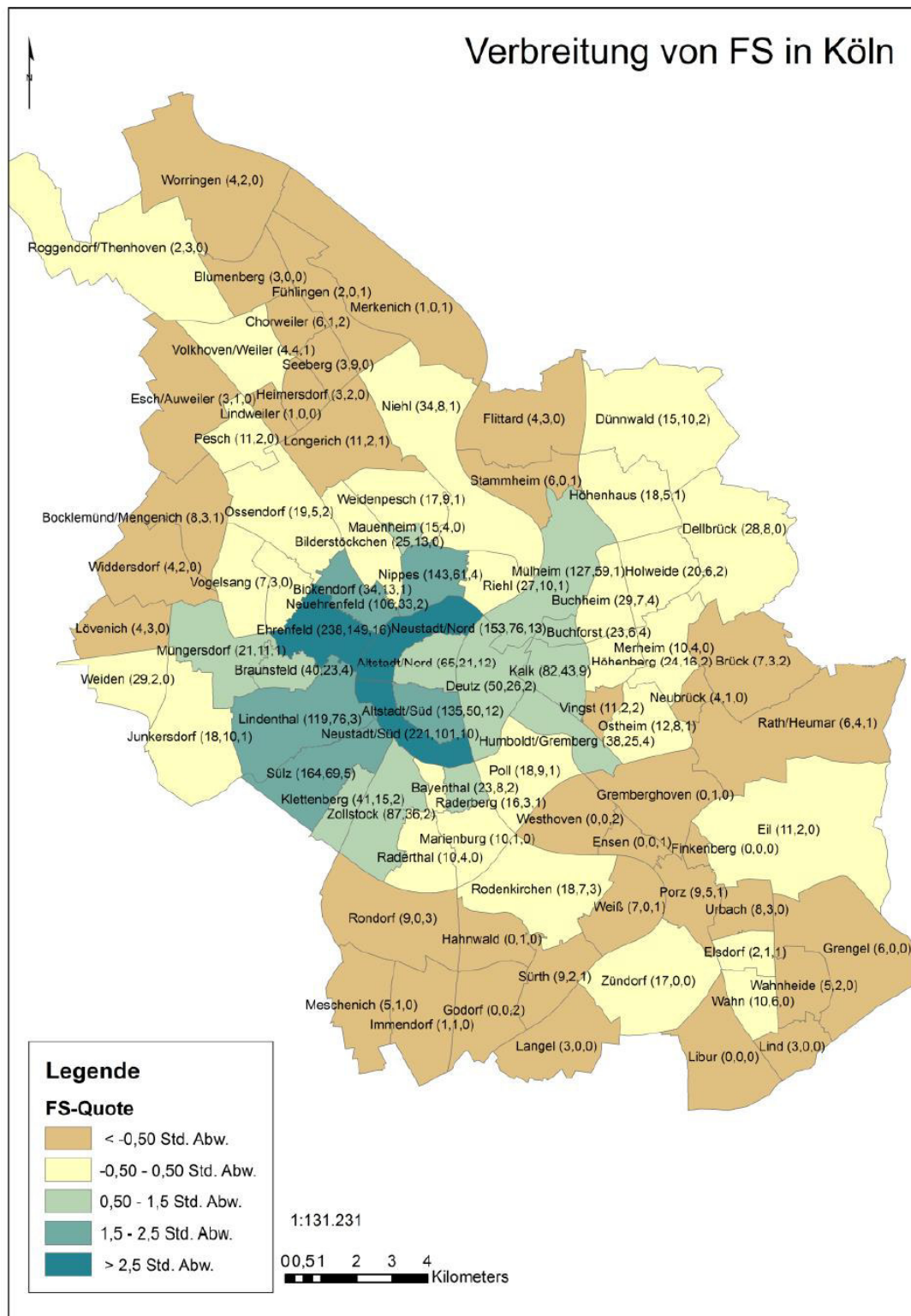
FS not only consist of a network of actors but also of material. The most tangible are so called Fairteiler, places in public space which serve to redistribute access food. Morrow (2019) researched a conflict between a local food safety authority and FS's Fairteiler. The author sketched FS as an attempt to frame food as commons and contrasted this with the market oriented and capitalocentric perspective of public sector workers as well as the rules and laws they refer to. The study gives an interesting insight on how FS as a commons is based on shared action and responsibilities over the collection, distribution and consumption of food. Thus, FS is an interesting case to research as it challenges hegemonic narratives through a tangible day-to-day practice performed by hundreds of thousands of people.

#### 2.9.3 - Diffusion of FS

Finally, the diffusion of FS which is crucial for its potentially transformative power, was researched. Next to Schanes & Stagl (2019) who found that some participants were directly recruited through their personal environment, Melkonyan & Krumme (2019) quantitatively researched the spatial component of diffusion on both national and local level. Findings where that nationally, FS spreads primarily among females in urban areas and its diffusion happens as clusters.

For the local level, the city of Cologne, Germany was selected as case study, a place of special interest as Davies et al. (2017) claim it to rank number one worldwide on food sharing initiatives per capita. The results by Melkonyan & Krumme (2019) suggest a correlation between the occurrence of FS in a neighbourhood and the milieu-specific sociodemographic characteristics. The authors explained that diffusion depends on three factors, innovation properties and properties of the adaptor, sociocultural environment, and chosen communication channels (Rogers, 2003 in Melkonyan & Krumme 2019). They explain the exclusive occurrence in cities with the requirement of a certain population density, making a foundation of a local group more likely. Second, in cities spatial and temporal distances are shorter, suggesting it becomes easier to incorporate the resource intensive act of FS into actors' daily lives. This spatial proximity, also to other participants plays a role in the diffusion as it is easier for newcomers to integrate in already existing structures (ibid.). Even though FS, being an ICT supported social innovation, has the potential to reach people beyond physical space, the "transmission of social innovation seems to take place increasingly through local, i.e., personal, contacts" (Melkonyan & Krumme, 2019, p. 205). This results in distribution clusters, meaning in areas with an already high FS presence, FS diffuses even faster. Lastly, visibility in public space, for example through Fairteiler, sticker, information stands or public pickups, might be a driver for diffusion, too.

The study also suggested that participants are mostly living in typical student housing, are between 21 and 34 years old and tend to live in areas with high percentages of votes for the green party. The occurrence of FS in a neighbourhood is dependent upon the prevalence of this social milieu being dwellings there, which in the case of Cologne is summarised in fig. 5. It shows that participation mainly occurs in 'trendy' and popular student districts close to the city centre and university, a phenomenon that can be observed in all major cities in which FS occurs.



**Fig. 5:** Distribution of FS in Cologne  
Source: Melkonyan & Krumme (2019)

This spatially and socially selective distribution proves the initiative's niche character but also raises questions. For example, Argüelles et al. (2017) attested FS and other community initiatives a "lack of

consideration of the interests, needs and capacities of groups beyond their traditional closer networks” (p. 38). Melkonyan & Krumme (2019) see FS as consolidating in its niche rather than moving out of it and identifies this as a barrier for its potential for system transformation.

## 2.10 - Research aim

This research analyses FS and its spatial occurrence in Cologne based on the quantitative data collected by Melkonyan & Krumme (2019) with the aim to add a qualitative layer on the data presented in Fig. 2. Following calls by Schanes & Stagl (2019) for further research on motivations of actors in food sharing organisations, I interviewed people in two contrasting neighbourhoods in Cologne (Neustadt/Süd and Merkenich) to first, understand motivations as an internal driver or disincentive for participation, and second external drivers and disincentives which lay in both, the direct social circle of interviewees as well as in characteristics of the neighbourhood (potential) participants live in. Interviewees will be recruited from WhatsApp groups in which FS participants are organised, a medium that yet has not been considered in food sharing research. With this aim to connect the spatial aspect with motivation research. Through in-depth interviews with people from FS WhatsApp groups, being a medium outside the official FS framework, I hope to give voice to actors being underrepresented in previous research, something that can be seen as crucial for the path towards a sustainable food system.

## 3 - THEORY

### 3.1 - Diffusion of innovations

In Rogers (2003), 3 communication channels are presented to spread information, namely personal contacts, mass media and social media. Even though they all bear the potential for diffusion, he argues that the first form, face-to-face contacts, is the most effective way to trigger diffusion and adaption. The reasons for this are first, that diffusion is more likely to happen between social homophiles, meaning people identifying each other as of the same kind. Second, if an innovation demands a break with routinised behaviour (to which patterns of food consumption can count), such disruption is more likely to occur when learned through a personal interaction. Through personal experiences, whether made by oneself or in form of narration or assistance by someone trustworthy from one's own social environment (especially from homophiles) first, obstacles are being

deconstructed and second, perceived risks of adaption lowered. To make this face-to-face interaction more likely the smaller the spatial and personal distance between two individuals, the more likely this interaction can occur and with this the transmission of information relevant for adaption, something that Bathelt et. al. (2012) call neighbourhood-diffusion. To sum up, diffusion is more likely to happen first, between people of similar socio-democratic and ideological backgrounds (e.g. direct social circles), and second, between people in spatial proximity (e.g. in the neighbourhood).

### 3.2 - Motivation

Whereas the theories described above will help to understand external factors for diffusion, the theory by Klandermans (2007), which was also used by Rombach & Bitsch (2015) in their study on alternative food movements in Germany, can help to understand what motivates people to become active in a social movement and, with the help of Becker (2019) and Ferrando et al. (2019) why certain people engage more than others. Therewith, motivation is another factor influencing diffusion, helping to understand the current unequal distribution of FS in Cologne.

Turning to Klanderman's (2007), instrumental motivation on a psychological level relates to the rational choice theory which constitutes the grounds for the marked based model of the homo economicus. In short, each individuum is considered a rational actor trying to maximise their individual welfare through a choice of actions taken. All behaviour is therefore an expression of the individuum's attempt to satisfy their own needs, to gain something. Applied to social movements, that means people need an external incentive to participate which can be of different kinds. Examples could be striving for material gains, emotional satisfaction or avoiding fines, moral pressures, judgement or sanctions.

Instrumental motivations are a way to understand why some people might be interested in a topic or support an idea but actively decide to not participate, as it is 'not worth' for them. On the other hand, a mere focus on this approach has long been criticised to not adequately represent real drivers for individual behaviour, as humans often don't act economically rational but consider other factors for participation than pure self-interest. This is why it's worth to look at the other two categories of motivation by Klandermans (2007), namely identification and ideology.

A participant of a social movement shows identificational motivations when members can relate to other members as of one's own kind, creating a sense of belonging. This sympathy can be based on their behaviour, interest, social and economic class, age, external characteristics such as looks, gender and many more.

All social movements are built on a collective action frame (CAF), that are meant to create a

consensus in the movement's goals, approaches, and organisation. These frames can be modified to fit a specific target group or left rather open and unspecific to unite very different people and ideas in one movement. When participants of a movement feel they mutually agree on this frame it is more like to feel like belonging to one group.

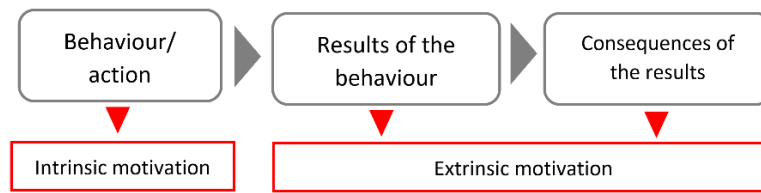
Lastly, identification with other members can lead to individual action on behalf of the group, to favour the group as a whole or help other members through altruistic personal behaviour.

Identifying the motivations that lay behind identity is a useful way to pinpoint why people, even if they can expect personal benefits and stand behind the cause of the movement, decide to not participate in a movement, because they might feel they 'don't belong there' and don't wish to collaborate with the other members of the group. On the contrary, the more people sense identification the more likely and intense their participation will be.

Lastly, ideological motivations derive from moral convictions and emotions participants carry. In each society there are themes and counterthemes that entail ideology, determining the public discourse. Examples for themes could be two adversative ideological convictions of commodification/privatisation vs. communalisation of food, materialism vs. idealism or transition towards ecological sustainability vs. the maintenance of the status quo. Civil movements are a reaction to such antagonistic themes. They adopt parts, re-create them and form a CAF as a result, which often stand in contrast to the status-quo.

The CAF consists of a problem to tackle (injustice), second, defines who is affected and responsible (identity) and third shows possibilities to change society (agency). These three dimensions can be expected to at least partly correlate with participants' own moral and political convictions. When similar or even identical, the movements serve as a tool for their members to express emotions (e.g., anger) by engaging in collective actions under a common framework, triggering enhanced commitment to participate.

Kladermans' (2007) framework also proves to be useful as his categories can easily be divided into intrinsic and extrinsic motivations. Becker (2019) explains that people who act driven by intrinsic motivations find satisfaction in the performing action itself, not considering possible results or consequences as a motivating factor to get involved. On the contrary, behaviours driven by extrinsic motivation take their expected results of a behaviour as a starting point. Its instrumental nature, meaning that the action performed is meant to achieve a goal or trigger consequences is the precise reason for its extrinsic nature. Fig. 6 summarises this relationship.



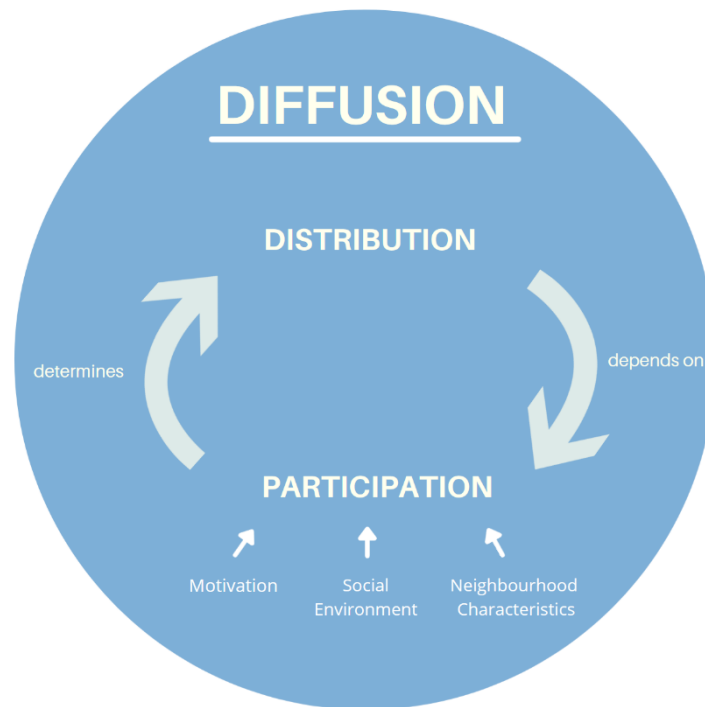
**Fig.6:** Intrinsic and extrinsic motivation  
Inspired by Becker (2019)

This dualistic framework of intrinsic and extrinsic motivation can easily be transferred onto the 3 categories Klandermans (2007) suggests: While instrumental motivation is of extrinsic nature, as it is based on expected results as the driving force behind the action, both, identificational and ideological motivation are of intrinsic nature because they are based on an individual's identity or values. Therewith, the behaviour itself is perceived as being meaningful.

Becker (2019) suggests that people motivated by intrinsic motivation are more engaged than those driven by extrinsic motivations. They are also inclined engage longer and in a more sustainable manner because, e.g., they can deal better with disappointments. This is meaningful because it is important to know which motivational factors have a positive effect on participation in social innovations such as FS. In accordance to this, Ferrando et al. (2019) suggest that lasting behavioural change “depends on individuals acting on the basis of their own values and deeply held beliefs, rather than external rewards or penalties” (p. 320). Translated into the categories by Klandermans (2007) this means intrinsic ideological motivations are desired if FS aims to achieve a sustainable change in participants' behaviours, which it claims to do. Ferrando et al. (2019) formulate that economic incentives, which in Klanderman (2007) would be extrinsic, instrumental motivations, “may be insufficient to disrupt routines (. . .) and to bring about change at the desired scale” (p. 380).

### 3.3 - Final research framework

In Sum, the aim of this research is to understand diffusion processes of FS in Cologne, which determine the distribution of FS activity in neighbourhoods. Therefore, external factors such as the direct social environment of participants and neighbourhood characteristics will be taken into account and applied with the help of Rogers (2003). Second, internal factors, meaning the individual motivation of participants and their relation towards FS's benefits, members and ideology will be researched using theories by Klandermans (2007), Becker (2019) and Ferrando et al. (2019). This framework is summarised in fig 7.



**Fig. 7:** Framework for this research

Source: Author's own

## 4 - METHODOLOGY

### 4.1 - Research Question

This research aims to examine the reasons for the unequal distribution of FS participation between two neighbourhoods in Cologne, namely Neustadt/Süd and Merkenich, making use of a case study approach. This should be done by answering the following guiding research question:

***What factors contribute to which degree to the unequal distribution of participation in the organisation Foodsharing e.V. in Cologne, Germany?***

To answer this main guiding question, secondary questions are raised:

- What motivates people to become active in Foodsharing e.V.?
- In what way does the direct social environment of Foodsharers influence participation and diffusion?
- How do neighbourhood characteristics influence participation and diffusion?
- How do diffusion processes work under different circumstances?
- To what extent does the organisation Foodsharing e.V. influence participation itself?
- Are the approaches Foodsharing e.V. follows constructive and are their goals respectively feasible?

## 4.2 - Methods used

To acquire quantitative data for this research I decided to conduct interviews with FS participants in both neighbourhoods, Neustadt/Süd and Merkenich. For this I entered a FS WhatsApp group in each neighbourhood and contacted members of the group via direct message. They were chosen randomly, following the list WhatsApp provided.

The interviews were primarily aimed to be conducted in person, however, due to the current Covid-19 situation some had to be held on the phone or via video call. Interviewees were anonymised by allocating them with numbers instead of their names, only revealing their gender, rough age, occupation and FS position. All interviews were conducted in German, partly with Cologne-dialect, and lasted between 25 minutes and 1,5 hours. At the end, 19 interviews were conducted, with 12 people from Neustadt/Süd and 7 from Merkenich. A list of interviewees is provided here:

### List of interviewees in Neustadt/Süd, Cologne

| Number  | Gender | Age (~) | Occupation            | FS Role        |
|---------|--------|---------|-----------------------|----------------|
| Int. 3  | Female | 28      | Student               | BV             |
| Int. 4  | Female | 32      | Teacher               | Foodsaver      |
| Int. 5  | Female | 28      | International Student | Not registered |
| Int. 8  | Female | 25      | PHD candidate         | Foodsaver      |
| Int. 9  | Female | 21      | Student               | Foodsharer     |
| Int. 10 | Female | 22      | Student               | Foodsharer     |

|         |        |    |                       |                |
|---------|--------|----|-----------------------|----------------|
| Int. 11 | Male   | 21 | Student               | Not registered |
| Int. 12 | Female | 25 | Student               | Foodsharer     |
| Int. 13 | Female | 29 | Student               | Foodsharer     |
| Int. 14 | Male   | 28 | Student               | Not registered |
| Int. 15 | Male   | 34 | Unemployed/Freelancer | Not registered |
| Int. 16 | Female | 25 | Student               | Food saver     |

#### List of interviewees in Merkenich, Cologne

| Number  | Gender | Age (~) | Occupation       | FS Role        |
|---------|--------|---------|------------------|----------------|
| Int. 1  | Female | 38      | Employed         | Not registered |
| Int. 2  | Male   | 32      | Employed/Student | Not registered |
| Int. 6  | Female | 68      | Retired          | Not registered |
| Int. 7  | Female | 55      | Employed         | Not registered |
| Int. 17 | Female | 45      | Employed         | Not registered |
| Int. 18 | Female | 62      | Employed         | Not registered |
| Int. 19 | Female | 75      | Retired          | Not registered |

### 4.3 - Why WhatsApp?

The reason for deriving interviewees from WhatsApp groups laid in the aim to cover people who partake in FS but don't participate within FS system of hierarchy which developed around foodsharing.de (see also fig. 8). This is because skimming through the literature, no study had conducted interviews with these people but only official Foodsavers or ambassadors, and applied their findings from this group on all people partaking in FS, which could lead to a bias in understanding the multitude of people being active in FS. WhatsApp is also an adequate source for interviewees as there, both, people from within and outside the official FS system come together, creating new practices.

### 4.4 - Problems and limitations

One of the main challenges during my research were connected to target possible interviewees through WhatsApp. First, the group in Neustadt/Süd was (and continues to be) full, so I had to check the group for weeks, hoping to get a free spot from someone who left the group. I did the same with groups in Ehrenfeld and Sülz, neighbourhoods showing similar or higher FS participation but didn't manage to enter these. Second, getting responses for interviews in Neustadt/Süd was very easy, whereas in Merkenich the whole process was rather slow, and only 5 people had answered my

request after 2 weeks, from which then 2 cancelled interviews multiple times. Whereas in Neustadt/Süd I interviewed people individually, without them knowing who else I texted, in Merkenich the news of me asking for interviews spread fast, raising suspicion, and ended with me getting banned from the Merkenich FS WhatsApp group without being notified beforehand. Doing research in Merkenich, I sometimes underestimated the well-connectiveness of individual participants among each other, resulting in a strong in-group feeling, being doubtful about anything unusual from the outside.

The Covid-19 situation also brought many troubles during the research, as foci had to be adapted multiple times given the constantly changing circumstances, making it difficult to conduct research on the ground. Still, I managed to get 3/4 of the interviews conducted face-to-face, and the rest via telephone or video call. Even though face-to-face interviews offer a wider range of information such as body language and other nuances can be considered, and also helps to build trust easier, telephone interviews have also proven to be an adequate method for qualitative research, too (Sturges & Hanrahan, 2004). In fact, talking about the financial situation of participants in connection to FS, e.g., turned out to be easier on the phone.

Lastly, possible biases in the results could occur from the sample of interviewees, as those who answered to my interview request do not represent people who feel uncomfortable or even ashamed to talk about their participation in FS. This could be the reason why (1) many people in Merkenich did not reply to my request and (2), as other studies, I could only confirm the existence of people being financially dependent on FS by narrations but did not manage to interview them. More time and personal engagement in FS might have helped to get in contact with these individuals and build the necessary trust. Lastly, demographics such as the age structure between both sample groups are very different which can either be seen as a problem but also a good starting point for comparison, serving as a base for future research with similar differences.

## 5 - CASES

### 5.1 - Foodsharing e.V.

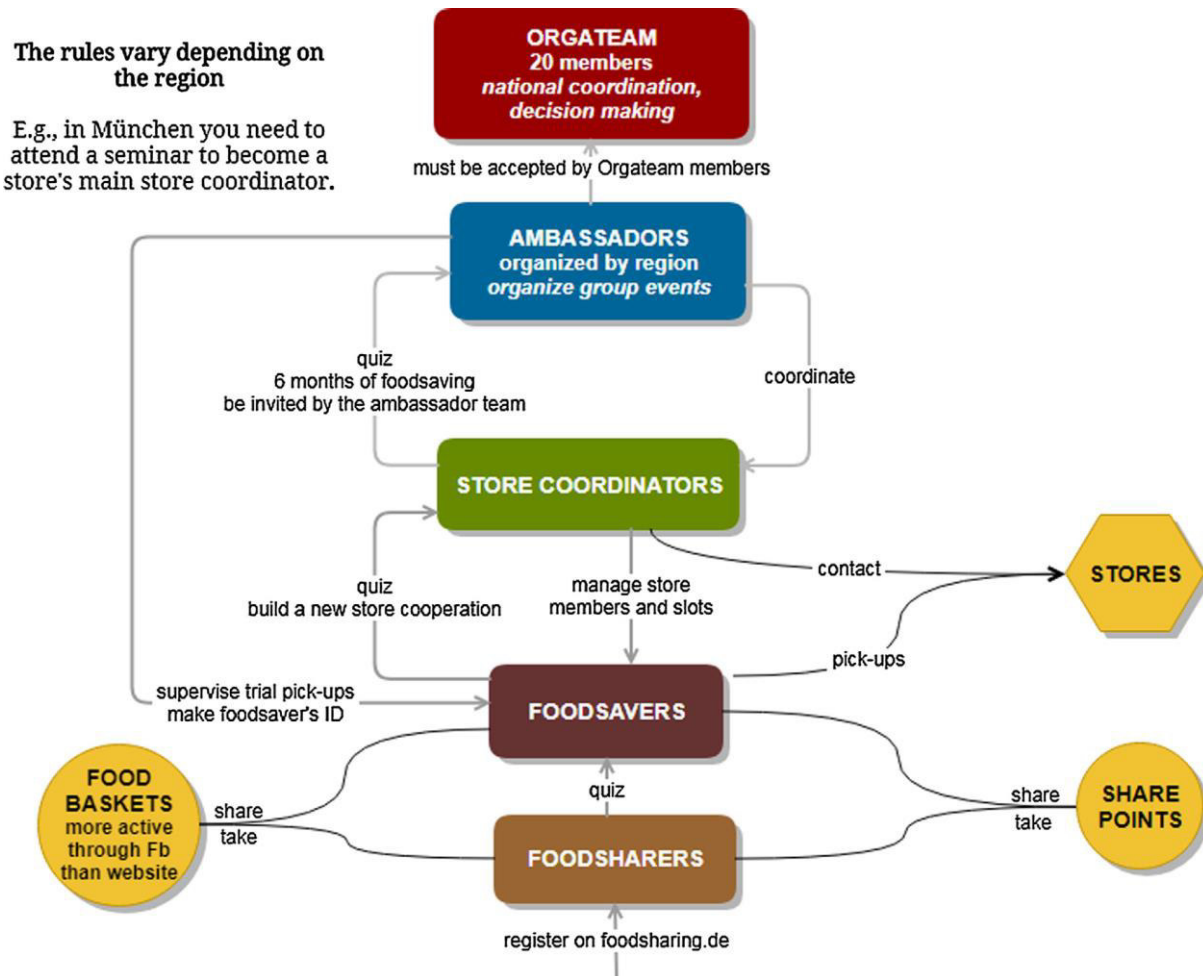
As read before, the study deals with the phenomenon of food sharing in the city of Cologne, Germany. Here, it is important to distinguish between food sharing as a practice, Foodsharing e.V. (FS) and foodsharing.de. The first describes a general practice in which food is saved from being tossed away and then distributed in one way or another to avoid food waste by any individual or

organisation. Foodsharing e.V., however, is one non-profit association dealing with food waste, and foodsharing.de is their main web page through which their efforts are meant to be coordinated.

FS was founded in 2012 in Cologne and within only 2 years it counted 60.000 members in Germany, Austria and Switzerland. Until today, over 400.000 registered members have saved 54.662,5 tons of food from 10.127 cooperating stores (Foodsharing, 2021a). FS is volunteer-run and free of charge and has the ambition to involve as little money as possible for its activities. The responsibility for the accomplishment of actions is individual, but shared concerning the food itself, knowledge and skills, the Fairteiler and the website (Morrow, 2019).

The organisation of FS is illustrated in figure 8. The starting point is a registration on foodsharing.de through which one gets the status as a Foodsharer. As a Foodsharer one can see and take food baskets offered by individuals that are being distributed over the website, and similarly offer such baskets oneself. Fairteiler can also be used, however, that is also possible without being registered. To be able to pick up food from stores it is necessary to pass an online quiz to which one has 3 attempts to pass. The quiz, which is only available online and in German, includes questions on the organisation of pickups at stores, but also inquires knowledge on FS policies and standpoints. After passing the quiz, a process of verification starts, which includes at least 3 trial pickups with a BOT who then decides over the eligibility to carry out future pickups at stores without supervision, issuing a FS pass for identification at stores. Generally speaking, being a Foodsaver involves more engagement than only being a Foodsharer, because pickups at stores follow strict schedules and the responsibility to distribute the saved food (e.g. by organising private pickups) lays in the hand of Foodsavers. For those who aim to take on even more responsibility they can become a store manager (BV) or ambassador (BOT) after passing corresponding quizzes.

However, figure 8, which has been used previously in several studies, excludes people who are not registered on foodsharing.de but partake in FS in other ways, such as using Fairteiler, being involved through registered members or being part of social media such as FS WhatsApp groups. It therewith excludes most people that have been interviewed for this research, even though they surely are part of the FS network. The fact that several studies excluded these people gives a hint on why it is important to reach exactly those people, too, something this study aims to do.



**Fig. 8:** Internal Structure Diagram of Foodsharing e.V.

Source: Tais (2016)

### 5.1.1 - Collective Action Framework (CAF) of FS

FS, just as other social movements, is guided by a collective action framework (CAF) which is divided into 'injustice', 'identity' and 'agency' (Klandermans, 2007). Reading through the Foodsharing Wiki (2021a) it was possible to identify a CAF. Starting with 'injustice', the 1,3 billion tons of food waste that are produced annually are identified as the main problem to be tackled. Food waste is defined as a problem by itself, mirroring a disrupted relation between humans and food and understood as a lack of appreciation. Primarily, however, FS understands itself as an environmental movement, picturing the problem of food waste as one of a misuse of natural resources that were put into the production and distribution of that food.

Turning to 'identity', through their self-conception as an environmental organisation, FS makes it clear that all humans are affected by food waste through an unsustainable exploitation of natural resources destroying the basis of life on this planet. FS also brings in the 57.000 people that die from

starvation every day being the victims of this wasteful food system (Foodsharing Wiki, 2021b). FS continues that 2/3 of global food waste could be avoided if only “we all act responsibly and do our part” (ibid. para 2). In the case of FS, the participation comes with a reward, namely free food. As everybody is expected to join the FS movement, social status or material needs are also not considered over who should receive or be prioritised in the distribution of this food. Instead, FS tries to counterbalance this by formulating the aim to “grant unconditional access to food to all humans, therewith promoting its appreciation” (Foodsharing Wiki, 2021b).

In ‘agency’, the imagined possibilities to change society as well as strategies how to achieve these changes are described, which in FS’s case is manifested in the long-term goal to end the disposal of edible food through active involvement in the movement. With this, a new culture of respect towards food should be lived in Germany, triggering an awareness of the set of difficulties. This active involvement in FS is clearly defined and includes sets of expected behaviour (the call to not use money, use certain kinds of transport, to not act confrontative, etc.).

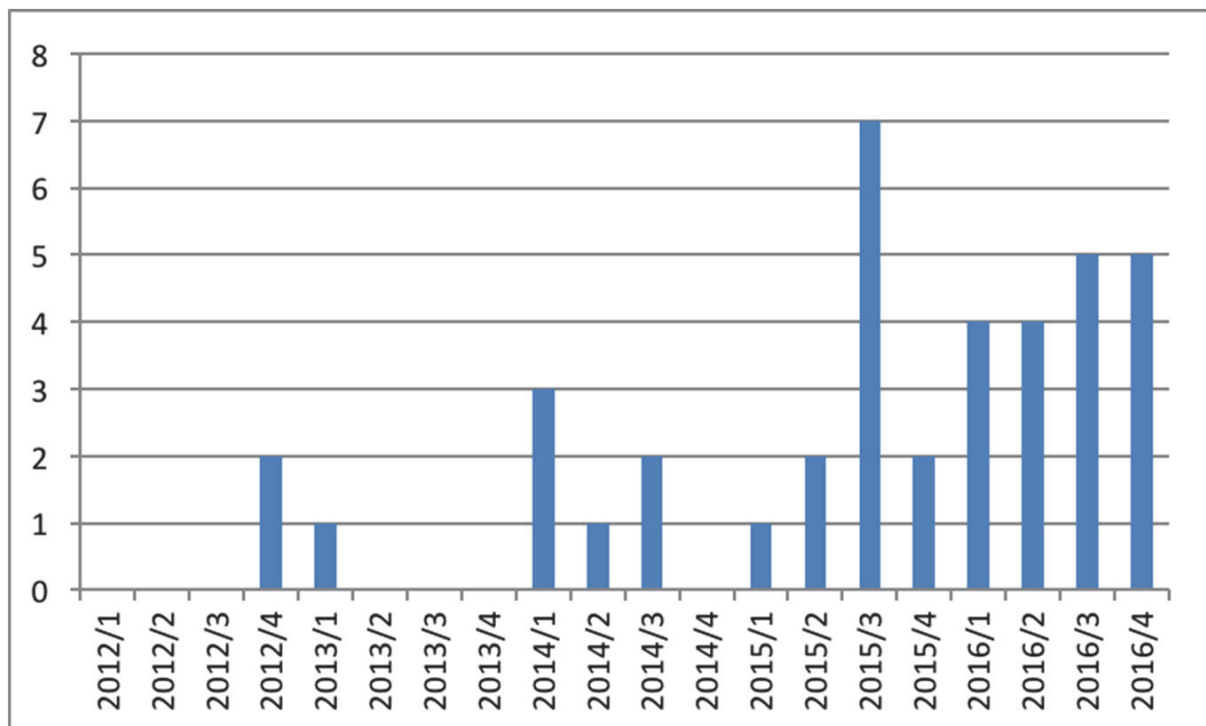
Similarly, FS’s CAF can be understood as an answer to hegemonic themes in society that FS tries to disrupt with their actions. Reading through Foodsharing Wiki (2021a), the movement offers counterthemes to dominating ideological themes in society, such as environmental sustainability over short-sighted profit maximation, recycling over status-oriented materialism, emission free lifestyles over fossil energies, collaborative and individual responsibility over individual freedom, universal human rights over individual property rights, quality over quantity, and, to just name a few, other themes related to environmentalism. Sometimes, FS’s themes also conflict. For example, the access to food is described as a universal human right but at the same time FS acknowledges property rights of food by, for example, multinational supermarket chains, through which their hegemony and refusal to acknowledge food as a basic human right are reproduced. This resonates with the critiques on social innovations previously described in the literature review, providing neo-liberal solutions without questioning dominating power structures causing problems in the first place.

### 5.1.2 Why Foodsharing?

As outlined in the literature review, the current global food system with its hegemonic ideology of profit maximation and capital accumulation significantly contributes to problems of malnutrition, starvation and not the least to climate change, threatening not only individuals but humanity and the planet. In order to overcome this destructive system, and e.g., stop wasting food, alternatives need to be presented, promoted and implemented, with the framework of the commons being a

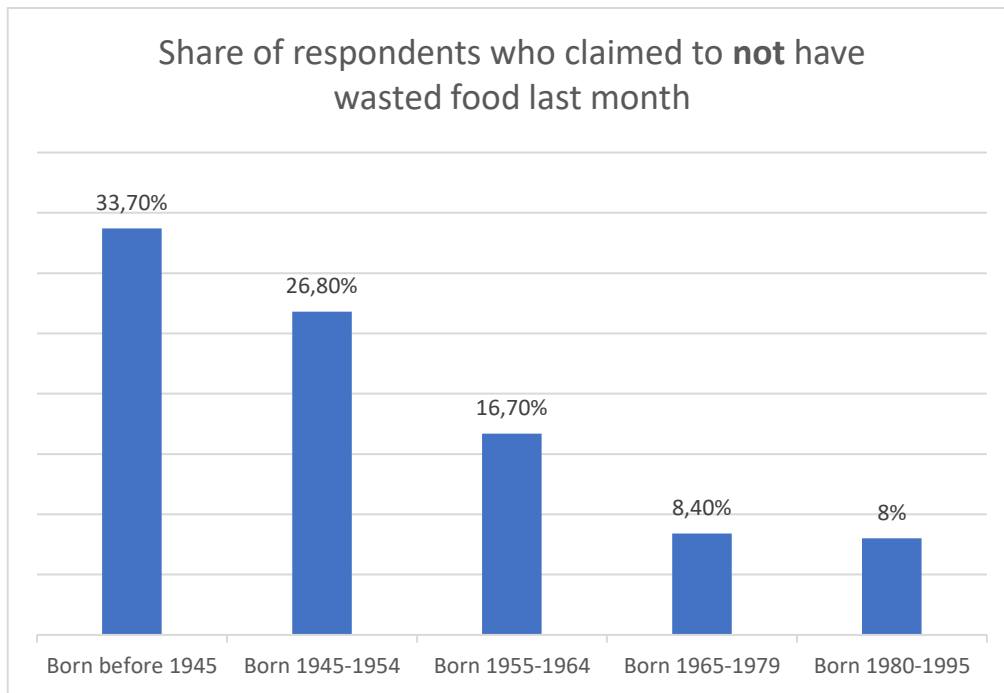
promising and sustainable alternative. As authors have shown before, FS is a movement built on the idea of ‘commoning’ food, disrupting dominant practices and discourses and therefore a movement worth considering for research. Trying to understand FS’s diffusion will help to strategically promote diffusion, by eliminating obstacles and multiplying best practices.

Besides, whether or not agreeing with this approach, it is indisputable that the topic of food waste has gained popularity in Germany in recent years, as proven by Yang et al. (2019) showing an increased prevalence of articles on food sharing over time (Fig. 9). Moreover, produced food waste is not only expected to rise over the next years (Reiferscheid, 2018) but also seems to be a generational problem, as a survey found that the younger the people the more often they waste food (see figure 10). As, according to the literature, FS attracts mostly young people, the importance of the movement’s goal of a reappreciation of food, for this and future generations, seems even bigger.



**Fig. 9:** Number of articles on “food sharing”, in two big newspapers (FAZ and SZ), quarters, N=36

Source: Yang et al. (2019)



**Fig. 10:** Survey results over the correlation between age and wasteful consumer behaviour

Source: Author's own

Based on: <https://de.statista.com/infografik/10732/je-juenger-desto-verschwenderischer>

Besides, FS is the largest organisation in Germany and Cologne dealing with the issue of food waste and with over 400.000 members in several countries an important network of civil society. Its importance is also underlined by the existing body of research by multiple authors and from different angles, making it a good study case being able to put findings in these lines of scholarship.

## 5.2 - Why Cologne?

Cologne, or Köln in German, is the 4th largest city in Germany with 1.1 million inhabitants and located in the densely populated western part of the country. It is a lively and multi-cultural city, hosting the biggest public university in Germany, with 10% of inhabitants in Cologne being enrolled students. Lastly, it is famously known for being rather tolerant and progressive, often quoted to be the best place for queer people to live in Germany (Queer.de, 2019), undermining the open, young and vivid atmosphere in the city.

Having explained the general context, it is not surprising that social innovations thrive in such an environment, possibly explaining FS's foundation here. This goes in line with Davies et al. (2017) who claim the city to rank number one worldwide on food sharing initiatives per capita. What can certainly be said is that Cologne still today ranks number 1 in Germany considering the total amount of saved food through FS and having the most active FS community (Foodsharing, 2021a).

From an academic perspective, the detailed quantitative study by Melkonyan & Krumme (2019) on FS distribution in Cologne was a great foundation to build qualitative research on, something that this study aims for. Given all these reasons, Cologne seemed to be a very good place to research FS.

### 5.3 - Why Neustadt/Süd and Merkenich?

The choice for Neustadt/Süd and Merkenich was based on two factors. First, there exists a FS WhatsApp group for both neighbourhoods, which both were open to the public and possible to enter. This is not the case for many neighbourhoods, as only a handful have a WhatsApp group and sometimes even these cannot be accessed because they are full. Second, both neighbourhoods show very contrasting characteristics and data. Above all, the calculated FS-quota by Melkonyan & Krumme (2019), meaning the percentage of people in a neighbourhood who participate in FS, shows a big discrepancy, between 0,842% in Neustadt/Süd (which is the 2<sup>nd</sup> highest in Cologne) and 0,017% in Merkenich (which is the lowest quota detected in Cologne, disregarding 4 neighbourhoods with a quota 0). This difference, also mapped out in Fig. 5, was the main argument for my choice; however, not the only one motivating this selection, of which some will be illustrated in Fig. 11.

|                     | Inhabitants | Inhabitants/m <sup>2</sup>      | 21–34 year-olds  | Detached/Semidetached houses | Rent level (€)     | Fairteiler (within <0,5km) |
|---------------------|-------------|---------------------------------|------------------|------------------------------|--------------------|----------------------------|
| <b>Neustadt/Süd</b> | 38.605      | 13552<br>(highest in Cologne)   | 36%<br>(highest) | 7,1%<br>(lowest)             | 12,1€<br>(highest) | 6<br>(highest)             |
| <b>Merkenich</b>    | 5.756       | 470<br>(5 <sup>th</sup> lowest) | 17%              | 78,7%                        | 8,7€               | 0                          |

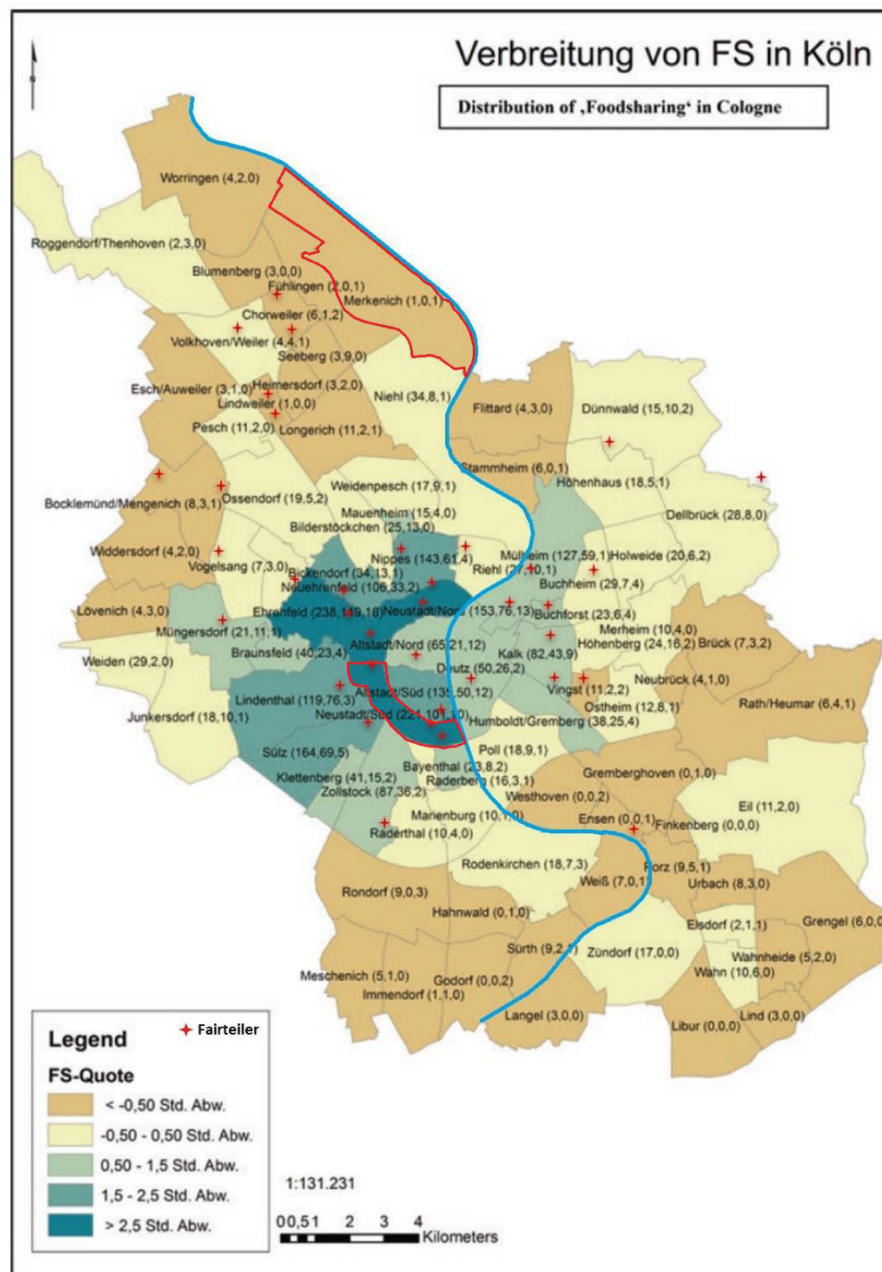
**Fig. 11:** Contrasting data between Neustadt/Süd and Merkenich

Sources: Melkonyan & Krumme (2019), Stadt Köln (2017), Foodsharing (2021b)

Besides the data in Fig. 11, Neustadt/Süd is located centrally along the inner ring of Cologne, whereas Merkenich is a peripheral neighbourhood, as illustrated in Fig. 5.1. The official website of Cologne describes Neustadt/Süd as the “pulsating urban heart of the city”, with “city flair, small cafes and cosy restaurants” and a “trendy student venue” (Koeln.de, 2021a). In contrast, Merkenich is “Cologne’s village idyll” with “old courtyards that spread a rural charm” (Koeln.de, 2021b). These descriptions match my personal experiences, with Neustadt/Süd being full of busy streets and trendy shops and Merkenich being a calm, village like neighbourhood, with little traffic (but a tram connection to the centre), more traditional shops as well as people following rather traditional

lifestyles. Some impressions of the two neighbourhoods are provided in figure 12-15.

Accounting for these differences, the choice of Merkenich was one based on the idea to compare the “least similar cases to allow for causal inference” (Beck, 2017, p. 538).



**Fig. 5.1:** Distribution of FS in Cologne

Edited. Original by Melkonyan & Krumme, 2019, p. 204



**Fig. 12:** Merkenich, with the Rhine to the left

Credits: „Köln-Merkenich - Luftaufnahme-0319.jpg“ by Raimond Spekking & Elke Wetzig is licensed under CC BY-SA 4.0

([https://upload.wikimedia.org/wikipedia/commons/thumb/a/a3/K%C3%B6ln-Merkenich\\_-\\_Luftaufnahme-0319.jpg/640px-K%C3%B6ln-Merkenich\\_-\\_Luftaufnahme-0319.jpg](https://upload.wikimedia.org/wikipedia/commons/thumb/a/a3/K%C3%B6ln-Merkenich_-_Luftaufnahme-0319.jpg/640px-K%C3%B6ln-Merkenich_-_Luftaufnahme-0319.jpg))

<https://creativecommons.org/licenses/by-sa/4.0/legalcode>



**Fig. 13:** One of many examples of old courtyards in Merkenich

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([https://upload.wikimedia.org/wikipedia/commons/thumb/b/bc/Hofanlage\\_Cohnenhof.jpg/640px-Hofanlage\\_Cohnenhof.jpg](https://upload.wikimedia.org/wikipedia/commons/thumb/b/bc/Hofanlage_Cohnenhof.jpg/640px-Hofanlage_Cohnenhof.jpg))

<https://creativecommons.org/licenses/by-sa/4.0/legalcode>



**Fig. 14:** Chlodwigplatz in Neustadt/Süd

Credits: „Ballonfahrt über Köln - Chlodwigplatz-RS-4038.jpg“ by Raimond Spekking is licensed under CC BY-SA 4.0

([https://commons.wikimedia.org/wiki/File:Ballonfahrt\\_über\\_Köln\\_-\\_Chlodwigplatz-RS-4038.jpg](https://commons.wikimedia.org/wiki/File:Ballonfahrt_über_Köln_-_Chlodwigplatz-RS-4038.jpg)),

<https://creativecommons.org/licenses/by-sa/4.0/legalcode>



**Fig. 15:** Neustadt/Süd

Credits: „Ubierring, Querverkehr - panoramio.jpg“ by Rembert Satow is licensed under CC BY-SA 3.0

([https://upload.wikimedia.org/wikipedia/commons/thumb/9/93/Ubierring%2C\\_Querverkehr\\_-\\_panoramio.jpg/640px-Ubierring%2C\\_Querverkehr\\_-\\_panoramio.jpg](https://upload.wikimedia.org/wikipedia/commons/thumb/9/93/Ubierring%2C_Querverkehr_-_panoramio.jpg/640px-Ubierring%2C_Querverkehr_-_panoramio.jpg))

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## 6.1 - FINDINGS AND ANALYSIS NEUSTADT/SÜD

### 6.1.1 - Motivation

#### 6.1.1.1 - Instrumental

In the interviews in Neustadt/Süd, three different kinds of instrumental motivations could be identified, namely economic gains, personal well-being, and self-study. The first type is represented by Int. 5, who states that participating in FS and obtaining free food would help her coping with the higher consumer prices in Germany comparing to those in her home country. Similarly, Int. 11 notes that the high costs of rental homes put a strain on his budget and sees FS as a financial relief. Int. 14 repeatedly stressed the monetary value of the food he obtained through FS and plans to do a spreadsheet to calculate the money he saved through his participation in FS. Second, Int. 4 explains how partaking in volunteer work is a moral duty to her. Engaging in FS in addition to her work as a teacher alleviates the moral pressure she feels, as for her, doing this activity fulfils her societal duty. Lastly, Int. 4, 9, 12 and 15 feel motivated by experiencing joy trying products, that they otherwise would not have tasted due to financial constraints, as FS products are often of high quality such as organic or local food (Int. 4 and 9). Besides, personal well-being was enhanced by the pure joy breaking out of routinised consumption patterns trying new things that FS randomly provides. Int. 12 even compared this feeling of surprise with that on Christmas receiving presents. Lastly, one interviewee (10) uses her activity in FS to learn about sustainable lifestyles, which she later hopes to implement in her life after having finished university studies. This hope for personal knowledge gains for her own future lifestyle can be counted as instrumental motivation, because obtaining personal experiences are the driver for action.

All three interviewees (5, 11 and 14) who indicated to participate in FS for financial reasons also declared this generally to be their main motivation. At the same time, they also engaged the least in FS, trying to minimise time and effort to obtain the free food, a finding that corresponds with Becker (2019) and Ferrando et al. (2019). When they felt it was not worth engaging, they backed off until the benefits outweighed the costs again. Their disengagement can also be explained with the volatile and unreliable economic benefits deriving from participating in FS. If these economic gains are the main motivating factor, a sustainable commitment to participation in FS cannot be achieved. In contrast, Int. 13, who was the only one denying instrumental motivation behind her participation, mentioned the volatile and unreliable economic benefit of FS as the reason for her absence of instrumental motivation.

Nevertheless, this cost/benefit analysis by Int. 5, 11 and 14 seems to be a determining factor, at least when other motivating factors are absent. Its determining nature could also be observed in the recruitment of possible new Foodsharers from interviewees' close social circles, something that will be discussed in paragraph 6.1.2.

Finally, instrumental motivations mentioned by Int. 4, 9, 10, 12 and 15 can only be accounted for as side motivators, explaining its limited influence on their active engagement in FS (Rogers, 2003). In contrast to that, Int. 10 thinks that FS is not an efficient way to spend one's time if aiming to bring about a systemic and political change, showing that she feels discouraged by a negative result of her personal cost/benefit analysis.

#### 6.1.1.2 - Identificational

Turning to identificational motivations, only Int. 12 explained that her engagement in FS was primarily driven by an identification with other FS participants. She described it as a "parallel world which cares about sustainability" and seeing and meeting so many like-minded people gave her motivation to continue with FS. Similarly, Int. 8, 10, 13 and 16 expressed a general potential for new social contacts and friendships with other Foodsharers, explaining that it makes it easier for them to do FS in a social environment they feel belonging to which positively influenced participation and diffusion dynamics. The hope for new social contacts also motivated Int. 4 and 16, just like Int. 9 and 15 who expressed the wish to expand their local network in the neighbourhood. Int. 15 went into detail explaining that some of his new contacts he obtained through the active participation in FS are now friends of his. Int. 4, 9 and 16 also had the aspiration to make friends and strengthen their local network but admitted to not have achieved it, yet. Except for Int. 15, there is no real connection in form of personal bonds between participants that goes beyond meeting in a FS context, as each participant is driven by their individual motivations, something that Int. 4 also complained about.

Nevertheless, during FS activities, this general sympathy among participants was expressed by 9 out of 12 interviewees. For instance, Int. 16 explained that during the act of FS, participants help each other first, because it is necessary to complete the task, and second because one feels sympathy. She described that when another Foodsharer needs help she is motivated to support because they are like-minded people, making it easy to understand and relate to their struggle.

These findings reveal that FS in Neustadt/Süd is mainly an individualistic practice among homophiles. While in the digital world participants are connected through the WhatsApp group or foodsharing.de, in the analogue world this connection is rather instrumental. What possibly holds the community in Neustadt/Süd together could be the reported high degree of identification with other Foodsharers,

with some even seeing potentials for friendships. When identification, which translates into trust, is not on hand, participation in the movement is less likely, as demonstrated by several flatmates who had doubts about FS as they hesitated to let strangers into their flats. It is hard to derive a causality, but all those who engage as Foodsavers also show a high degree of identification towards other members, explaining their altruistic effort, to save food not only for themselves, but for others, too.

Lastly, the findings suggest that when feeling excluded there is little or no motivation to engage in the movement. This was the case for Int. 5 who explained her sense of exclusion first, with the fact that she didn't know any other Foodsharers and second, did not speak German and was consequently not able to engage in the conversations on WhatsApp. Likewise, Int. 14 could not identify with members of FS, as he didn't see them as homophiles but fostering a different lifestyle than his own in many ways.

Sometimes, individuals are also excluded deliberately, as Int. 3, who is the administrator of the WhatsApp group for Neustadt/Süd sometimes uses her power position to expel people from the group based on sympathy, excluding those she finds untrustworthy or rude. Lastly, Int. 8 and 15 reported that, due to inconveniences being in a big WhatsApp group, such as spam or a high fluctuation, they started to organise in more exclusive WhatsApp groups whose members they know and had met before.

#### 6.1.1.3 - Ideological

In Neustadt/Süd, 8 out of 12 people were primarily motivated for ideological reasons, a number sticking out compared to those of instrumental and identificational motivations described above. Even though the other 4 interviewees had different motivating factors that were stronger than those of ideological nature, they showed degrees of ideological motivations, too. 8 out of 12 interviewees mentioned anger or frustration as one of their drivers to participate in FS. This anger is related to a perceived injustice, namely that of food getting wasted, with 5 interviewees contrasting this with the injustice of people starving in the world. To solve this emotional discomfort, FS proves to be a solution here in two ways. First, through its CAF, FS defines food getting wasted as the 'injustice' to be addressed, which corresponds to the same injustice interviewees defined and based their emotions on. Second, FS CAF suggests engagement in the movement as a solution which generates ideological motivation. With the help of Becker (2019) the high degree of participation by those who felt emotions like anger can therewith be explained. In line with this, interviewee 15 explained that he needed to become active to bring about a change towards more sustainability.

This focus on individualised responsibility to change consumption patterns, a typically neo-liberal approach to transitions, goes corresponds with FS's CAF category 'identity', bringing the responsibility to change the system down to an individual level. It is an ideological conviction repeated by 11 interviewees in different ways. For instance, Int. 4 proudly explained that she only buys second-hand cloth and always finishes meals in restaurants. Int. 10 tried to avoid plastic just as interviewee 12 who also only buys in organic stores. Int. 13 also tried to buy regional on special farmer's markets and Int. 16 only cycles to save CO<sup>2</sup> emissions. All these acts are an expression of FS's CAF category 'agency' reflecting the conviction to change society and the world for the better through the adjustment of individual behavioural choices. The described efforts also correspond to the same themes FS suggests, aiming for their version of a more sustainable society.

By contrast, not all interviewees resonated with FS's CAF, some only showing low levels of participation which can be explained through the analysis of their ideological motivations. For example, Int. 11 and 14 don't resonate with food waste and FS's CAF on an emotional, but only an instrumental level. Int. 14 explains that he finds it more important to invest his time coaching kids in the local football club rather than fighting food waste. He recognises food waste as a problem but does not relate to it emotionally, not being his field of interest, but instead explained to feel excitement seeing kids making progressing in his football team. However, as explained earlier, such emotions are a precondition for the growth of ideological motivations making a more sustainable and active participation in social movements more likely.

Int. 10 is a very interesting case, too, as she was the only one raising doubts over the effectiveness and usefulness of FS, arguing it is only fighting the symptoms and not the cause of food waste, and therefore deeming the movement to be not worth engaging in too much. Here, two factor play a role. First, as mentioned in the paragraph on instrumental motivation, her disengagement stems from a negative cost/benefit analysis, just as in the cases 5, 11 and 14 described above. At the same time, however, it is also the result of a divergence from FS's CAF, not believing in the personal responsibility of consumers to bring about a change towards sustainability through the adjustment of individual consumption patterns, as propagated by FS. The inactivity of Int. 10 is therefore also based on discouraging factors of ideological nature. This means that her correspondence with the general ideological theme of environmental sustainability as well as the definition of 'injustice' in FS's CAF cannot outweigh her dissensus with FS'S CAF categories 'identity' and 'agency', finally leading to her abstinence. Nevertheless, it is important to note that she was the only interviewee diverging from the CAF. Therewith, one can conclude that in the case of Neustadt/Süd, individual ideological accordance with the CAF might be one precondition for participation but it is surely not the only driving force.

Finally, those who aimed for more participation (5 out of 12 interviewees) all had ideological motivation as their principal driver to participate in FS. Being mainly ideologically motivated does, however, not necessarily lead to a wish for more participation (as proven by Int. 4, 8 and 10) but seems to make it more likely. At the same time, all Foodsavers had their main motivation laid in ideology. That correlation in my findings also resonates with Becker (2019) and Ferrando et al. (2019) who claim a more intense and long lasting engagement in a social movement is more likely when motivation stems from intrinsic, ideological factors.

### 6.1.2 - Personal social environment and the effect on diffusion

In this study it quickly became clear that the environment participants live in can play a determining role if and how FS is practised and diffuses, with one part being the direct social environment of interviewees. 11 out of the 12 interviewed participants in Neustadt/Süd experienced positive resonances from friends and (study-) colleagues. After an initial reported shock over the dimensions of food waste, the reactions reached from interest, to enthusiasm, and most interviewees even managed to convince their friends or colleagues to participate. This participation was often indirect, which can be exemplified by Int. 8 who frequently brings saved food to her colleagues, or in other cases where flat mates or friends help to consume saved food, as described by Int. 9, 10, 11, 12, 13, 14 and 16. Sometimes, like in the case of Int. 11 and 14, flatmates liked FS that much that they directly adapted the participate. For Int. 10 and 11, the engagement of their flatmates in FS made it easier to be an active member in the movement. They support and motivate each other during food pickups, point to each other when something interesting was posted in the FS WhatsApp group and eat together the food they saved. For 4 interviewees, the help of their friends and flatmates was a precondition to engage in FS pickups.

The positive resonance by their direct social environment encouraged interviewees to confront and include their friends and flatmates in FS activities, which made a diffusion within these close social circles more likely. This resonates with Rogers (2003) who expects diffusion processes of social innovations like FS, where physical and social proximity are given, which, regarding flatmates and friends is mostly the case. Following this line of argument, it is not surprising that 8 out of 12 interviewees got into contact with FS first through face-to-face interactions with people from their direct social environment. In this way, the diffusion becomes self-propelling as exemplified in figure 4: Participants confront their close social environment with FS, these socially close people react in shock which, according to Becker (2019) and Ferrando et al. (2019) helps to provoke adaption. The new Foodsharers then start the process again, including their social environment triggering a new wave of diffusion, underpinning this face-to-face diffusion dynamic described by Rogers (2003). This

diffusion among close social circles, often constituted of homophiles, might also explain the reported homogeneity in form of high identification among Foodsharers in Neustadt/Süd (see chapter 6.1.1.2).

Even though almost everyone in the sample group got positive reactions, some interviewees also received rejection. Int. 12 and 16 both experienced that their flatmates felt uncomfortable letting strangers into their flat to pick up saved food. However, after a few pickups, doubts could be erased in both cases, as their flatmates could relate to the practice and started to trust these strangers. This vanishing of a perceived risk was also described by Rogers (2003), being a result of personal experiences in addition to the repeated persuasion efforts by Int. 12. Even though it makes adaption more likely, in this case her flatmates started to appreciate the free food and supported the idea of FS, but still thought the personal gains did not outweigh the efforts, discouraging them to participate. Other interviewees, too, expressed that this negative cost/benefit analysis was a common reaction from their social environment. Here, the assumption by Rogers (2003) that homophiles in close social contact with a participant are more likely become adopters of practices themselves was outweighed by Becker (2019) and Ferrando et al. (2019) who suggest that if external rewards are the main driver for participation, engagement is less likely to happen.

Int. 14 was an exception in this sample group because he selected whom to reveal his engagement in FS, as in his friend group no one was part of FS or could be expected to have the understanding for it. He was also the only one not having received positive reactions, but neither negative ones, as he tended not to talk about it in his social environment, contrasting the reality of the other interviewees who knew at least one person in their direct friend circle participating in FS. At the end, 7 out of 12 participants had experienced exclusively positive resonance, whereas the other 5 had both good and bad reactions.

### 6.1.3 - Neighbourhood characteristics and the effect on diffusion

8 out of 12 Foodsharers in Neustadt/Süd described their direct neighbourhood to be open towards the idea of FS. Int. 4, 10, 13 and 16 also either do share, or can easily imagine sharing FS products with their direct neighbours. Int. 4 even considers organising pickups exclusively for direct neighbours because she sees much potential in the surrounding houses and flats. Int. 10 lives in a student dorm with many young people interested in the idea of free and sustainable food and Int. 11 explains that he is surrounded by other student flat shares of which some are also engaged in FS.

In sharp contrast to this stands the experience of Int. 3, who got into conflict with her neighbours over FS. Living and organising pickups in a house predominantly inhabited by German, upper-middle

class families, some neighbours started to complain about the interviewee's involvement in FS. They mostly didn't like so many strangers entering the house and complained about the space the food occupied in the basement. One neighbour even dumped saved vegetables and other groceries in front of the door of Int.3. Consequently, she decided to drastically reduce her FS activity to adapt to her neighbours' needs, which shows that having supporting and understanding neighbours can be a precondition for a successful participation.

Int. 3, 4, 8, 9, 11, 12, 14, 15 and 16 talked about much FS activity in their neighbourhood, both in the local WhatsApp group but also on the street. This is, e.g., manifested through the existence of Fairteiler which are prominent and visible in the neighbourhood and regularly visited by 7 out of 12 participants. All interviewees could wave these visits into their daily lives which meant FS could be practiced easier and independent from pickups. Int. 4 and 15 felt that Fairteiler were a great way to connect with other Foodsharers as they are a physical place of encounter. This relates to Int. 8, 10 and 12 who explained how Fairteiler were an easy way to start engaging with FS. Their assumption is not only backed up by the fact that 2 interviewees started FS themselves because of Fairteiler, but also theoretically by Rogers (2003), as these places of physical encounter mean that potential new members could meet Foodsharers directly, so diffusion processes through face-to-face interactions are more likely to happen.

Besides, Int. 14 explained that at the Fairteiler one sometimes sees a different kind of people practising FS than during official or private pickups. These people often had no connection or knowledge about FS and appreciated even very small amounts of free food (e.g., one onion) which, the Foodsharers she knows, would not have made the effort to pick up. This narrative could raise questions of equality between people with different degrees of access to the saved food. On the other hand, it seems Fairteiler enlarge the scope of people who can benefit from FS, corresponding Int. 15 who claims to have seen homeless there regularly. It should also be noted that some interviewees didn't know about Fairteiler (Int. 5 and 11), found them too far (Int. 3 and 16) or unhygienic (Int. 14).

Next to Fairteiler, in Neustadt/Süd there are lots of shops participating in FS. Indeed, Int. 4 explained that there are certain kinds of shops that tend to cooperate with FS, like organic or plastic-free stores, which in Neustadt/Süd exist in great numbers. In sum, all FS locations, whether Fairteiler, shops or private pickups, were very close to participants' homes. Because of the high occurrence of pickups and the great number of Fairteiler and shops, all interviewees felt they can easily participate in FS which brought Int. 4 to the conclusion that FS in Neustadt/Süd is a self-propelling movement. Therewith, the density of presence of a social movement seems to affect participation and diffusion positively.

Int. 16, for example, had seen pick-ups happening on the street when the local vegetables market closed. In this pickup he recognised another Foodsharer, which gave him a feeling of comfort and belonging. Int. 15 described feeling part of a FS community in his neighbourhood, greeting other Foodsharers on the street and generally feeling well-embedded.

## 6.2 - FINDINGS AND ANALYSIS MERKENICH

### 6.2.1 Motivation

#### 6.2.1.1 Instrumental

In Merkenich, the main driver to participate in FS for all interviewees was instrumental motivation, with only Int. 6 showing a similar degree of ideological motivation, too. Before turning to this exception, within the dimension of instrumental motivation, 2 categories could be determined, namely economic gain and personal well-being. To start with the first, Int. 1, 2, 7, 17 and 19 stated that their engagement in FS mainly derives from the wish to save money, substituting purchased groceries for free FS products. For example, Int. 17 explained she tries to roughly calculate the monetary value deriving from FS pickups, admitting that this value is very volatile ranging from 25€ to 370€ a month. Here, it is important to stress that all interviewees claimed to not be financially dependent on FS, however, even if the opposite was true, it can be doubted that people would that easily admit their severe financial needs. Instead, interviewees repeatedly reported that there are, indeed, people who participate and do depend on FS and other food initiatives in Cologne, like Tafel or EssensRetter e.V.

Besides, Int. 3, 17 and 19 explain that through FS they were able to obtain products of high quality, that otherwise would have been too expensive to purchase in a shop, also constituting an instrumental motivation for participation.

Second, Int. 6 and 18 both experienced joy when practising FS, explaining this to be a motivating factor. For Int. 18 participating is a way to get into contact with people and enjoy company, as being retired she lives alone and sometimes feels isolated. Int. 6 organises the pickups in Merkenich and experienced joy by first, distributing things to people and helping them, and second, because FS to her is sometimes like Christmas, enjoying the surprise of receiving nice things for free. In addition, Int. 19 enjoys trying new products and cook new recipes. The big quantities of food in FS pickups enable her to cook greater portions which she likes to share with her favourite neighbour.

In contrast to this, interviewees described discouragement to become active in FS when either, it is economically not worth it (Int. 2 and 17), the food is personally not needed in that moment (Int. 7) or generally doesn't match the personal taste (Int. 18). This selective behaviour of participants indicates low levels of commitment and mirrors the impression of Int. 6 that the number of people showing up to pickups is very volatile. That lack of (altruistic) commitment corresponds to Ferrando et al. (2019), who explains that behavioural change (meaning increased engagement in FS) is not achieved when motivations stem from instrumental backgrounds. In fact, it also explains why not a single person interviewed in Merkenich expressed the willingness or interest to increase their engagement in FS, by, for example, becoming a Foodsaver. Instead, interviewees preferred to not engage too much, keeping loose or no ties with FS.

#### 6.2.1.2 - Identificational

Next to instrumental motivations, interviewees in Merkenich also showed high degrees of identificational motivations for their participation in FS, however, for none it was the main driver to engage. In the interview sample, there were 2 kinds of groups, with Int. 1 and 2 in the first, and Int. 6, 7, 17, 18 and 19 in the second group. This categorisation can be explained with the fact that Int. 1 was new to the neighbourhood and had no ties to other Foodsharers in Merkenich, similar to Int. 2 who didn't have ties either and doesn't even live in Merkenich. As both specifically expressed no identificational motivation to partake in FS activities, this could be one explaining factor for their low activity, not feeling part of the group.

In contrast, Int. 6, 7, 17, 18 and 19 had all been living in Merkenich for decades or were born there and had therefore known each other at least superficially long. This relationship is mirrored in the source of motivation for participation, as Int 1 and 2 showed no identification towards other members, while Int. 6, 7, 17, 18 and 19 did. The fact, that this second group showed similar characteristics, all being middle-aged women living in detached or semi-detached houses gives a hint from where their sense of identification could stem from, especially when considering the theory of homophiles by Rogers (2003). However, not only outside characteristics were rather homogeneous, but they also agreed over a reinterpretation of FS's CAF as being discussed in the section 6.2.1.3. These common properties undoubtedly have a positive influence on participation, as interviewees felt understood, well-embedded and empathy for other Foodsharers in Merkenich which translates into identificational motivation.

One example for that is neighbours reminding and picking each other up for FS activities, as Int. 19 told. Int. 7 coordinates herself with other friends and brings them food, while sometimes they go to

FS activities to bring food for her. This sense of solidarity is also explained by Int. 6 who, since she began to organise pickups, receives more offers for help related to things detached from FS. Besides, the core group of FS in Merkenich give a small present to the district's BOT and Int. 6 every Easter and Christmas as a thank you for organising FS pickups. In return, in addition doing the pickups, Int. 6 phones many people for pickups who she believes might, e.g., have forgotten it or are in material need for which the free food could be a relief. This extra work is an act of altruistic solidarity which, if antipathy and a feeling of being surrounded by strangers one cannot relate to (heterophiles) were dominating, such behaviour could hardly be imagined. The fact that many of those who participate in FS in Merkenich are not strangers but friends and family increases identificational motivation, too.

To clarify, despite these high degrees of identificational motivation, participants main motivations were still of instrumental nature. The reason for that interpretation is that at the end, all participants made their engagement depended on instrumental factors, not identificational. In other words, people decided to show up at pickups when they felt the FS products offered were worth it, not because regardless of what was on offer they wanted to be with other Foodsharers.

#### 6.2.1.3 - Ideological

Finally, all interviewees in Merkenich showed traces of ideological motivation. Emotions, being one of the factors described by Klandermans (2007) triggering ideological motivations were expressed by Int. 6, who was angry about the amount of food getting wasted, or by Int. 7 who works in a warehouse of a big supermarket chain and found it sad to watch big amounts of food getting thrown away. Next, whereas interviewees agreed with the 'injustice' part of FS's CAF, seeing food waste as a problem, Int. 1, 6, 7, 17, 18 and 19 diverged from FS's CAF in the 'identity' part in two ways. First, Int. 6 is convinced that those who are in biggest material needs, or those who struggle the most to partake in FS should be prioritised in receiving FS food, not following FS's 'first come first serve' policy. She explains that it does not mean wealthier people should be excluded, but that it is important to acknowledge the fact that for some FS can be a relief from material needs. This extra effort, to get the food to these people by reserving it or calling them was also approved by Int. 7, 17 and 18, and stems from their own ideological values, their own interpretation of the CAF. Second, Int. 1, 17, 18, 19 acknowledged that, to bring about a change towards sustainability in society, individuals should make an effort, but at the same time agreed that individual efforts don't change much but that problems lay somewhere else, diverging from neoliberal narratives of self-responsability.

This conviction not taking the responsibility for problems that lay beyond their scope of influence was also reflected in the groups' divergence from FS's CAF in the 'agency' part. This means, whereas the long-term goal was agreed on, the way how to achieve this goal differs. For instance, Int. 7, living only 300m away regularly uses her car for pickups. Int. 17 says she tries to avoid plastic but stresses she is not a "Öko-tante"<sup>1</sup>, with an explicit reference to some people in the centre of Cologne, and continues to take an airplane to fly on holiday or eating meat. These statements show that Int. 17 knows she diverges from expected behaviour, not only as defined by FS's CAF but also themes FS corresponds to, like sustainable personal lifestyles. Therewith, within the Merkenich bubble, a slightly modified, new CAF is in place, steering and organising FS activities differently. This can be exemplified not only in the mutual acceptance of this new CAF and reinterpretation of themes among FS participants but also in the rejection of such from FS participants outside the Merkenich microcosm. It relates to an incidence that Int. 7 described when she once stopped at a Fairteiler in central Cologne and felt judged by people there for arriving by car, something which in Merkenich is common sense.

The rather low degree of ideological motivation can consequently be explained by having their version of the CAF seemingly corresponding less to FS but more to hegemonic narratives in society, making an outrage against the status-quo as a trigger for ideological motivation less likely. The fact that an alternative CAF developed could be explained with the general low FS presence in Merkenich. This means no sanctions from the side of FS (or other Foodsharers) must be feared, which otherwise would be a hindrance and rather a discouraging factor participation.

At the end, only Int. 6 seemed to respond to FS themes like environmental sustainability, as she had been an activist for over 40 years. Following Ferrando et al. (2019) her high ideological motivation also explains her relatively high engagement in FS.

### 6.2.2 Personal social environment and the effect on diffusion

FS participants in Merkenich had two approaches how to deal with FS in respect to their direct social environment. Either they actively tried to avoid talking about it with their friends and neighbours (Int. 17), or they mentioned it only when they felt it was appropriate to do so (Int. 1, 2, 6, 7, 18, 19). Even if most were generally willing to talk about their engagement in FS, all interviewees were selective and cautious who to talk about it, as they had experienced rejection (Int. 17) or mean comments by some people of their direct social environment (Int. 1, 2 and 7). It quickly became clear that, even among friends, participants felt an inhibition to talk about FS, which Int. 1, 2, 6, 7, 17 and

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<sup>1</sup> Öko-tante is a downgrading term describing someone adjusting their whole life around sustainability, spirituality and an organic lifestyle, often associated with the hippy movement of the late 60s

18 explain to be rooted in a stigma around receiving food for free. Int. 2 explains that many of his friends and family initially thought that FS was exclusively for poor people, something that not only many other interviewees themselves initially thought as well, but it's also a perspective on FS that all interviewees found with people in their direct social circle, too. Int. 6 and 18 explained that this misconception often causes irritation and rejection, with people trying to distance themselves from such activities to not be considered poor, needy, or unsuccessful in life. This is also the reason Int. 6 knew people who were interested in joining FS but felt too ashamed, scared and judged to do so, because, as Int. 1 and 7 explained, even after clarifying that FS is not a relief but environmental movement, some people stayed doubtful and clung to their negative associations.

However, to those people in interviewees' direct social circle they considered to be understanding and interested in FS they were open to talk about it. Int. 6, for example, explains that she luckily barely has friends who would reject movements like FS and Int. 1, 7, 18 and 19 had friends and colleagues, too, who were open and interested in the idea. Int. 18 even reported to have managed to convince her friend to directly participate in FS, too. Here it becomes evident that some form of diffusion of FS is happening in these exact close social circles, explaining how interviewees themselves came into FS. For instance, Int. 7 was introduced by her husband who was passionate about the idea. She first refused to join FS, but to do her husband a favour she joined and quickly realised that she liked it and now visits pickups regularly. This corresponds to Rogers (2003), that through her husband's narrated positive experiences and later through her own ones, obstacles, and perceived risks to join were lowered and finally diminished, constituting a successful adaption. The same happened to Int. 18 and 19, with the first being convinced by her colleague who also lives in Merkenich and the latter by her neighbour, to whom she has close ties. This neighbour encouraged Int. 19 to join, who first thought she was too old to try it out and felt not belonging there. However, the persuasion of her trusted neighbour lead Int. 19 to join her for a pickup, for which she states without that support and suasion she would not have participated in FS. Here, personal and physical distance were minimal, which both favour diffusion and adaption (ibid.). Next to these examples of diffusion leading to direct participation, 3 interviewees also reported to engage in FS on behalf of close social contacts, meaning they take extra amounts of food to later share it with their friends, family, neighbours, or colleagues who don't want to or cannot participate in FS actively themselves.

### 6.2.3 - Neighbourhood characteristics and the effect on diffusion

Interviewees in Merkenich pictured their neighbourhood to not be the friendliest regarding FS. First, Int. 1 complained that there was very little activity, both in the WhatsApp group but also on the

ground. She is new to Merkenich and used to do more FS before, when she lived closer to the centre where she felt more opportunities for it. The few pickups that do happen mostly didn't fit her schedule, leaving her in inactivity. Due to the lack of activity in the WhatsApp group, Int. 2 even considered leaving the group again, as he found the few pickups exclusively organised by Int. 6 not attractive enough. Besides, there were neither Fairteiler and shops that cooperate with FS, nor any other form of FS activity taking place in Merkenich. This, in fact, left participants with the choice between participating in the pickups organised by Int.6, which also means subordinating to her schedule and rules, or not practise any FS at all in Merkenich. It also meant that this lack of network or alternatives made FS in Merkenich vulnerable. Int. 17 gave the example that some month ago, the BOT left Cologne for 6 weeks for personal reasons. As she is the only one delivering FS products to Int. 6 who then organises the pickups in Merkenich, there was no FS activity in the neighbourhood for these entire 6 weeks. This means that at the end, all FS activity depend on first, the BOT and second, Int. 6, who confirmed this situation and concluded if the BOT stops her engagement, FS in Merkenich will end to exist. Even though the fragile distribution of responsibilities is evident, none of the interviewees felt like engaging more, to either support the BOT or Int.6, or to make the system more resilient in general.

Int. 7 and 19 both claimed that most people in Merkenich know about FS and the pickups organised by Int. 6. Int. 7 explained that crowded public places, like the local football field, kindergarten, or playgrounds were among those places where people told each other about FS. These were also the places where Int. 6 and reportedly others, too, first got to know about FS. They therewith important places for diffusion, where people who know each other meet, or, in other words, places where personal and physical distances are minimal, so diffusion is more likely to happen (Rogers, 2003). Similarly, Int. 6 also reported that when pickups were happening publicly on the centrally located church square some years ago, more people stopped by to either inform themselves about FS or to partake in the pickup.

Second, all interviewees reported that Merkenich is a calm, village like neighbourhood where change is not embraced, and new activities and movements are met with scepticism. This conservative spirit and especially the above-described stigma around receiving food for free is very present in the neighbourhood, with 4 out of 7 interviewees describing gossiping related to people participating in FS activities as something they have experienced. This means joining FS in Merkenich comes with a social cost, which, especially for those being deeply rooted in the neighbourhood (like local shopkeepers), might be too high, or demands enough self-confidence to withstand these social pressures. The reason is simply that everyone is afraid to be considered in economical need which ironically, as Int. 6 describes, especially deters the poor. As she continued, receiving things (especially

food) for free is a common theme of having failed in life, being lazy or not being able to sustain oneself. Int. 18 confirmed that counterthemes around FS such as environmental sustainability have little meaning in such conservative circles, making the diffusion process more difficult. Int. 6 also initially tried to motivate her direct neighbours to join, and initially was successful with that. Soon, however, these neighbours found flimsy excuses which she explains with them being ashamed to join FS.

However, despite these rather difficult circumstances, there are also positive things to report. Those interviewees who are active participants in Merkenich (Int. 6, 7, 17, 18, 19) all reported an increased sense of community as a result of FS activities. Int. 6 explained that her engagement in organising pickups is answered by an increased helpfulness towards her, also for things unrelated to FS. Similarly, Int. 7 and 17 reported that the contact with others in the neighbourhood has increased and became closer, with Int. 18 even speaking of a FS community feeling among participants in Merkenich. Int. 18 also reported that the topic of food waste is now more prominent in talks among neighbours, even among those who do not participate in FS. Also, there is a general contentment among those who visit the pickups over the good organisation and the tolerant and respectful behaviour among each other.

## 6.3 - COMPARISON BETWEEN NEUSTADT/SÜD AND MERKENICH

### 6.3.1 - Motivations

#### 6.3.1.1 - Instrumental

Instrumental motivations were detected with all interviewees in both neighbourhoods, except for Int. 13 who actively denied it. What differs, however, is the degree of instrumental motivation, meaning whether it is a side or main motivator. Whereas in Merkenich all participants were primarily driven by instrumental motivations, in Neustadt/Süd most interviewees had other motivations as their main driver. In those cases where instrumental motivation was the most dominant, it primarily stemmed from an economic incentive, with only the exception of Int. 6 and 18 as theirs was personal joy. This joy was also detected in Neustadt/Süd but only appeared to play a minor role.

The findings suggest that when economic gains were the principal motivator, in both neighbourhoods these were also the people who showed the lowest degree of participation, commitment and knowledge towards FS. However, all interviewees claimed to not depend on FS

financially themselves but knew of other active participants who do.

To clarify, an indication of instrumental motivation does not necessarily lead to lower engagement, but could also be an extra boost, as proven by Int. 3 and 6, who were both the admins of each FS WhatsApp group and the most engaged in the sample groups of their neighbourhoods. Still, all interviewees whose main motivation was of instrumental nature showed a negative correlation with the willingness to step up the FS hierarchy and take on more responsibility, but preferred to stay in their, what was often perceived as, comfortable position.

#### 6.3.1.2 - Identification

In both, Neustadt/Süd and Merkenich participants were also driven by identificational motivations, but to a different degree. In Neustadt/Süd, interviewees (who were mainly young, alternative, female academics living in shared flat) expressed much sympathy for other FS participants, describing them as homophiles they could relate to. Out of this sympathy sporadic altruistic action occurred, however, beyond the scope of FS, there was no connection on a personal level. Many saw a potential in other Foodsharers to become friends, and some even wished for it, but except for Int. 15 this had not happened for anyone, making it more of a theoretical, digital and superficial connection with other Foodsharers. Therefore, with the exception of flatmates or friends practicing FS together anyway, the movement in Neustadt/Süd can be accounted for being an individualistic action under a common FS CAF which seems powerful enough to unite people during FS activities but not beyond.

The situation in Merkenich is different, as FS there is more collaborative. Interviewees from the in-group (who were mainly middle-aged to elderly woman who lived in detached or semi-detached houses) reported that FS events are a platform to connect with neighbours on a personal level, intensifying the contact between those who have known each other for decades. The fact that participants know each other and identify with each other's behaviour, attitude and approaches (aka. homophiles) creates a solid base for trust which then triggers altruistic behaviour and solidarity beyond the scope of FS activities, reaching levels that have not been found in Neustadt/Süd.

In both neighbourhoods, the high level of identification made people feel more comfortable during FS activities, being surrounded by homophiles they can trust.

However, not all interviewees were part of this in-group in Merkenich, just as in Neustadt/Süd there were interviewees who felt excluded. In both cases, these people did not or only engage very little in FS and had rather low levels of knowledge about the movement. Knowing someone who is an active Foodsaver did not necessarily increase activity but interviewees' knowledge about FS.

### 6.3.1.3 - Ideology

In Neustadt/Süd, most interviewees were primarily driven by ideological motivations, while in Merkenich participants showed significantly lower degrees of it. As in both cases those participants with mainly ideological motivations were also those who were the most engaged, a correlation in accordance with Becker (2019) was detected. In contrast, the tendency in Neustadt/Süd, that those with high ideological motivations were also those who wished to engage more could not be verified in Merkenich, which might be accounted for the low number of ideologically motivated interviewees there.

Next, emotions, as a trigger for ideological motivation were mainly experienced among the sample group in Neustadt/Süd, with anger being an especially important emotion to provoke increased participation. Besides, when interviewees showed a combination of strong ideological and instrumental motivation, the highest forms of engagement in their sample groups could be observed, as in the case of the admins for both WhatsApp groups. The opposite was true for those participants with no or low ideological motivations, showing only low rates of engagement with some feeling discouragement to partake at all, echoing the theory of Ferrando et al. (2019).

Finally, interviewees in Neustadt/Süd clung more to FS's themes and CAF than their counterparts in Merkenich. First, there was a universal agreement in both neighbourhoods over the identified 'injustice', namely that food waste is a problem worth to tackle, constituting the baseline for action. Besides, most participants in Neustadt/Süd could identify with and believed in FS's approach of individualised responsibilities, and FS's main focus to save food disregarding social situations. Similarly, themes around FS such as environmental sustainability, emission-free lifestyles, or recycling were acknowledged and acted upon.

The FS community in Merkenich also corresponded with some FS themes and FS's CAF, but also partly diverged from it. Instead of embracing them, they either tended to theoretically acknowledge but then dismiss themes in their actions, or they actively distanced themselves from these, acting deliberately different. In addition, elements of FS's CAF were altered, such as the 'first-come-first-serve' credo. Instead, the community in Merkenich added a dimension of social responsibility towards other individuals of their community that they believed an engagement in FS entails. This social responsibility for each other reflects participants' feeling of community.

Consequently, FS's offered CAF and themes rather appeal to the clientele in Neustadt/Süd who are willing to adapt their lifestyles in accordance with such themes and the CAF, finally leading to a higher degree of ideological motivation. This could explain why FS there was perceived as a self-propelling movement, whereas in Merkenich it is a rather fragile construct. That assumption is based

on Becker (2019) who claims intrinsic motivations lead to more engagement, more participation and therewith more diffusion.

### 6.3.2 - Personal social environment and the effect on diffusion

Findings show a difference between both neighbourhoods in respect to how the social circles of interviewees relate to FS. In Neustadt/Süd, most participants received positive, or exclusively positive reactions by their social circle when revealing their engagement in FS, from which direct or indirect participation by these friends, flatmates or colleagues emerged easily. For some, this direct or indirect participation was a precondition for their own engagement. Because of the affirmative reactions interviewees received, they were open to talk about FS and to involve their direct social circle in it. Consequently, following Rogers (2003), the lighthearted communication facilitated the creation of a self-propelling diffusion dynamic among homophiles who stand in physical and social proximity to each other.

In contrast, interviewees in Merkenich mostly received mixed responses and carefully selected to whom they would talk about FS. They explained the negative reactions with a stigma around receiving things for free from which some of their friends, colleagues or direct neighbours would derive neediness and poverty - attributes interviewees tried to avoid being associated with. This also impeded diffusion processes, as before a potential adaption can take place, it takes more efforts to build trust and more courage to overcome this stigma, with likely less people willing to spare these efforts.

### 6.3.3 - Neighbourhood characteristics and the effect on diffusion

Besides interviewees' social circles, different characteristics of the neighbourhood also influenced diffusion. The prevalent openness interviewees in Neustadt/Süd described in their social circles were similarly found in their neighbourhood, too. The overwhelming majority reported an inviting environment to practice FS, as many people and flat shares around either already practiced FS or could easily be considered potential candidates. The big number of possibilities to engage in FS practices was amplified by the many Fairteiler that exist in or right next to Neustadt/Süd as well as a multitude of shops cooperating with FS for pickups. These many physical representations of FS in the neighbourhood not only fuelled diffusion but also made it easy for interviewees to wave FS practices into their daily lives.

The situation in Merkenich draws a different picture as the stigma that participants experienced within their close social circles was also a topic in the neighbourhood as a whole. Participants described judgement and gossiping by people in Merkenich about those who engage in FS, something 4 interviewees had experienced themselves. Most people in the neighbourhood were rather conservative and did not sympathise with FS's CAF or the corresponding themes of, e.g., environmentalism and sustainability. Consequently, partaking in FS can come with higher social cost than it is the case in Neustadt/Süd, clearly influencing diffusion processes negatively.

In contrast to Neustadt Süd, there are no Fairteiler, nor participating shops in Merkenich, both factors hampering first, the exposure to FS, which makes knowledge diffusion and therewith adaption less likely and second, making it more complicated for interviewees to participate in FS. However, public spaces like the local football pitch are platforms for knowledge diffusion, where people are likely to be exposed to the idea of FS first. Still, in Merkenich there are no choices between different FS activities, and no official FS infrastructure, but instead, a parallel way to organise FS has emerged. On the one hand, this means that when not agreeing or fitting into these unofficial approaches (which are decided upon rather exclusively by Int. 6), one has no choice but to refrain from FS in Merkenich. On the other hand, the absence of FS infrastructure and alternatives in Merkenich give room for FS practices that diverge from FS's CAF, like using the car. People with different ideological convictions than those proposed by FS, who might otherwise have been repelled from participation, could feel invited to the action, too. Either way, the organisation of FS in Merkenich is quite vulnerable, as all FS activity in the neighbourhood is dependent on only two participants, highly contrasting the resilient organisation of FS in Neustadt/Süd with its multiple actors.

## 7 - DISCUSSION

### 7.1 - Motivation

This research has provided results that show analogies but also odds with previous research presented in chapter 2. Starting with the first, the detected strong identification of all FS participants towards other members corresponds to the findings by Schanes & Stagl (2019) and Rombach & Bitsch (2015). This is also the reason for another finding by Rombach & Bitsch (2015) who discovered 'free-riding' by other members is tolerated, something that this research could confirm, at least by those who primarily act out of intrinsic motivations. In contrast, those mainly driven by instrumental

motivation used a cost/benefit analysis for personal gains, showing no signs of altruistic behaviour towards others. Besides, Ganglbauer et al. (2014), Rombach & Bitsch (2015) and Schanes & Stagl (2019) attest most participants of FS ideological motivations across the board. However, this study helps to differentiate, as indeed most interviewees showed at least basic ideological motivations, but some, especially those in Neustadt/Süd indicated very high levels of such, explaining different outcomes on participation and therewith diffusion and distribution between neighbourhoods in Cologne.

Another analogy with previous research lays in the instrumental motivation experiencing personal joy or gratification when partaking in FS as described by Ganglbauer et al. (2014), whether it be to break out of routines, connect with other Foodsharers or to ease one's conscience.

This research also corresponds with Schanes & Stagl (2019), who were told of people who financially depend on the free food FS provides, but similarly to my efforts did not manage to actually detect and interview these people but only revealed their existence. From this perspective, this research could not keep up with its aims to cover these people, however, their existence could be confirmed, resulting in a demand for further research on FS and the participation of those people.

In accordance to Ganglbauer et al. (2014), but contrasting Rombach & Bitsch (2015) and Schanes & Stagl (2019), nearly all interviewees in both neighbourhoods showed instrumental motivations to partake in FS. Again, this research helps to differentiate and understand the effects of this on FS distribution, clarifying that member whos' main motivations were of instrumental nature were also those who engaged the least, not substantially contributing to the diffusion of FS in the neighbourhood. A possible reason that Ganglbauer et al. (2014) had similar findings on instrumental motivation could be that their target group was also derived from an ICT platform, namely Facebook, just as this work derived its interviewees from WhatsApp. As both platforms exist outside of the official FS network and can easily include people who are not part of the FS hierarchy to partake in FS activities, this divergence Rombach & Bitsch (2015) and Schanes & Stagl (2019) could be explained, who conducted their interviews with registered Foodsharers only.

Regarding people who show instrumental motivations, I want to stress that the aim here is not to judge or dismiss their (rather low) participation. Instead, it is FS's strength to also allow participants in the movement who only want to benefit, making the engagement of people possible who otherwise would not have come in contact with the topic of food waste or the communal organisation of such in form of a commons.

On a similar note, this research has rebutted the claim by Rombach & Bitsch (2015) that FS requires identification, ideological motivation and commitment. Instead, there were several interviewees being motivated by extrinsic, instrumental factors who showed low commitment to the action but were still part of the FS network. Interviewing these people who were all outside of FS's intranet but

still partake in activities related to FS is one of the main contributions of this work.

In a similar manner, covering participants who diverged from FS's CAF and responded to different themes than FS itself does, and analysing their participation based on this divergence is a novelty in this line of scholarship, too. In fact, this accounts for all findings that relate to the degree of participation to any kind of motivation, as this relationship had not been analysed previously in the context of FS. This also accounts for external circumstances and their influence on the degree of participation in FS activities, which I will turn to now.

## 7.2 - Social influence and neighbourhood characteristics

Schanes's & Stagl's (2019) assertion that most participants were motivated by members of their social circle and found their way through contact with these to FS could be confirmed. In a similar manner, even though FS, being an ICT supported social innovation, has the potential to reach people beyond physical space, the assertion by Melkonyan & Krumme (2019) that the diffusion of innovations primarily take place face-to-face was verified. These contacts helped to reduce perceived risks, such as the found hesitation to share the home address with strangers to pick up food just as described by Edwards & Davies (2018), and generally made it easier to partake in FS, offering another explanation for the clustering of FS participation. Next, descriptive norms found by Schanes & Stagl (2019) played a role only in Neustadt/Süd, whereas in Merkenich it did not occur, mirroring findings of Rombach and Bitsch (2015). These differences can be explained with the general attitudes of people in close social circles as well as in the neighbourhood, with, e.g., many inhabitants in Merkenich not corresponding with FS themes and its CAF, therewith not building up pressures to join the movement.

On the other hand, the claim by Melkonyan & Krumme (2019) that FS occurrence in a neighbourhood is dependent upon the prevalence of the social milieu being dwellings there can only partly be confirmed. Indeed, as described, a general positive attitude in the neighbourhood makes it easier to partake in FS, however, it is not a precondition as framed by the authors. The FS activities in Merkenich show that, even if most people in the neighbourhood don't sympathise with a movement, activities connected to it can still happen, constituting a new finding. In the case of Merkenich, this was possible by adapting FS's CAF to local needs and ideologies as well as building trust and community which was facilitated by the fact that most interviewees had known each other for decades.

Lastly, the influence of the neighbourhood on participation as outlined by Melkonyan & Krumme (2019) claiming that spatial proximity, as well as physical representations of an innovation (in form of

Fairteiler or public pickups) would lead to an increased participation, was confirmed by several interviewees, and goes in line with Rombach's and Bitsch's (2015) claims on the instalment of local spots that would facilitate or expand the saving or sharing process.

### 7.3 - Effectiveness for the desired change

There are two ways to evaluate whether FS is a successful social innovation. When considering FS has saved almost 55.000 tons of food since its founding only 9 years ago, by more than 400.000 Foodsavers in several countries, the growth and scope of FS, being a non-monetary and volunteer-run organisation is impressive. However, FS explains that saving food is not an end in itself but a means to achieve the goal to generally stop the production of food waste by creating an awareness in society. Despite the movement involves hundreds of thousands of people but the amount of food waste has actually increased since FS has come into existence (Reiferscheid, 2018), missing its own goals the movement's success from a quantitative point of view can be questioned.

This mirrors the assessment by Miroso et al. (2016) that rescuing food alone has only a minimal effect in reducing food waste, something that might be explained with the critique by Schanes & Stagl (2019) that CBEs like FS overstate the power of awareness, information and agency of individuals and dismisses the structural and systemic causes of food waste Schanes & Stagl (2019). It is part of the scholarship of neoliberal critiques, which when applied to FS could be confirmed by its discursive emphasis on personal responsibility and voluntary action, therewith de-politicizing food politics and placing the transformative agency on the shoulders of conscientious consumers and well-intended volunteers (Vivero-Pol, 2017). Besides, the discovered individualised character of FS in Neustadt/Süd confirms concerns by Argüelles et al. (2017) that the rise of individual-based political actions might create another creative class bubble, in which individuals reinforce neoliberal mechanisms and only organise to raise voice for their personal interests, missing out on organisations' potentials of community experiences to bring about a broader, more accessible and redistributive transformation process.

Therefore, also following recommendations by Rombach & Bitsch (2015) the question whether FS should become more political must be asked. It seems a necessary step, as this research has shown that despite people are informed or even partake in FS, not all change their general consumption patterns and, except for int. 10, no participant questioned the contemporary food system and especially the capitalist foundations of it as such, even though this is where main cause of food waste lays. Instead, the status-quo is maintained or even strengthened, with retailers reducing garbage

costs and gaining moral legitimisation by being a benevolent donor, and (critical) consumers experiencing joy or emotional relief having done “at least something” (Int. 13).

However, this shift in strategy is easily proposed, as in practice FS faces the dilemma of aiming to change food providers’ actions, policies and power positions, measures possibly endangering their cooperation with these. Still, more focus on the big picture also in action, and not only in statutes on FS’s website could do good to bring about a more systemic change, because

*“if nothing ever happens a movement of change will collapse, fade, or turn into a social club or self-help organization  
(Klandermans, 2007, p. 13).*

## 7.4 - The social question

In addition to the adherence of the economic status-quo described above, social inequalities seem to be reproduced, too, which not only raises questions of equity but also threatens diffusion dynamics and therewith FS’s goals.

Like other works before, this research has shown that FS’s approach is modelled for the young, urban and well-educated middle class living in places like Neustadt/Süd, matching best with their ideological convictions and living situations. Considering diffusion happens among homophiles, the assertion by Melkonyan & Krumme (2019) seeing FS consolidating in its niche rather than moving out of it got proven by this work. The problem is that targeting one specific group ultimately leads to the exclusion of another. My research has confirmed Argüelles' et al. (2017) attestation of FS lacking consideration of the interests, needs and capacities of groups beyond their traditional closer network. This includes not translating critical information, urging members to behave in a certain way even though it did not fit peoples believes and practices, or labelling engagement in FS as a moral duty, despite the obstacles people, like those in Merkenich, face to comply to such demands.

Concerning the researched WhatsApp groups, this trend of exclusivity is amplified, as (1) WhatsApp only allows 256 members in groups that are therefore often full, (2) some Foodsavers created smaller WhatsApp groups to only offer food to people they had already met, they felt sympathy for or who lived close by, (3) private admins kicking out members from groups based on personal discretion and (4) more inclusive, public points such as foodsharing.de or Fairteiler (which, according to Ganglbauer et al. (2014) are crucial reference points for disadvantaged people) become neglected while, at the same time, new materials are necessary to partake, such as mobile phones with internet connection.

Especially point 4 hints to the difficulties not being able to partake in FS, contradicting FS's aims to "grant unconditional access to food to all humans, therewith promoting its appreciation" (Foodsharing Wiki, 2021). Other barriers revealed in this study were not enough spare time or pickups not matching personal schedules, lack of FS activity and infrastructure, not enough space at home to store food, no support or even disaffirmation by their social environment, missing knowledge to successfully partake in FS or feeling ashamed – all showing that FS distribution links questions of access and equity. Interviewees also reported that those of higher positions in FS have access to an abundance of fresh food and often pick the best for themselves, whereas as an outsider being dependent on Fairteiler meant the quantity and quality of food decreases significantly.

Similarly, after I went to a big private pickup in Neustadt/Süd for this research, I met two homeless people less than 50 meters away from the house in which the pickup took place and shared some of the food I just got with them. Their gratitude and big interest in how FS pickups worked quickly tipped over into disillusion when it became clear that the minimum requirement to partake could not be met by them, namely having a phone and an internet connection. This all can raise doubts over the success of FS's aim to provide an unconditional access of food to all. The critique by Argüelles et al. (2017) on privileged citizenship becomes reality here, where only those with a certain status in society may be entitled to the benefits non-state actors, such as CBEs, produce.

The research showed that it was mostly upon the goodwill and efforts of individuals to counterbalance some of these obstacles and injustices. In Merkenich, there was a conviction that having large amount of free, high-quality food also entails a social responsibility. However, reaching out to excluded, precarious individuals took much effort which was mainly expended by Int. 6 - an effort that for many would likely be too much to bear alone. This individualised responsabilisation to expand FS to those social circles must be criticised, even more when believing FS also has a social responsibility, a position that surely bears potential for debate.

## 7.5 - Achievements of FS

This rather grim assessment, however, must be counterargued with the fact that FS has managed to raise awareness of the problem of food waste on a broad scale, reaching people who otherwise would not have gotten in contact with the topic. Food waste and other topics like sustainability are now discussed more in Merkenich, a neighbourhood in which conservative discourses and themes prevail, mirroring Rombach & Bitsch (2015) who label FS as a platform for exchange and discussion.

The fact that FS exists to such extend in Merkenich, despite indicated differently in figure 5 and the divergence from FS's CAF are only possible due to a set of unique circumstances, namely (1) an

extremely engaged BOT<sup>2</sup>, (2) the presence of Int. 6 being altruistic, caring and well-connected in the neighbourhood, (3) a complete absence of FS presence possibly limiting the described divergence from FS's CAF and (4) the good connectedness via WhatsApp. It is unlikely to find similar or substituting circumstances in other peripheral neighbourhoods, most likely deeming peripheral neighbourhoods to be FS deserts, just as visualised in Fig 5.

Still, FS has not only managed to save tons of food but also to unite very different people in one movement, create new local bonds and informed many people about the problem of food waste. The long-term effects of this sensibilisation of the masses that FS continues to achieve are hard to determine but bear the potential for a long-lasting change also in other spheres, both on an individual level and in society as a whole. In the context of the commons, hundreds of thousands of Foodsharers and their social circles have experienced that this 'nowtopia' (Argüelles et al., 2017), seeing a communing of food is feasible and desirable. This experience of a collective and local reappreciation of food, with some questioning hegemonic profit-oriented maxims in the global food system can be accounted for expanding the realms of possibility over a re-communalisation of food management; a finding matching with Vivero-Pol (2017), asserting FS to develop alternative narratives to the dominant food regime. With FS being only one example of an urban common, other initiatives could benefit from this created and expanded room for manoeuvre.

Despite the criticisms presented above, FS, being a volunteer-run organisation, might only be a first step towards transition, as even basic knowledge on food waste, or basic levels of organisation of a resource like food according to the commons framework constitute novelties in many peoples' lives. Afterall, I agree with Melkonyan & Krumme (2019) stating that FS is a sustainable social practice simply being an alternative to the disposal of eatable food.

## 8 - CONCLUSION

### 8.1 - Findings

The aim of this research was to identify push and pull factors for participation in FS in Cologne and discuss their influence on the unequal distribution of FS members between neighbourhoods.

Researching motivations helped to identify the internal drivers of individuals to join (or not join) FS,

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<sup>2</sup> In fact, according to foodsharing.de, the BOT for this district (which includes Merkenich) is the most active Foodsharer of all the 400.000 members registered on the website, having saved 139.072 kg of food in a total of 4.451 pickups!

Source: <https://foodsharing.de/statistik>

and how these drivers determined the level of engagement, differentiating between high, low and no participation. It also made it possible to contrast FS's CAF with individuals own moral convictions, giving insights to whom the movement is addressed to and to whom not, constituting another explanatory factor for participation and the following distribution patterns in Cologne.

It turned out that

- participants who are exclusively motivated by extrinsic factors show low levels of engagement and knowledge regarding FS
- participants who cannot identify with other members of the group show low or no levels of engagement
- participants who are primarily motivated by ideological factors show high levels of engagement
- participants who indicated a mix of both, intrinsic and extrinsic motivations were those who engaged the most
- FS's CAF matched primarily with a young, educated, female and urban clientele
- FS's CAF seems to lead FS to be an individualised practice, built on instrumental solidarity with few ties beyond the action of saving food

Even though personal characteristics like motivations certainly play an important role in the adoption of a social innovation, individuals act in a social and physical context. To understand the distribution of social innovations like FS in Cologne, diffusion processes were analysed, identifying which social and physical conditions cultivate or oppress the spread of a social innovation to which degree.

It was shown that diffusion is more likely to occur among homophiles as well as when individuals stand in social and physical proximity to each other (neighbourhood-diffusion). The reduction of initial doubts and perceived risks to partake in the movement was also speeded up when FS diffused among homophiles in close social and physical relation. Besides, neighbourhood characteristics influence the likelihood of adaption, too. The more FS infrastructure and activity there was, the easier it was to partake in the movement which ultimately facilitated diffusion processes. Here, visibility in public space was a driving force because it confronted more people outside FS clusters with the problem of food waste and gave those already participating a sense of belonging.

The theories and methods used turned out to be adequate means to answer the presented research questions. At the same time, it opened other questions, such as the consequences of the rising importance of ICT and social media in FS actions as well as the question of social equity concerning the access for participation in FS. These are topics which demand further research, as when being convinced that commons, such as FS, are an essential constituent to bring about a systematic change towards a more sustainable and equal food system.

## 8.2 - Recommendations

For FS to achieve their goal involving as many people as possible, efforts must first be directed towards spreading knowledge about the movement and its approaches and goals, being the most basic precondition for participation. As this knowledge seems to diffuse inside bubbles of homophiles, FS must aim to break out of these clusters and find ways to become more known in society as a whole. As face-to-face diffusions continue to be the most effective, a sole focus on (social) media cannot be recommended, but info booths and pickups organised in public space could be one way, with the latter having proofed in Merkenich to spread knowledge on FS to a diverse audience.

But as this research has shown, the mere knowledge about FS does not necessarily lead to an adaption of the practice. As high levels of ideological motivation bring the most sustainable engagement, FS should work on feeding and creating such motivation. This can either be done by triggering emotions (e.g. through campaigns) which showed to be one precondition for ideological motivation, or by adapting its own CAF to include groups who currently do not respond to it. For example, damning people who travel across the city or use their car to partake in FS goes against reality of life for many people, especially for those not living in the city centre. This call for inclusion also means lifting other barriers for participation, such as having descriptions in WhatsApp groups in English or other languages, with further info about the organisation of FS and how to engage.

For this, FS should stop ignoring and instead start to take WhatsApp and other social media seriously, acknowledging the fact that they gradually replace structures around foodsharing.de. Whereas communication on the website is monitored, and misconduct can be sanctioned based on a mutually agreed set of measures, WhatsApp groups are run by random people, some of which are not even registered Foodsavers and therewith not familiar with FS guidelines. The problem here is that members of the group depend on the goodwill of the group admin. This research showed that misusing this power position can lead to random acts of in- and exclusion and no chance to contest or settle the conflict within in the legitimised committees FS has successfully developed over years for these purposes.

Finally, instead of focusing on the individuum and their behaviour, FS should follow less neo-liberal and more radical political strategies, starting to use its power to fight the roots of food waste, not the symptoms. It is a ridge walk between bringing about a more profound change and not threatening the cooperation with retailers. However, the strategy to ingratiate with retailers and accommodating to all their needs, even doing them a favour reducing their garbage costs which increases their profits

further, but not demanding them to stop their unsustainable practices, is questionable. With soon half a million members, FS is a powerful actor of civil society with the potential to influence the food system for the better, challenging those in power currently benefitting from unsustainable practices. This, however, cannot happen if FS continues to be a practice composed of individuals who, beyond the scope of saving food, do not organise or connect with each other, as it was the case in Neustadt/Süd, as herewith, the opportunity to build a community becoming a potent political movement is missed.

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