Think Globally, Act Locally: A Case Study of a Free Food Sharing Community and Social Networking

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ABSTRACT

Social networking has a long history of supporting communities online. In this paper we are concerned with a specific community that has formed around free food sharing to save food from being wasted. Specifically, Foodsharing.de is a platform that enables consumers, farmers, organizations and retailers to offer and collect food. Associated with this is the Foodsharing Facebook group where broader community discussions take place. We report on a qualitative analysis of the Foodsharing Facebook group to understand its role in emerging and sustaining the community. The Facebook group is a place where the individual values and motives, socio-political discussions and mass media interrelate and create new social patterns through narratives and local community building. We present our findings as interplay between a number of factors: individual, community, and organisational levels; public relations and media, the operational platform Foodsharing.de that enables local communities and the Facebook group where global ideological framing of the community takes place.

Author Keywords

Social networking sites; communities; Facebook; food waste; empowerment; free share economy; activism;

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION

Sharing food has been a cultural and social practice in communities since ancient times and is re-gaining

popularity now. This is because societal developments of overproduction of food in industrialized countries results in half of the food being produced thrown away along the food chain [10]. The advance of web and social technologies offer new possibilities to connect people who want to offer or receive food for free to save it from being wasted. This gives rise to interesting online and offline sharing interactions, as people who meet online have to meet offline to actually hand over the food articles. However little has been researched about the values and ideals of such free share economy [27] communities and how technologies facilitate these online-offline practices.

The focus of the study here is a German community that shares food supported by the platform Foodsharing.de. This platform enables activities such as offering food, accepting the offer, and negotiating a time and place to meet and hand over the food. Complementing this, active discussions around Foodsharing and its community happen at the Foodsharing Facebook page, where the Foodsharing Association posts messages to invite community interactions and discussions. Community members are also allowed to post to the Facebook group. 3242 posts and comments from December 2012 until March 2013 on this Facebook group served as the material for our qualitative thematic analysis. The focus of our analysis was on individual values and the overall picture that makes such a community work. We identified individual values and needs of social, ecological and economic nature as motivations to engage in sharing food. Here public relations and mass media not only played a significant role in promoting the community but also in creating through narratives a new social pattern of sharing food. Public relations also played a role in building local communities, as sharing food requires a critical mass of active participants in a geographically bounded area. We also analyzed interactions between community members and found pro-active appeals and critical awareness of community members. The key contribution of this paper for the CSCW community is how participants use the social media and web platforms to facilitate fluid transitions between online-offline and local-global interactions. We draw out the interplay between individual, community, organisational levels, public relations and media, the operational platform Foodsharing.de that enables local

communities and the Facebook group where global ideological framing of the community takes place.

RELATED LITERATURE

This paper builds on prior research on food as a social and cultural phenomenon, the phenomenon of food waste, communication and social networking sites, and food communities.

Food and its passage to waste

The main motivation behind the Foodsharing community is to save food from being wasted by giving it to other individuals and institutions for free. In this section we first want to engage with food itself, as food is an inherent part of our lives. Everybody has to eat to survive. Beyond this primary need there is a social and cultural dimension, where food is inherent in the enactment of cultural and social practices. Food is graspable, tangible, visible, and related to living organisms. Evans points to this materiality of food as "susceptible to spoilage, decay, and rapid transformation" that "suggests a vitalism that animates foodstuffs" [7].

If food is wasted somewhere along the food supply chain, it is not just the food itself that is wasted but also the energy that has been invested in growing, nurturing, harvesting, producing, packaging and transporting. According to Gustavvson et al. [9] medium and high income countries are mainly responsible for food waste, with 95-115 kg a year per person, whereas in developing countries it is 6-11 kg a year per person. The majority of food waste happens at the household consumer and retailer level for industrialized countries like Germany, which cause up to 40 percent of all food waste. The remaining 60 percent of waste happens during food production, agriculture, post-harvesting and processing [9]. Besides the ecological effects it is also the ethical implications that accompany food. It is important to emphasize that for individuals, food waste usually occurs unintentionally. For example, the participants in studies of Evans [7] and Ganglbauer et al. [8], in most instances, did not want to waste food. Food was wasted inadvertently, accompanied by ethical as well as economic concerns and because somewhere else in the world 'people suffer from hunger' or 'it just feels wrong to throw food away'.

Food communities

Given the importance and social nature of food in people's everyday lives, it is not surprising that communities around food are formed. Communities serve as a foundation where experiences and knowledge are discussed and reflected upon. There are various communities with food as a common theme and these include alternative food cultures that might be supported by technology [2]. Odom [19] looked at the agricultural aspect of urban food production and how this might be supported by technology, as technology can potentially play a role in tracking food to 'grower management software' or 'garden sensors'. Communities are often built on the idea of sharing, such as the one studied by Parker et al. who looked at the reflective aspects when people share healthy eating ideas through audio-recordings on health [21]. Participants in this study discussed and shared more than healthy eating ideas and also had debates about wider systemic implications of healthy food and 'become advocates of change apart from the tool' [22]. Gross et al [11] talk about Foodmunity, a social networking site that facilitates people meeting together around shared experiences with food. Our Foodsharing community is extended by the notion of actually sharing food articles, which in turn results in discussions and engagement around broader issues we want to present in this paper.

Communities and social networking sites

Individuals are often part of a broader community, where there are different dynamics at work. An integral part of communities is communication, as it is only through communication that the interior values and motives can be exteriorized [9]. It is also communication that enables cooperation and collaboration [14] between members, which is central to a community. Social networking is an umbrella term for the infrastructures where people with similar interests can meet, interact, create, share and exchange information online. Platforms like Facebook provide the possibilities to connect, investigate and network socially to share identities, content and statuses [12]. For people with common interests there are Facebook pages that enable an online space for people who like and follow a certain theme. Facebook users 'liking' the page and participating in it can benefit from being able to socialize, entertain, seek self-status and information [20], contribute and discover [13]. The members of such online communities are often geographically distributed and independent as a common interest acts as social lubricant for the community. Such social networking sites can also be used in local geographical areas to build social relationships, negotiate ways to take collective action and social norms [17], negotiate local events and services, and share information and advice [15]. In this case interactions happen online as well as offline [18].

ABOUT FOODSHARING

Foodsharing.de[1] is a community platform in Germany that enables consumers, farmers, organizations and retailers to offer and collect food articles to save them from being wasted. Sharing food in this community involves no transactions of money and attracts all sorts of participants. Foodsharing therefore is theoretically open to all levels of the food supply chain.

The Foodsharing initiative originated in Cologne when several committed people came together to form an Association. It mainly started around Valentin Thurn, a documentary film-maker. Thurn had created a documentary called "Taste the Waste"[2] that presented the problem of

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[1] http://foodsharing.de/

[2] http://www.tastethewaste.com/

food being wasted from different perspectives including farmers, wholesalers, food retailers and consumers. Besides many other vey active members he was key in actually starting the Association and is still part of it. Following the documentary the newly formed Foodsharing Association started a crowdfunding campaign and raised enough money in Germany to get funding for an online platform, giving evidence that there were already many people who believed enough in the idea to invest money for its development. Foodsharing.de was subsequently released on Dec 12th 2012. While it was started in Cologne, the site now can be accessed by anyone anywhere in Germany and actual food sharing could take place wherever people could physically access each other.
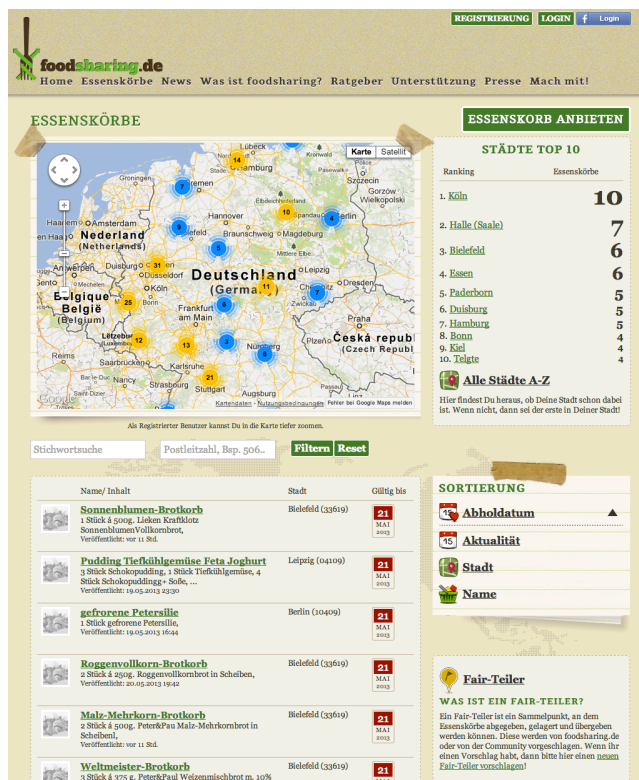

Figure 1: Screenshot from Foodsharing.de webpage

As at March 2013[3] the Foodsharing.de community had 17000 active members distributed over Germany and 1788 food baskets had been handed over. On the date we downloaded our data for analysis, there were 271 food baskets on offer to be collected. A food basket is created by someone who has food to offer and can contain one or more food articles. The food basket page of Foodsharing.de displays all currently available food baskets across a map of Germany and also provides the same information (available baskets) in a list view (see Figure 1). Community members can filter on different parameters such as location and

adjacency on a map, timeliness of food baskets, content, or ending time for collecting them. If somebody wants to take up the offer of a food basket, s/he can then send a request to the person, organization or institution offering the basket. The offering side in turn can accept or decline a request. If both sides agree, they then negotiate where and when to hand over the food basket in the offline world.

The Foodsharing Facebook community

The Foodsharing webpage also links to a Facebook group called Foodsharing[4], which will be referred to as the Foodsharing Facebook page or just Facebook page in this paper. The Facebook page was started on September 13th 2012, before the platform itself started, as a forum for interested people. Whereas the Foodsharing.de platform is mainly functional, enabling the practical sharing of food, the Facebook page is the place where we can see the emergence of the community itself: where broader community discussions take place, and where members are invited to post, comment or 'like'. This paper will therefore focus on the community interactions on the Foodsharing Facebook page.

METHODS

To understand the mechanisms of this community and the role of the platform the posts of the Facebook community were qualitatively analyzed using inductive thematic analysis [3]. As at March 2013, there were 22405 'likes' (Facebook's mechanism for showing support for a page), and 1012 contributing members. The data set comprised 3242 contributions, made up by 243 posts contributed from the Foodsharing Association, 401 posts by members and 2598 comments to posts. Everybody who 'likes' and is subscribed to the page has access to all the posts and comments.

To create the dataset for analysis, we expanded all posts, starting from the beginning of September 2012 until beginning of March 2013, to make all comments visible, and printed out 208 pages of material. As a first pass in the thematic analysis, two coders made notes on two separate prints-outs, from which they identified and agreed 14 broad types of contributions, such as users requesting help or the Foodsharing Association celebrating a milestone. We then started to look for the deeper themes underlying the posts and repeatedly reviewed the material together to draw out important issues. The themes and codes were further reviewed in a collaborative analysis session with other group members. In this paper we focus on two themes, 'individual values and needs' and the 'emergence of the community'.

From the first analysis we could see that public relations and mass media played important roles in promoting the community and engaging new members. Hence, we analyzed 11 videos that were still available from the 17

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[3] As at October 2013 the Foodsharing.de community had 27600 members and 4800 food baskets have been handed over.

[4] https://www.facebook.com/foodsharing.de

video links that were posted to the site. We observed these 11 videos and made notes of the main content topics. We were also looking for themes in these videos to analyse how they contribute to the emergence of the community. One illustrative video that was highly influential (surpassing all others by number of comments, likes and shares) was transcribed and thematically coded to uncover the possible new relations of sub-themes to the emergence of the community.

At our request, the Foodsharing Association also made us 'insight analysts' for this group, which granted us access to aggregated Facebook data and descriptive statistics behind the group. This provided us with information about basic demographic data of the members and to identify posts that were most 'viral', meaning we could see how many people commented, liked or shared a post.

FINDINGS

As background to understanding the Foodsharing Facebook community, we first provide a picture of the age group and gender of people engaging in this group, drawn from an analysis of the aggregated data of the Foodsharing Facebook page.
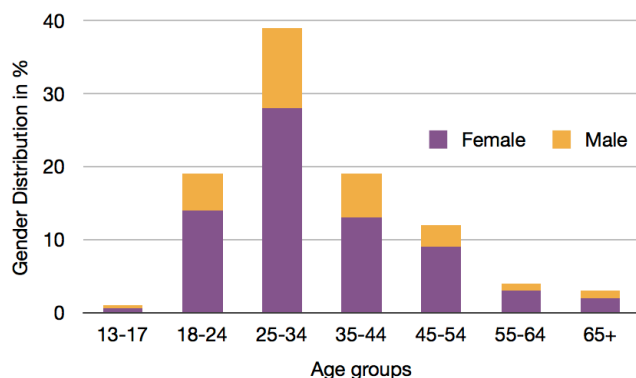
Figure 2: Gender and age distribution within the Foodsharing Facebook community.

More users 'like' the page who identify themselves to be female (69.6 percent) than male (27.4 percent). This resonates with other reports that women often play "central roles in shaping and furthering alternative agrifood movements and institutions" [1, p.12]. Allen and Sachs discuss the ways in which food practices such as cooking are often still a predominantly female domain, with women being mainly responsible for food-related work at the home as well as at the labour market [1]. This could be one aspect why more women (at least on the Facebook page) than men are present.

The most common age group for Foodsharing Facebook 'likers' is between 25 and 34 (39 percent of total). Almost a third (28 percent) of the users in the Foodsharing Facebook group are female and between 25 and 34 years old. See Figure 2 for more details.

We go on here to characterise the posts and comments in terms of topics. There were a plethora of issues discussed by the community, ranging from dumpster diving (freeganism)[5], agriculture, gardening, and everyday practices of food and waste, to sharing experiences offline and online, food waste cooking events and other initiatives.

To determine the nature of the information provided and how users engaged with Foodsharing, we categorised different types of contributions from Foodsharing users:

- *Foodsharing experiences*: Experiences, both positive and negative, from online and offline interactions with other members with whom food was shared.
- *Finding a local community*: Requests to connect to/ find others in a specific local area.
- *Calls for internationalization*: Remarks about wanting to have such a community in their country. (Foodsharing.de is provided for Germany only at the time of analysis).
- *Offering help:* Offers not only to share food but also to engage in voluntary work.
- *Plaudit to the Foodsharing initiative:* Appreciation for the initiative and how useful it is.
- *Wider systemic implications:* Discussions of the systemic effects of Foodsharing and if individual actions might have consequences if Foodsharing gains a critical mass.
- *Links to other initiatives:* The dynamics of Foodsharing seemed to attract users to link to other initiatives with a similar mindset.
- *Everyday practices and food waste:* Discussions about how food waste in private households, food retailers, restaurants or agri-industry emerges or not.
- *Feedback on the design of the Foodsharing.de platform:* Remarks about what could be improved and which features would be desirable.

The Foodsharing Association also made particular types of contributions:

- *Requesting help*: Asking for help on a range of issues, from asking for legal expertise (e.g., lawyers to consult about food legislation and Foodsharing activities) to asking for volunteers to be interviewed and report about Foodsharing experiences on TV.
- *Providing feedback to members:* Giving answers to questions, contributing to discussions.
- *Showcasing Foodsharing:* Sharing links to media where Foodsharing was presented, ranging from reports on TV to newspaper magazines.
- *Promoting networking:* Providing links to other initiatives with a similar mindset or political intention, such as for petitions, events, etc.

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[5] The practice of foraging dumpsters for edible food (freeganism) or other goods.

- *Celebrating collective community milestones* such as the thousandth food basket that has been handed over.

Within these contributions, we identified emerging themes following the thematic analysis procedure described in the methods section. Here we start with unpacking the underlying motivations and values of individuals to participate in such a community. Posts may also entail a number of other themes than the one we primarily identify, as topics were often discussed in a non-linear way, where personal experiences are mixed with arguments for political perspectives or general expressions of praise or dispraise for the community. Statements of the members have been translated from colloquial German into English to make it understandable for an international audience. Pseudonyms are used to refer to members.

INDIVIDUAL VALUES AND NEEDS

This community included a highly diverse set of active Foodsharing Facebook members. To enact practices of sharing food requires additional effort in people's everyday lives – to create and/or respond to posts, to negotiate meeting places and times, and to physically meet to exchange the food. This implies that there are motivations and added values beyond the food that is provided to members. We were looking for the motivations that are inherent in the practice of sharing food in such a community. Two underlying and interdependent aspects as incentives to take action in this food sharing community were identified, namely *social and ecological* values and *economical* needs.

Social and ecological values

When people described their experiences on sharing food on Facebook, we often came across statements such as "*gives me a good feeling*" or "*doing a good thing*" in sharing food to save it from being wasted. So there seems to be something in not throwing food away that feels inherently right for these members and gives people an intrinsic reward from being 'socially responsible'.

There were also social side effects and some specific instances where people reported that they built new social relationships through Foodsharing activities. This is because the online interaction on Foodsharing.de leads to people actually meeting up, i.e., while the initial contact is made online via the platform, actually meeting and handing over the food has to happen offline at a place users can decide themselves.

> Isabel: "Even if it [food] was only a small amount I gave away, it gave me a good feeling. I get rid of my food baskets so quickly and you get to know so many brilliant and interesting people. Next week I have an arrangement with one for dinner … it is fun doing good and at the same time making new friends."

For others, the social motivation was more about wishing to "*do good*", to help and support people "*who don't have it so easy*" (Sophie). This social motivation in some cases went

even further. Michael solely wanted to offer to people who are in need and not those who are economically well off:

> Michael: "Foodsharing is a great idea, I can finally give left over food to people in need of help. […] I just don't see a point in helping people who are NOT in need of it."

This statement was then discussed with other Foodsharing members, questioning who is in need and how one might be sure that only people in need are receiving food. The discussion, along the dimension of who has or has not economic and social need, points to wider systemic discussions we often encountered in the data when members discussed Foodsharing, an aspect which we will discuss later on.

Given the effort involved in sharing food, it is not surprising to see that people also expressed frustration when members of the community made an appointment to hand over the food but those collecting were not reliable. The Facebook group then acted as a forum for those who had been disappointed by a member who did not show up. It was suggested by members that these happenings should be translated into technological changes insofar that not only members offering food baskets should be rated but also those who collect them.

Besides intrinsic social values that mattered for sharing food, active members also demonstrated ecological motivations. These played out not just in terms of local practices, but connected to broader concerns for societal change.

> Karoline: "I hope even more people become enthusiastic about Foodsharing, at least this would be great for humanity and the environment."

This statement implies the humanistic nature of sharing food and how the social and environmental impacts go together in an idealized account of striving for a better world. This statement also reveals that users think about Foodsharing having systemic effects in a social (humanity) and ecological (environment) way. It is not only about the practice of sharing food on a local micro-level, but, given that more people participate, it will have macro-effects and systemic changes along the food chain. Doris similarly expresses this:

> Doris: "Our resources are limited and we should ALL catch on to this finally".

Such discussions pointed to the importance of getting a critical mass in order to achieve a notable effect on scarce limited resources of the environment. However, these environmentally optimistic posts were often counter-argued by people who pointed out that more than just a critical mass is needed, that it needs interventions from the state to reduce food waste on the agri-industrial side. There were a vast number of posts, particularly during discussions about more systemic and political aspects, that condemned the food industry for resource and food depletion, the state who

does nothing against it, and retailers who deliberately prefer to throw away instead of giving to people in need. Those in need refer to our next motivation, which is an economical as well as social one.

Economic need

It is clear from other posts the economic need played a big part in food sharing, given how often people in the 'giving' position commented about people in need. However there was only a minority of posts to the Facebook group from users who were in need of food support to make or improve their living. Of all the 3242 posts there were only five instances where people explicitly articulated their own economic need. This points potentially to feelings of shame that might go with social and economical needs of sharing food and discussing this publicly.

> Tory: "If I go to the food bank twice a week already und cannot give a lot [of food] myself…can I still get any?"

> Anna: "Just register online and have a look if somebody has to give something away. I don't think that it is about "who collects also has to give" but rather those who have, give, and those who need, just take."

Though we could not find many posts from users who collect food baskets, the free-rider phenomenon that is criticized in many other communities is actually welcome for the Foodsharing community. Tory is seeking help and asking for the conditions under which she can get food, and is encouraged and supported through Anna, telling her it is endorsed if "*those who need, just take*". Michael's social motivation to share food (noted previously) was even to give only to people who are socially disadvantaged. We could not find at any point a member complaining (at least on Facebook) about people who only seek and not give food.

In summary, in this section we were looking for the motivations that are inherent in the practice of sharing food in such a community. Social, ecological as well as economic values and needs are incentives to take action. The motivations between and within participants are manifold, some emphasizing a general '*doing good*', some writing more about their social, ecological and/or economic motives. Help-seekers, help-givers, social, ethical ecological and economic values and engagements are all able to co-exist and in some cases mutually re-enforce each other. These values are reflected and made visible by the various discussions at the Facebook community. What is interesting to note too is that while the different roles of giving and receiving make this sharing community work, since both roles are needed for any food exchange, the discussions on the Facebook community are largely presented from the activists and giver perspective.

EMERGENCE OF THE COMMUNITY

We can see the emergence of Foodsharing at both local and global levels, with the public media also playing a key role. We define the term 'global' in this paper to have a non-local, geography-independent and issue-based connotation. This section is started with the initial role of the media.

Creating visibility and narrative through media

Public relations and mass media played an important role in the emergence and sustainability of the Foodsharing community. Specifically we focus on the emergence of the Facebook community through the inter-relation between Facebook and public relations and mass media, and how members support local community building through advertising and pro-active appeals. We also focus on the development of critical awareness through community interactions and the emergent narratives that are used to communicate the values and practices of the Foodsharing Association.

As noted previously, Foodsharing started off with a crowdsource campaign to attract funding for the development of Foodsharing.de, at a point where the Facebook group already existed to promote and discuss Foddsharing.de's development. The platform was released on December 12th 2012 with a press conference, accompanied by local strategies such as posters, flyers and billboards close to food retailers. Foodsharing has since had significant media interest, with a very frequent presence on prominent TV news, newspapers and online news. The Foodsharing Facebook page links to: 17 reports about the community on TV channels, 3 of those channels being the biggest in Germany who broadcast about Foodsharing in their main evening news; 44 newspaper articles, with 6 of those being amongst the biggest national newspapers or magazines in Germany; and 3 links to radio entries and 2 mentions on blogs. This mass media coverage served as a starting point for motivating people to get active themselves in Foodsharing and posting this to the Facebook page. The activating potential was visible on the Facebook page with 31 posts where members got to know Foodsharing through a TV report in the main news on a prominent German TV channel and were encouraging about the initiative.

> Pam: "We just watched it on TV, tried it out and classify it as PERFECT! Great idea :D".

Media coverage not only prompted people becoming actively engaged in food sharing, but also to actively talk to other people who had more power and control over the distribution of food and so try to change their instant environment.

> Cora: "Just watched it on TV … it's a great thing … I am working in a big supermarket chain and will talk about it with my boss".

The various responses showed how media coverage could have important effects on awareness with follow-up actions, moving from watching TV reports to actively engaging in the community or their specific local environment. In fact so many people tried to visit the Foodsharing website after one broadcast report about it on one of the major German TV news shows, that the Foodsharing.de page was accessed

unexpectedly often and was not reachable for days. This also resulted in numerous posts on the Facebook page remarking on the unattainability of Foodsharing.de.

To understand the nature of these reports with their activating potential, we observed reccuring issues across these reports: Stories started with presenting the problem space of food waste to raise awareness, presented Foodsharing.de as an alternative, and showed role-playing and exemplifying how the platform can be used. To understand the way these TV reports encouraged interested members, we analysed the narrative content of an illustrative example of the TV report that Facebook users 'shared' the most (most viral) on Facebook; 29.3 percent of all users who saw the post with the TV report also reacted (liked, shared or commented) to it.

The TV report starts off with the overall story of wasted food and introduces Foodsharing.de as a platform that enables individuals to waste less through the new evolving practice of meeting online to share offline. The main narrative behind the report told an individual story to "*show how it works*" (speaker announcing the report). The report then depicted a woman to show online interactions with the platform Foodsharing.de as well as offline interactions when another woman comes by with her children to collect the offered food. She says:

> "One has to bring the right attitude to this, others would throw it away, and that you can accept Foodsharing confidently and don't have to feel weird doing this."

The content of this TV report serves to attract people who want to engage in food sharing and directly addresses stigmas that could potentially be attached to it. This is illustrated in the remarks "*don't have to feel weird about doing this*" and "*accept Foodsharing confidently*" about collecting food baskets. That such social stigmas might otherwise exist is suggested by the fact that only five people posting to the Facebook page identify themselves as being in economic need (see section economic needs). The TV report also serves to practically demonstrate sharing food and how this constructs and narrates a new social pattern, potentially aiming to achieve cultural change ("*bringing the right attitude to this*") for TV audiences. The moderator's words to announce the report, "*show how it works*", point to the demonstration and play-acting of the new social pattern.

In sum, the values of Foodsharing and its social patterns are narrated and exteriorized through broadcasting and at the same time promote acceptance of it. The Facebook page played a critical role in a) keeping the report alive by linking to it and b) keeping the issue alive and being able to mobilise the energy, concerns and debates arising from the report by providing a focal point for people to gather, discuss and learn.

Building local communities

While the media played a role in making Foodsharing an accepted social pattern globally in a cultural, societal, and political way, local communities are still needed to make Foodsharing productive and sustainable. Active agents enabled through the global Facebook page promoted local community building and Foodsharing members engaged in broadcasting, advertising strategies and local interactions.

> Dora: "Is there a possibility to advertise for Foodsharing in your own town? Ideas anybody? It just works if enough people participate…"

> Carla: "It depends how you imagine advertising, you can have advertising material sent to you, I have done that too and was sent posters, stickers and flyers in different sizes. There is an email address I forgot that you can write to*"*

> Foodsharing: "info@foodsharing.de"

This conversation shows that to make Foodsharing reach enough people it is inherently dependent on local communities and pro-actively engaged members such as Dora. Therefore public relations and the organisational means of a community play a crucial role on a local level to advertise offline with flyers and posters, both of which can be ordered from and sent out by the Association. This conversation also points to online-offline interactions in advertising online and offline, similar to the practice of sharing food itself. Building and instantiating local communities are necessary to make the community as a whole work, to reach a critical mass, as Dora remarked. Such interactions on the global Foodsharing Facebook page resulted in 17 new local Foodsharing Facebook groups being founded to enable local interactions and food sharing.

Online support in the community did not necessarily come from the Foodsharing Association itself and often happened between members. Support often takes the form of encouraging statements or pro-active appeals.

> Sandra: "I really love the idea, unfortunately there are no food articles provided in my city."

> Kathy: "Sandra, offer food articles yourself, mine have been requested and collected within minutes! If everybody just waits until others are offering food articles, it will not work."

There were many other instances where community members supported each other. Examples include: advice on how to use the platform; how to initiate a local community; and discussing relevant food topics such as how to start dumpster diving.

Pro-active appeals were not only exchanged between members of the community to form bottom-up local Foodsharing communities, but also from the active agents behind the Foodsharing Association in a top-down manner. Hence it is also the pro-active involvement of the Foodsharing Association that matters, such as in Dora's and Carla's case where the exchange of information is accompanied by someone from the Association actively providing information.

The Association also repeatedly posted pro-active top-down appeals for engagement to the Facebook community members to offer foodstuffs which members not need any more.

> Foodsharing: "Dear Friends, holidays are coming soon and everybody still has foodstuffs at home that could be offered on Foodsharing.de before they spoil. Take part and comb through your pantry, fridge and kitchen. Now is the right time! Over 15.000 Foodsharing members are waiting for your food basket."

The role of the remark "*over 15.000 Foodsharing members are waiting for you*" is to communicate to interested members that they are part of a bigger movement and story, that another 15000 active people have already adopted the practice of sharing food. This pro-active call also provides direct instructions ("*comb through your pantry*") to engage potential or existing members in sharing food.

Creating critical 'global' awareness

Accompanying the emergence of the community was also the development of critical awareness at a more general level, through which people developed a critical understanding of the socio-political sphere their community moves in. Members regularly engaged with topics on the Facebook page that were actively discussed, questioned and negotiated, such as hunger in the world and the context of wasted food, genetically modified organisms, the role of marketing at food retailers, product packaging or practices of the agri-industry, etc. The vast numbers of topics, though not directly associated with Foodsharing, were actively discussed and provide evidence that food practices are inherently cultural and political.

Discussions also allowed members to develop critical awareness towards potential systemic impacts of Foodsharing and often took place within the context of discussed topics. An illustrative instance for the ongoing development of critical awareness was Tom and Hannah discussing the wider systemic impacts of Foodsharing:

> Tom: "Foodsharing cannot change the throw-away practices of agriculture and industry. Foodsharing can also not contribute to reduce hunger in the world. Foodsharing should then only communicate what it can do: Saving food at the consumer level. Not more, not less."

> Hannah: "But Foodsharing connects people with each other – and this is the basis for all other changes, because enterprises will not change their strategies voluntarily, together we are strong. Foodsharing raises awareness, and awareness is the key."

Here Tom and Hannah discuss their individual belief of what Foodsharing can achieve, where Tom questions and negates wider systemic implications, and Hannah argues that people together can achieve change though raising awareness and collective action ("*together we are strong*"). It is this interaction between members - where they provide different critical perspectives, the debate between them - which potentially contributes to raising critical awareness

of individual members. The Facebook page offered the medium through which people could engage critically with the community, its purpose, its aims, its attitude, its technologies and systemic consequences. Through this critical process people acquire a greater understanding of the cultural and social circumstances that shape their lives.

DISCUSSION

In this paper we have been concerned with understanding an activist community around the issue of food sharing and its use of social networking, drawing particularly on contributions from the first 19 months of its Facebook page. Overall, what is impressive across the data is how quickly this community grew over a short period of time and, by definition, how engaged so many people needed to be. The very emergence of Foodsharing as a grassroots initiative and the growing levels of activity both on Foodsharing.de in the food baskets exchanged, and on the Facebook page in the number of 'likes' and the active contributions and discussions, give evidence of people feeling and being empowered to act. Empowerment links to levels of individual, community and organisational empowerment [23]. The Facebook group has been a key focal point and enabler at the levels of the individual, community and organisation (here, the Association) as well, along with key roles of Foodsharing.de and public media, in enabling the emergence of a community that engaged in intertwined 'global' thinking and local acting.

Think globally, act locally

As for many communities the principle of '*think globally, act locally*' is a valid description of the interactions between individuals, the community, the Association and across the data there were strong patterns of *global-local* as well as *online-offline* interactions.

The Facebook page, representing the online world, provided the basis to form global identities and ideas that guide and frame this community. Various discussions, links to similar interventions, the links to mass media where Foodsharing is portrayed, all act as *ideological framing* processes for the community. The Facebook page also has a global-local dimension as people there connect with each other to build new local communities, which resulted in 17 new local Facebook groups. The platform Foodsharing.de acted on a national level and is provided for all Germany as a functional and operational tool. But there is also a strong local element that is the lifeblood of Foodsharing. First users search, request, accept and meet online to negotiate where and when to meet. It is then at the offline local place where the act of handing over of food takes place.

Apart from the overarching patterns of global–local, and offline–online, we could observe interactions to be *top-down* as well *as bottom-up*. This was most visible for e.g. local community building which was a bottom-up approach by engaged community members, at instances supported top-down by Foodsharing through providing advertising material. Pro-active appeals were used as encouragement

between members as well as top-down by the Foodsharing Association as posts to all members of the Facebook community. This was, for example, the case at the instances where they pro-actively promoted Foodsharing with mass media. Mass media presented narratives of *new social patterns* how the community works and direct instructions and encouragements to engage in sharing food. Thus actions happen at multiple levels, by local agents as well as the Association.

Individuals of the community enact through social, ecological and economic motives, to save food from being wasted. Through the social networking platforms, they are enabled to translate needs, values, and 'good intentions' (around eco-beliefs, concern for environment, social good, etc.) into practical offers or collection of food. They are also able to connect with others to exchange food in local geographical areas. It was also the belief in a wider systemic change and being part in a bigger intervention that encouraged people to participate. The relationship for individuals to the narratives told via various (mass) media was, according to our data, very influential. Not only the guiding values of the Foodsharing community were shown, but also how the new social pattern of meeting online to share food offline is played out in very explicit and explanatory ways. This had impact on individual encouragement to pro-actively engage in the community. It is the Facebook page that makes this engagement visible and notions of *empowerment*, the process of being motivated to act [23] were visible - such as for Michael who reported to "*finally give left over food to people in need of help*" or Cora who watched a report about Foodsharing on TV and felt encouraged to talk to her boss in the supermarket to actively change her environment. Individuals saw stories where they could identify themselves as part of a bigger movement able to change their circumstances that empower them to act. This was also discussed by Dimond et al. [4] who described the positive impact of collaborative storytelling online. Overall it is the individuals that can realize an emerging and sustained community only, individuals that need to feel agency to change their respective environments according to their values, needs and beliefs.

The **community** itself lives and is enlivened by the various interactions between individuals that fulfil different roles. Mutual understanding, helping behaviours between and within community members, engaged voluntary action, and receiving help add up to collective problem solving. The Facebook group of the community acts as a forum for direct encouragement (pro-active appeals) to act, to post questions, find answers, get support, connect to others and being pointed to most relevant resources in a just-in-time way by other people in the community responding to questions and comments. This is accompanied by tensions and hot debates about political and cultural implications of food and waste practices that characterise this community. Interactions between community members can shape the

nature of debates and support the development of critical awareness. Members discuss wider possible or non-possible systemic change through the community or question the systemic impacts of Foodsharing, as illustrated in the conversation between Tom and Hannah. Moreover the Facebook page provided a platform for people to form a community of interest, passion and activism around the issue of food waste and sharing food. It enabled people to mobilise and to act as a 'global-issue-based' community, to seed new local communities, while Foodsharing.de enabled people to form a local community of practical action to hand over food between the members.

The Foodsharing Association provided **organisational** means and technological resources to enable the emergence of this community. They provided the development and maintenance of the operational platform Foodsharing.de that made this free food sharing community possible. Through the Facebook group they were able to provide the information, materials, resources and respond directly to people, to point them to these resources, contribute to conversations, discussions through their posts, and make more powerful use of public media by linking stories through to Facebook. They could effect change, both by empowering individuals to act locally and form local food exchange groups, and empowering people more generally, even if they didn't have a local group, to change thinking, to be more aware and to act politically through giving information, stimulating discussions, pro-active appeals and establishing public discourses.

From a design perspective, there were two key characteristics that made this particular type of local-global, online-offline community work. Firstly, the platform Foodsharing.de enabled practical and operational local community exchanges. Secondly, the Facebook page facilitated broader discussions and framing processes for the community. These sites of inter-dependent global interactions then also facilitated the development of local interactions and communities, which is a crucial aspect for distributing power to local agents of change, such as the instances where local communities were built and advertised by local agents to initiate their own local Foodsharing Facebook page.

It is crucial to acknowledge for CSCW and HCI researchers who aim to design for communities that the foodsharing Association itself was the main actor who intervened and was visible as a change actor beyond the provided platforms Foodsharing.de and Facebook. The community would not have worked without their guiding initiative, help, support and intervention. However the community is still growing because different roles are offered to individuals that they can fulfil and act out. The effect of media also adds to a holistic perspective on how this community could emerge. Community policy and framing also includes rather than excludes political issues and values that are [22] or should be addressed [5, 6, 16].

Moreover the Foodsharing community is a very specific one as the nature of food and food waste is a tangible, graspable and visible one, as opposed to the invisibility of electricity or water [26], resources that are implicitly, naturally, and invisibly delivered to the household. For these reasons, some of the dimensions of local-global, online-offline [18] might be inherently part of this type of free share economy [27] community.

Limitations of our study
While this study had access to a large number of posts starting from the beginning of the Facebook group of the Foodsharing community, the findings might not reflect all members. This is because we only had material about those members who post to Facebook. We could not include the voices of members who are using Foodsharing.de but do not engage with the Facebook group. Conversely, we might also have heard voices that engage with the Facebook group but do not actually engage in food sharing.

CONCLUSION
Foodsharing is a vibrant active community of members engaging in very practical ways at local levels to exchange food, mediated by Foodsharing.de, and in more political and mutually supportive ways at a global level, using the Foodsharing Facebook group. Here we have focused on the role of the Facebook group and explored how the discussions and links provide a means for the values, motivations and growth of the Foodsharing community to play out and evolve. The key contributions are showing how participants use the social media and web platforms to facilitate fluid transitions between online-offline and local-global interactions and the empowering impact of these interactions. We draw out the interplay between individual, community, organisational levels; public relations and media, the operational platform Foodsharing.de that enables local communities and the Facebook group where global ideological framing of the community takes place. The study also points to the relationship between mass media coverage and the follow up public communication on the Facebook page, which proved to be of central importance for establishing cultural change and new institutional practices and social patterns that are oriented towards sustainability and social values.

For future work we plan to interview members of the Foodsharing community who are actively using the operational platform Foodsharing.de to gain more understanding how and why such new social patterns evolve within a community.

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