

Article

# Preventing Conflicts in Sharing Communities as a Means of Promoting Sustainability

Thomas Sabitzer <sup>1,\*</sup>, Barbara Hartl <sup>1,2</sup>, Sarah Marth <sup>1</sup>, Eva Hofmann <sup>1</sup> and Elfriede Penz <sup>3</sup>

<sup>1</sup> Competence Center for Empirical Research Methods, Vienna University of Economics and Business, 1020 Wien, Austria; barbara.hartl@wu.ac.at (B.H.); sarah.marth@wu.ac.at (S.M.); eva.hofmann@wu.ac.at (E.H.)

<sup>2</sup> Institute of Organization Science, Johannes Kepler University Linz, 4040 Linz, Austria; barbara.hartl\_1@jku.at

<sup>3</sup> Institute for International Marketing Management, Vienna University of Economics and Business, 1020 Wien, Austria; elfriede.penz@wu.ac.at

\* Correspondence: thomas.sabitzer@wu.ac.at; Tel.: +43-1-31336-6064

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**Abstract:** The sharing economy is a new promising trend with many positive outcomes on society and the environment, as it provides potential for sustainable solutions due to the reduction of resource consumption and less waste. However, research and practice show that sharing comes with its own share of problems. People often act selfishly, and in worst-case scenarios try to take advantage of others without contributing to the shared good. To achieve the higher goal of sustainability, it is important that conflicts in the sharing economy are prevented, and a setting is achieved that allows people to easily behave in a cooperative and sustainable way. The present research examines which conflicts emerge in sharing communities (study 1) and community gardens in particular (study 2), and whether regulation can prevent conflicts in large groups. Two exploratory studies were conducted. First, a qualitative study with consumers and non-consumers of the sharing economy revealed that regulatory systems are perceived as important for preventing the exploitation of other community members, but also that cooperation should not be enforced with strict controls and punishment. Rather, problems should be discussed in a democratic group setting, rules and goals should be set up together, and trust should be built. Second, a questionnaire study with community gardeners in Austria confirmed these results, and showed that trust is related to less conflict in community gardens, while harsh forms of regulation are related to a potential for greater conflict. Additionally, the results indicate that soft forms of regulation are related to fewer relationship and task conflicts, better conflict resolutions, a high sense of community, and greater trust in the community. We then discuss how these findings can be used to regulate sharing economy activities and give limitations and directions for future studies.

**Keywords:** sharing economy; sustainability; community gardens; conflicts; regulation

## 1. Introduction

Due to the economic crisis and a higher awareness for environmental problems in society, consumers have started to build new consumption habits (cf., [1]). In recent years, a general change in values was observable. Public concerns for air pollution, climate change, and resource scarcity are increasing, and have found their way into the minds of consumers [2]. Therefore, sustainable ways of consumption are getting more popular and the sharing economy as a sustainable alternative gets shifted in the center of consumer's attention [3]. The sharing economy can be defined as: "consumers granting each other temporary access to underutilized physical assets ("idle capacity"), possibly for money" ([4],

pp. 4–5), and stands for a variety of different forms of sharing whereby access to goods replaces the need to possess goods [5–7]. Examples of the sharing economy are car and ridesharing via Drivy [8] and BlaBlaCar [9], accommodation sharing through websites such as Airbnb [10] and Couchsurfing [11], community gardens [12], and many other forms of sharing. Besides consumer-to-consumer (c2c) sharing activities, where a platform organizes the sharing activity, there are also self-regulating communities that organize the shared good without the need of an intermediary [13]. Therefore, the sharing economy includes both forms of sharing—c2c sharing activities as well as non-profit sharing economy activities—whereby communities, societies, clubs, or private citizens organize the consumption of a shared good [14]. In this paper, these forms of sharing are called sharing communities. An example would be a community garden, where the gardeners (consumers) share a piece of land that often otherwise would not be used (idle capacity). They use the garden temporarily, and additionally share their gardening tools. Irrespective of which type of sharing is addressed, they all have a promoted consumption pattern in common that could be a new path to sustainable development [15].

It is widely assumed that the sharing economy has a positive impact on the environment and helps shrink carbon footprints due to secondary markets that reduce demand for new goods [16]. It is also considered that the excessive consumption of natural resources is a major cause of environmental change [17], and the sharing of resources could make an important contribution to the preservation of natural resources, if individual motivation to maximize one's own well-being becomes less important [18]. Sharing communities such as community gardens, where a piece of land is farmed together by a group of people [19], can especially make a valuable contribution to food sustainability [20], sustainable consumption, and development, as well as facilitate a movement against the disposable society [21,22]. As a conclusion, sharing communities grant the opportunity to share goods with strangers, avoid overconsumption, and prevent the exploitation of nature; therefore, they foster sustainability. Many authors have found that most people act selfishly, mainly engaging in the sharing economy to lower costs [7,23,24], and that sustainable and environmental concerns are not the main reasons why people participate [25,26]. Nevertheless, the sharing economy holds the potential for positive environmental outcomes such as waste reduction because fewer goods are produced [22] and as long as sharing actually works, a valuable impact of the sharing economy can be expected [27,28].

However, sharing is not a new phenomenon. Humans always shared goods with family, friends, and neighbors [29]. The new issue about the sharing economy is that humans have started to share goods with strangers, and digital platforms make sharing among people who do not know each other easier and more natural [16,30]. The rapid technical development of the World Wide Web is a driving force of the sharing economy and owes its breakthrough to web 2.0 services that enable collaborative interaction via websites between individuals, independent of where they live [5,31]. Social networks help to match supply and demand, and therefore facilitate peer-to-peer transactions [32]. Many start-ups include such peer-to-peer models in their services [33], and use technical tools such as social media to facilitate trust and reduce the fear of strangers [34], which has strongly contributed to the emergence of the sharing economy [35].

Nevertheless, offline sharing economy activities also exist that are mostly independent of technical services such as community gardens where no internet strangers, but rather mostly unknown residents get together to take care of a piece of land, and therefore build social capital [36]. Hence, we value the technological developments as additional drivers of the sharing economy. However, the current article focuses on community gardens, which sometimes use the internet and social media for coordination tasks, but mostly participate in the sharing economy offline.

However, sharing with strangers also entails a high potential for conflicts, especially if the shared resources are quite intimate, such as sharing one's home or growing food together. Therefore, sharing communities must deal with problems and challenge its members with difficult situations. In the worst case, some people try to take advantage of others who cooperate and share their goods, and benefit without contributing to the community [7]. A sharing economy activity can only survive if it overcomes

the challenge of building a social community and encourages users to use its service [37]. Hence, it seems important to find out which factors are related to community building and strong group cohesiveness. It is assumed that occurring conflicts in a community can hinder the process of building group cohesion, which can lead to less satisfaction and participants leaving the group [38]. In the worst case, this could end in a complete disbanding of the community and therefore the breakdown of the sharing economy activity [39]. To prevent conflicts and encourage cooperation, regulatory measures could be introduced.

Therefore, the contribution of this paper is to show how a sharing economy activity should be regulated to ensure cooperative and sustainable behavior and study interactions in sharing communities to identify structures that reduce conflict frequency. By asking consumers and non-consumers of shared goods how regulation should be implemented in sharing communities, and by investigating conflicts and regulation in community gardens in Austria, this paper aims to answer the following research questions:

In the first step, we investigate the perception of regulation in sharing communities and the opinion how a sharing community should be regulated (RQ1). In the second step, we explore which conflicts occur in community gardens (RQ2) as an example of a sharing economy activity, whether and how they are solved (RQ3), and whether regulatory mechanisms are related to the occurrence and frequency of conflicts (RQ4). By answering these questions, the paper provides a guideline to prevent conflicts in sharing communities and gives advice on how to minimize and cope with them to enable people to behave in a sustainable way.

In the next section, the basic underlying concepts of the described research questions are explained. Afterwards, two empirical studies investigating these research questions are presented. In the last section, we give recommendations as to how our findings can be implemented in practice and how they advance existing research by investigating social interactions concerning conflicts and regulation in sharing communities in order to achieve the goal of sustainability.

## 2. Conceptual Background

### 2.1. Sharing Communities Fostering Sustainable Development

Sharing communities can be seen as a social way of sharing goods, where participants seem to feel more responsible for the community and its members [26]. Communities that actively work together develop resilience that enables the group to respond to changes in the environment. This resilience can be seen as an important indicator of social sustainability [40]. Sustainability in general is a complex construct with the ultimate goal of continuously satisfying human needs in a global framework [41]. Some authors only focus on some parts of sustainable development such as ecological aspects [42,43]; others try to completely describe all of the aspects of the construct 'sustainability' by developing models with all of the underlying concepts, relations, dynamics and complexities [44]. Regarding the literature of sustainability, three aspects seem to be most common: ecological, economic, and social sustainability [45,46]. We assume that sharing communities hold the possibility to contribute to all of these aspects. One example of a sustainable sharing community that has the potential to facilitate sustainable development in any of these circumstances is community gardens, which offer a relevant platform for learning the multidimensional aspects of sustainability, such as ecological, social, economic and food sustainability [20].

A community garden is defined as a piece of land in an urban, suburban, or rural setting cultivated by a group of people [19]. Usually, a community of locally resident members who use the land for growing crops or flowers takes care of these gardens [47]. Community gardens vary in their format, from one communal plot to joint spaces managed by the whole community, up to many individual plots, where members have their own garden patch or share it with other members [48]. Over the last few years, more and more community gardens have emerged around the world. In Vienna, Austria, these gardens are promoted in order to increase the quality of life on

an individual, social, sustainable, political, and educational level [49]. Community gardens seem to bolster social health and community cohesion [50], and give people a possibility to cope with the pressures of daily life, provide them with a place of support, as well as give them self-esteem and social involvement [51,52]. Participation in community gardens leads to natural restoration, strengthens community building and social interaction, and therefore contributes to sustainable development in various aspects [47,53]. Additionally, the use of public urban spaces for parks and community gardens is linked to environmental and social justice, which can also be seen as contributory factors for sustainable development [54]. Socially disadvantaged people who live in environmentally unfriendly areas get the opportunity to spend time in a pleasant surrounding [55], consume fresh food, enjoy nature, and profit in terms of health and financial benefits [56]. As such, community gardens contribute to ecological sustainability, social sustainability [55], food sustainability [57], and additionally to economic sustainability if community gardens are used for research, development, design, e.g., for community science or innovative gardening technology [58]. Furthermore, consumers are getting more and more interested in food production and consumption, which influences their considerations about purchase intentions [59]. Despite the public opinion that it is difficult for ordinary citizens to procure sustainable food products because of a lack of local grocery stores or farmers markets [60], community gardens offer a promising opportunity for sustainable food production and procurement in urban regions.

## 2.2. Conflicts and Regulation in Sharing Communities

Regardless of the positive aspects of community gardens, sharing communities often must deal with conflicts. In an extreme case, some people try to exploit the others who cooperate and share their goods, without committing something to the community at all [7]. Hence, any example of the sharing economy is a social dilemma, a situation in which an individual's interest is in conflict with the interest of the community [61]. Considering community gardens, a gardener could maximize her or his profit by harvesting the shared resources without contributing to them [62]. However, the suggestion to use sanction systems to prevent uncooperative behavior should be regarded with caution. The use of control and punishment could strengthen the assumption that others act in their own self-interest, which could undermine initial trust in others [63]. Trust is a foundational ingredient for facilitating human interaction and cooperation; therefore, it plays an important role for sharing activities. Trust is supposed to be a driving factor of the sharing economy [25,26]. Additionally, it is seen as very important to profit from conflicts without suffering from interpersonal dispute, which is more likely to occur when people distrust each other [64].

If conflicts emerge in an increasing number and the majority of community members acts selfishly, it will negatively affect the entire community, and in consequence each group member [65]. Therefore, it is important that the community has the competence to identify potential conflicts, adequately deal with them, and prevent conflicts a priori, as unresolved intragroup conflicts often lead to poorer performance, less group cohesion, and in the worst case to disintegration [39].

Intragroup conflicts can generally be defined as perceived incompatibilities between at least two parties [66]. Conflicts arise when these parties are pursuing contrary goals and interact with each other [67]. According to social conflict theory [68,69], conflicts within groups are rational, to the effect that there is always a trigger, such as different views regarding a task or interpersonal incompatibilities that cause a conflict [70]. Interpersonal contradictions between members of a social group often lead to relationship conflicts. This form of conflicts usually includes tension, animosity, and annoyance. In contrast, a task conflict arises when group members have disagreements, different views, or conflicting ideas regarding an ongoing task [71].

It is well known that conflicts have negative impacts on group performance and satisfaction [72–74] and can be stressful for those being involved, resulting in less well-being [75]. Relationship conflicts can especially severely reduce performance and efficiency on individual and on group level [71]. If such conflicts occur, the group may be more concerned about solving the conflict

rather than undertaking its actual business [76]. In contrast, task conflicts hold the potential to make problems visible and thus enable groups to constructively deal with them. This can result in benefits if members share the same goals and have a high learning orientation [77]. Therefore, it is necessary to consider the type of conflict. Over time, conflicts that arise out of the incompatibilities of an ongoing task may evolve into a relationship conflict and lose their positive potential [78]. Thus, it is important to understand the effects that cause the development of a task conflict into a relationship conflict and prevent its transformation [70]. Conflict management style, for instance the application of policies, can be regarded as a moderating factor that influences the progress from task to relationship conflict [79]. The literature also indicates that trust among group members reduces the chance of task conflicts developing into relationship conflicts, and shields the community from negative effects on group performance and satisfaction [64,80].

In the current research, we follow the often-used distinction between trust based on processes that are automatic–affective, and trust based on processes that are cognitive–rational [81]. Thereby, we draw on Castelfranchi and Falcone’s [82] conceptualization of trust as either reason-based trust and implicit trust. Reason-based trust is based on rational considerations, shared goals, dependency, internal factors, and external factors. Implicit trust can be defined as an automatic, unintentional reaction that originates from associative and conditioned learning processes [82].

Apart from trust, the degree of closure, structure, and transparency influences conflict potential and the probability for a solution between the interacting parties [83]. By formalizing this structure, people obtain the possibility of better understanding the agreements in their relationships [84]. A way to provide such a structure could be the use of social regulation in form of rules. Rules and goals must be transparent for each party, and should therefore reduce the potential and frequency of conflicts. Furthermore, regulation establishes an environment where conflicts can be carried out in a beneficial way, and offers opportunities and guidelines to cope with emerging conflicts, which should ensure positive outcomes for the community and its members [85]. To deal with conflicts, it seems necessary to introduce some kind of regulation in sharing communities to make people behave cooperatively, and additionally prevent several other problems that may occur, such as asymmetric information and exploitation [86].

Social regulation can be defined as the capability of an entity to shape others’ behavior, attitudes, or beliefs [87,88]. In the literature, several sources of regulation can be distinguished. We use the definition of Hofmann, Hartl and Penz [13], who already used these concepts of social regulation in a sharing economy setting. In their definition, a sharing economy activity can use several types of regulation at the same time, such as for instance sanction systems for controlling and punishing unwanted behavior (coercive power), but also the use of rewards for wanted behavior (reward power) [89], comparable to operant conditioning [90]. Additionally, sharing economy activities have the possibility of focusing on legitimacy and justice [91]; they try to support consumers, provide a professional service as an expert, hand out relevant information, and act as a representative for the sharing economy activity to ensure cooperative behavior (legitimate power) [13]. Therefore, an entity in the sharing economy can use regulations such as controls and punishment (harsh forms) and/or legitimate forms (soft forms) of regulation to ensure cooperation [92].

Regulation in the sharing economy is still quite uncommon, especially when the good or service is not provided by a company [32]. In such cases, it is important that the community behind the shared good acts autonomously and takes self-regulation into account [93]. The research shows that consumers are generally in favor of control mechanisms, as they believe that this ensures fair usage behavior [26]. In particular, this should be the case if people do not trust other group members and suspect them to not behave collegially [94]. Furthermore, in sharing communities where policy and legal monitoring instances are usually very uncommon, people would support the introduction of a regulatory system to ensure cooperation between members [62]. Regulatory systems can offer guidance for different situations, and help people to behave in a way that leads to a benefit for the whole community. How communities deal with conflicts depends on the organizational structure

of the group. We assume that sharing communities use distinctive types of regulation that can have different effects on cooperation and conflicts within a community.

As the scientific literature on regulation in the sharing economy is still rare, especially regarding the perception of users and potential users of the sharing economy [62], the current article starts with an exploratory approach by examining the attitude of consumers and non-consumers of sharing activities on regulation and trust in focus groups. Building on these results, an exploratory survey was conducted investigating the level of regulation and trust in existing community gardens as one example of a sharing community. Therefore, in this paper, we deal with the question of what kind of regulation can be used to create conditions for cooperation and thus promote sustainable behavior, as practiced in community gardens. To answer these questions, two studies were conducted, which will be described in the next section.

### 3. Materials and Methods

#### 3.1. Study 1: Perception of Regulatory Measures in Sharing Communities

##### 3.1.1. Participants

Two focus group discussions were conducted. A total of 13 participants (10 females,  $M_{\text{age}} = 29.31$  years,  $SD_{\text{age}} = 8.58$ ) were recruited. The sampling procedure focused on young and well-educated participants as a target group, because they represent one of the main user groups of sharing economy activities [95,96]. Additionally, participants were assigned to one of the two focus groups according to their self-reported experience level with sharing economy activities, resulting in two groups, one consisting of seven (highly experienced) and the other of six (lowly experienced) participants. They were hired online via social media as well as via personal recruitment.

The majority of the nine participants held a university degree, the other four participants had a high school degree. For more detailed information about each participant, see Table 1. The focus groups took place in July 2017 on two consecutive days.

**Table 1.** Participants of focus group discussions.

Participant	Experience Level	Gender	Age	Education Level
1	high	female	32	university degree
2	high	female	25	university degree
3	high	female	31	university degree
4	high	female	22	high school degree
5	high	female	38	university degree
6	high	male	27	university degree
7	high	female	25	university degree
8	low	male	25	university degree
9	low	female	27	university degree
10	low	female	55	high school degree
11	low	male	27	high school degree
12	low	female	24	high school degree
13	low	female	23	university degree

##### 3.1.2. Method and Procedure

For the focus groups, a semi-structured guideline was used to make sure that on one hand participants could talk freely and that spontaneously arising discussions were possible, and that on the other hand, all of the important aspects of sharing communities were covered. The guideline was based on motives to engage in the sharing economy, as well as on the perception of trust and regulation in the sharing economy.

After welcoming the participants, they were told about the recording and filming of the focus groups, and signed an agreement. At the beginning, they were required to talk about their experience

with the sharing economy, either about their own participation in one or more sharing economy activities, or about their knowledge through media or similar sources. Next, it was explained how sharing communities can be distinguished from other forms of the sharing economy, to ensure that everyone would be talking about the same topic. A graphical model showing people who share goods in a community was displayed and explained with the following:

*“In this form of the sharing economy, the owner of the shared good is the community. The good is offered within the community. The users are members of the community who use the good. Take the example of car sharing. Thereby, a community owns the car. The community organizes the car for the users. Car sharing is just one example; other goods besides the car are conceivable, such as apartments, tools, books, and so on.”*

The participants were then asked about (possible) reasons to engage or to not engage in a sharing community (e.g., *“What are the reasons for using it?”*, *“What are possible reasons why people decide against using this form of the sharing economy?”*) as well as the issue of trust (e.g., *“Would you trust the owner/other users of the product? Why (not)?”*, *“What role does the trust in the owner/other users play for you?”*) and regulation within such sharing communities (e.g., *“Does this mean that this form of the sharing economy also needs rules?”*, *“What can be done to help users to comply with these rules?”*). After the discussion, all of the participants’ socio-demographics and their experience level with different offers within the sharing economy were assessed. Both focus group discussions took about 90 minutes, and each participant was remunerated with €50.

The recordings of the two focus group discussions were transcribed and analyzed following a template analysis [97]. The aim of the analysis was to identify and categorize statements about rules, controls, sanctions, and rewards that either should or should not be implemented in sharing communities. Trust issues within a community were not part of the analysis, but were considered when they were linked to regulation in a statement. Two researchers coded the text. In the case of disagreement, text passages were discussed until both researchers reached a consensus. These parts of the transcript were then organized into clusters, and their relationship to each other was defined, resulting in a final coding scheme.

### 3.1.3. Results

The template analysis with the aim of showing what kind of regulation mechanisms are desirable or not in a community revealed that regulation is an important aspect of communities to some extent. Although most participants agreed on the necessity of certain rules, they tend to support liberal regulation and democratic structures to achieve cooperation of all members in a community, instead of stiff regulation, such as control, sanctions, and rewards. A few argued that rules can also lead to disadvantages, such as inflexibility, as participant #3 states:

*“[ . . . ] that reminds me of a community garden. In my opinion, it would be very counterproductive if there would be very strict rules. For example, who has to water when. There’s no flexibility. Everybody should talk to each other and see how everything works out and so on. [Rules] would be very negative in my opinion.” (#3)*

Furthermore, it was argued that a common goal of all community members leads every member to act in a way in which the community can reach its goal without putting up rules. Participant #3 continues:

*“[ . . . ] if there is a common goal you want to reach then this is a process [ . . . ]. And this goal is very strong – it’s something collaborative – therefore you don’t need rules. Because the both of us want the same and that’s enough to be able to organize the community.” (#3)*

Most participants supported a presence of rules that regulate the interaction with each other, instead of very detailed prohibitions and requirements. This was also argued by stating that there

are rules in a society anyway, and state laws that count for the community and provide security for worst-case scenarios, even if the rules in a community are more liberal than strict, and more general than detailed. Furthermore, most participants agreed on a democratic process to set up rules. In this context, participant #2 also addressed the values of the community:

*“The rules have to be set up together. They have to be based on things and values that are comprehensible and reasonable for every participant.” (#2)*

Concerning the exertion of control, the opinions of all of the participants were homogenous. They argued against regular checks, as these lead to hierarchy and can harm the atmosphere. Furthermore, control was associated with low trust and a low sense of community. By looking at a few statements dealing with trust in connection with regulation, the participants stated that trust is a very important issue in a community, but it is also hard to build at the same time. Also, trust correlates with the rules; participant #4 states:

*“Depending on the rules that are set, more or less trust is needed. But trust is a very strong factor for me to either engage or not.” (#4)*

When it comes to the importance of sanctions, one factor was mentioned that seemed to be of significance to all of the participants. While there should not be any sanctions when someone makes a mistake, a willful damage of the community (e.g., stealing, damaging something on purpose) should be sanctioned. While some participants argued that this should lead to the person’s exclusion from the group, others were not sure if an exclusion would be fair. Participant #11 puts it:

*“An exclusion is somehow—I don’t know. When you already financially invested in the group to make sure the community can develop in the first place, then an exclusion is really no option. Saying that someone isn’t allowed to use the car for a certain period of time or something like that. But that would be really unfair.” (#11)*

However, all of the participants agreed that in such a case, sanctions, especially when an exclusion is possible, should again be decided democratically, taking the opinions of all of the members into account.

Rewards seem to be of less importance; only one participant argued that a reward system would be reasonable when a community has many members and needs people that deal with administrative tasks.

In both focus group discussions, participants also came up with possibilities other than rules, controls, and sanctions to make sure that the community and its members are doing well and prevent conflicts. The importance of communication was often mentioned. On the one hand, some participants argued that rules are hard to set up, as certain situations cannot be foreseen at the point of time when a community is forming and working out rules. Therefore, they think that a good communication between all members is essential, as participant #10 states:

*“You never know what could happen and how to exactly manage these things. If there is something wrong with the communication between the members of the community, the community won’t last long.” (#10)*

The issue of communication also appears in connection with the prevention of conflicts. Good communication is seen as a possibility to make sure every member understands what the consequences of uncooperative or selfish behavior will have for the other members, as participants #13 and #12 describe:

*“[ . . . ] not only developing sanctions but also telling the whole group how uncooperative behavior can harm someone else personally.” (#13)*

*“Conflicts arise when the communication is bad.” (#12)*

### 3.2. Study 2: Conflicts and Regulation in Community Gardens

#### 3.2.1. Participants

Getting data from community gardens is difficult. Therefore, a convenience sample was drawn from 94 members of community gardens. The questionnaire was completed by 86 participants (32 men,  $M_{\text{age}} = 43.59$  years,  $SD_{\text{age}} = 11.76$ ). This sample size specifically allows for exploratory analysis. Most participants ( $N = 54$ ) held a university degree; 26 participants a high school degree, and 11 had other degrees. Most of them reported an income between 1000–2000 Euro (41 people; less than 1000 Euro: 15 people; 2001–3000 Euro: 28 people; 3001–4000 Euro: three people; more than 4001 Euro: three people), and lived in a city with more than 300,000 citizens (73 people; less than 5000: seven people; between 5000–300,000: 13 people). Gardeners from 30 different community gardens from four different federal states of Austria (Lower Austria, Styria, Tyrol, Vienna), comprising the east (Vienna and Lower Austria), and the west (Tyrol), as well as urban (Vienna), and rural regions (Lower Austria, Tyrol), participated in the study. An overview of the characteristics of the gardens is shown in Table 2. Most of the community gardens had between 31–50 members, and provide own areas for their members ( $N = 60$ ). The majority of members reported to visit the garden several times a week ( $N = 57$ ) to fulfill collaborative tasks in the garden every few weeks ( $N = 24$ ), but also additionally grew plants at home on the balcony or elsewhere apart from the community garden ( $N = 79$ ).

**Table 2.** Characteristics of community gardens.

		N	M (SD)
Number of members	Less than 10	2	
	11–20	16	
	21–30	14	
	31–50	42	
	More than 50	20	
Duration of membership	In months		25.97 (19.01)
Frequency of visits	Daily	3	
	Several times a week	57	
	Once a week	26	
	Every few weeks	6	
Estimated duration of visits	In minutes		65.27 (62.49)
Frequency of collaborative tasks	Several times a week	21	
	Once a week	19	
	Every few weeks	24	
	Once a month	10	
	Less than once a month	13	
	There are no common tasks	4	
Own area	I have an area for myself	60	
	I share an area with others	33	
	Every part of the community garden belongs to every member	1	
Grow plants apart from the community garden	Yes	79	
	No	15	
Ownership	All plants belong to me–us		47.23 * (19.01)
	All equipment belongs to me–us		65.14 * (11.76)
	The harvest belongs to me–us		42.76 * (19.53)

\* Scale from 10 (me) to 70 (us).

### 3.2.2. Method and Procedure

A link to an online questionnaire and paper-pencil versions of the questionnaire were distributed to several community garden members using the snowball technique. Participants completed the questionnaire comprising the information of which community garden they belonged to, quantitative measures, and an open question asking participants to describe the last conflict that they experienced in their community garden.

In the beginning, the participants were asked to provide information about their community garden, e.g., how many members the garden had (see Table 2). Afterwards, participants had to fill in the first part of closed questions assessing implicit trust and reason-based trust in the community of the garden, as well as perceived harsh forms of regulation, soft forms of regulation, and the reward power of the community (adapted from Hofmann, Hartl, and Penz [13]), using Likert scales, ranging from 1 (totally disagree) to 5 (totally agree). Furthermore, scales were used assessing relationship conflicts, task conflicts, and conflict resolution within the garden community (adapted from Jehn [71]).

Participants were then asked to describe the last conflict they experienced in their community garden. They had to indicate the persons involved (“me”, “other members of the community garden”, “leader of the community garden”, “external people”) and describe the initial situation, the conflict as such, whether the conflict was solved, and if so, how it was solved (open questions).

Afterwards, participants were asked to describe the last conflict they experienced in their community garden. They were provided with questions concerning their sense of community (adapted from Peterson, Speer, and McMillan [98]), their general trustfulness (adapted from Cattell [99]), *risk seeking* (adapted from Colquitt, Scott, Judge, and Shaw [100]), materialism (adapted from Richins [101]), and greed (adapted from Seuntjens, Zeelenberg, Van de Ven, and Breugelmans [102]) (closed questions, using Likert scales ranging from 1 (totally disagree) to 5 (totally agree)). The questionnaire ended with socio-demographic questions.

Factor loadings for all of the constructs are displayed in Table A1. We decided to include all of the items with loadings larger than 0.32, which is equivalent to an overlap of about 10% of variance with the other items in that factor, and is seen as a good rule of thumb for the minimum factor loading [103,104]. Due to weak loadings, one item of reason-based trust (“I trust the community, because there is no alternative.”) and one item of soft forms of regulation (“The members of the community garden should behave conscientiously toward the community, especially if they have been negligent in the past.”) were deleted. In addition, the estimates for average variance extracted (AVE) were calculated for each construct and compared with the squared correlation estimates of the other constructs (see Table 3), which is a common method to assess for discriminant validity [105]. All the AVE estimates were larger than 0.50 and therefore satisfying except for materialism (AVE = 0.43). Comparing AVE estimates with squared correlation coefficients discriminant validity is sufficiently established. Finally, a reliability analysis of all of the scales was satisfying ( $\alpha$  ranging between 0.61–0.93, see Table 3).

Table 3. Correlation between scales.

	$\alpha$	M (SD)	HR	SR	RP	IT	RBT	RC	TC	CR	SoC	TF	RS	Mat	GR
Harsh regulation (HR)	0.85	1.68 (1.05)	<b>0.78</b>	−0.29 **	−0.12	−0.18	−0.29 **	0.32 **	0.25 *	−0.04	−0.28 *	−0.15	0.20	0.17	0.17
Soft regulation (SR)	0.83	5.07 (1.02)	0.09	<b>0.52</b>	0.52 ***	0.19 †	0.53 ***	−0.31 **	−0.22 *	0.23 *	0.58 ***	0.21 †	−0.02	0.12	0.06
Reward power (RP)	0.61	4.35 (1.28)	0.02	0.27	<b>0.74</b>	0.14	0.35 **	−0.16	−0.17	0.18	0.50 ***	0.19 †	−0.08	0.22 *	0.17
Implicit trust (IT)	0.67	4.62 (1.48)	0.03	0.04	0.02	<b>0.61</b>	0.50 ***	−0.32 **	−0.42 ***	0.01	0.06	0.30 **	0.00	0.06	−0.12
Reason-based trust (RBT)	0.80	5.23 (1.11)	0.09	0.28	0.12	0.25	<b>0.53</b>	−0.32 **	−0.49 ***	0.22 *	0.43 ***	0.29 **	0.09	0.15	0.07
Relationship conflict (RC)	0.91	2.74 (1.16)	0.10	0.10	0.03	0.10	0.10	<b>0.79</b>	0.67 ***	−0.15	−0.20 †	−0.14	0.10	0.07	−0.03
Task conflict (TC)	0.86	3.27 (1.19)	0.06	0.05	0.03	0.18	0.24	0.45	<b>0.71</b>	0.05	−0.12	−0.15	−0.04	0.09	−0.01
Conflict resolution (CR)	0.87	5.72 (1.44)	0.00	0.05	0.03	0.00	0.05	0.02	0.00	<b>0.81</b>	0.49 ***	0.33 **	0.03	−0.11	−0.11
Sense of community (SoC)	0.93	5.47 (1.30)	0.08	0.33	0.25	0.00	0.19	0.04	0.01	0.24	<b>0.66</b>	0.30 **	0.01	0.03	0.09
Trustfulness (TF)	0.86	5.22 (1.10)	0.02	0.05	0.03	0.09	0.08	0.02	0.02	0.11	0.09	<b>0.71</b>	0.03	−0.08	−0.11
Risk-seeking (RS)	0.78	3.10 (1.21)	0.04	0.00	0.01	0.00	0.01	0.01	0.00	0.00	0.00	0.00	<b>0.62</b>	0.02	0.15
Materialism (Mat)	0.75	2.44 (0.94)	0.03	0.01	0.05	0.00	0.00	0.00	0.01	0.01	0.00	0.01	0.00	<b>0.43</b>	0.63 ***
Greed (GR)	0.80	1.97 (0.93)	0.03	0.00	0.05	0.02	0.00	0.00	0.01	0.01	0.01	0.01	0.02	0.39	<b>0.51</b>

Note: Partial correlations (controlling for the source: online questionnaire vs. paper-pencil questionnaire) are above the diagonal, squared correlations are below the diagonal, and AVE estimates are presented on the diagonal, †, \*, \*\*, \*\*\* represent statistical significance at the  $p < 0.10$ ,  $p < 0.05$ ,  $p < 0.01$ ,  $p < 0.001$  levels, respectively.

### 3.2.3. Results

To answer the research questions regarding the relationship between conflicts/conflict resolution and independent variables, a multiple regression was used, with the aim of identifying the possible predictors for conflict frequency and conflict resolution within a community. Multiple regression is one of the most commonly used statistical techniques in psychology and social sciences, and makes it possible to analyze relationships between multiple predictor variables and one criterion variable [106]. As independent variables, different kinds of regulation (harsh forms of regulation, soft forms of regulation, reward power), trust (implicit trust, reason-based trust), as well as sense of community, which can be defined as the feeling of belongingness to a group in terms that members matter to each other and the belief that the needs of the members are fulfilled through their commitment to the community [98,107], trustfulness—trust in other people in general and therefore the capacity to take a risk [99,108], risk seeking—the tolerance for risks and uncertainty or the willingness to take a risk [100], as well as demographic variables such as gender, age, and income level were included in the regression analysis. Altogether, three models were calculated: respectively, relationship conflicts, task conflicts, and conflict resolution as dependent measures; for details, see Table 4.

**Table 4.** Regression models for relationship conflicts, task conflicts, and conflict resolution.

Predictor	Relationship Conflicts	Task Conflicts	Conflict Resolution	Collinearity	
	$\beta$	$\beta$	$\beta$	Tolerance	VIF
Harsh regulation (HR)	0.22 <sup>t</sup>	0.20 <sup>t</sup>	0.11	0.78	1.28
Soft regulation (SR)	−0.23	0.03	−0.06	0.48	2.07
Reward Power (RP)	0.08	−0.06	−0.08	0.58	1.71
Implicit Trust (IT)	−0.26 <sup>*</sup>	−0.22 <sup>t</sup>	−0.04	0.63	1.59
Reason-based Trust (RBT)	−0.03	−0.38 <sup>**</sup>	0.04	0.49	2.04
Sense of community (SoC)	−0.02	0.15	0.49 <sup>**</sup>	0.51	1.97
Trustfulness (TF)	0.03	0.03	0.26 <sup>*</sup>	0.83	1.21
Risk-seeking (RS)	0.06	−0.04	0.00	0.89	1.13
Gender	0.16	0.12	0.05	0.83	1.2
Age	−0.01	−0.04	0.05	0.82	1.23
Income	0.18 <sup>t</sup>	0.06	−0.16	0.88	1.14

Note: <sup>t</sup>, <sup>\*</sup>, <sup>\*\*</sup> represent statistical significance at the  $p < 0.10$ ,  $p < 0.05$ ,  $p < 0.01$  levels, respectively. VIF = Variance inflation factor.

The results of the first regression model explained 26% of the variance of the relationship conflict scale ( $R^2 = 0.26$ ,  $F(11,72) = 2.30$ ,  $p = 0.018$ ). Implicit trust ( $\beta = -0.26$ ,  $p = 0.049$ ) had a significantly negative effect on relationship conflict frequency, whereas harsh forms of regulation ( $\beta = 0.22$ ,  $p = 0.057$ ) revealed a positive tendency. These results indicate that implicit trust is related to less such conflicts, and that controls and punishment are related to more relationship conflicts in community gardens.

A slightly different picture was found for task conflicts. The results of the second regression model explained 33% of the variance of the task conflict scale ( $R^2 = 0.33$ ,  $F(11,72) = 3.21$ ,  $p = 0.001$ ). Reason-based trust ( $\beta = -0.38$ ,  $p = 0.007$ ) had a significant negative effect on task conflict frequency, and additionally, implicit trust ( $\beta = -0.22$ ,  $p = 0.072$ ) showed a negative tendency. Again, harsh forms of regulation ( $\beta = 0.20$ ,  $p = 0.075$ ) had a positive tendency on task conflict frequency. These results indicate that reason-based as well as implicit trust are related to less such conflicts, and that controls and punishment are related to more task conflicts in community gardens.

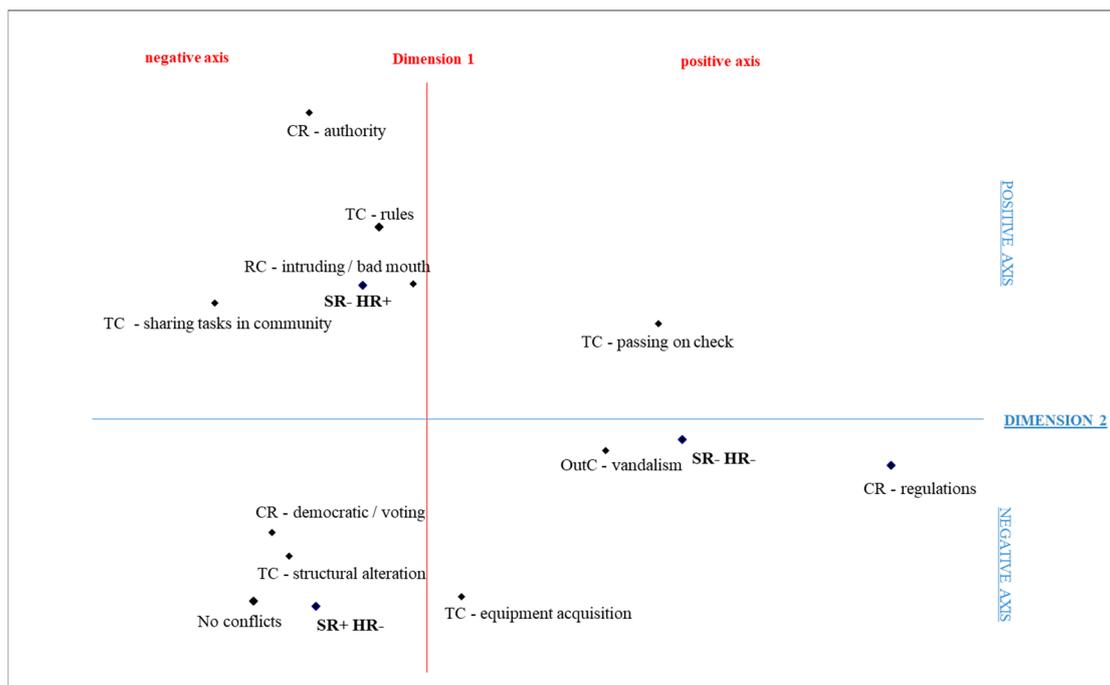
For conflict resolution, the regression model explained 32% of the variance of the conflict resolution scale ( $R^2 = 0.32$ ,  $F(11,72) = 3.07$ ,  $p = 0.002$ ). Sense of community ( $\beta = 0.49$ ,  $p < 0.001$ ) as well as trustfulness ( $\beta = 0.26$ ,  $p = 0.017$ ) had a significantly positive effect on conflict resolution within the community. These results indicate that a strong attachment to their garden community and trust within other people in general is related to a better conflict resolution style.

To analyze how perceived regulation in community gardens is related to the type of conflict described in an open question in the survey, a correspondence analysis was conducted [109]. Participants described these conflicts and the corresponding resolution of these conflicts, for example:

*“The shelter for gardening tools, etc. should be extended. Different variants were worked out and sent to all members with photos, [a] description of advantages and disadvantages, and so on. In the subsequent discussion at the meeting, no solution was achieved. It was agreed on a voting procedure in the meeting. Again, all information was sent out and it was voted via Doodle. The solution was binding for all.”* (task conflict with democratic conflict resolution)

*“A member insulted other members and made gross violations. This led to strife, escalation, insecurity and fear of the threatened members. It was resolved by talks and a vote of exclusion”* (relationship conflict resolved through democratic voting and communication)

The correspondence analysis (ANACOR procedure, normalization method “canonical”) is an exploratory method for the graphical display of categorical data, which allows the simultaneous treatment of variables [110], in this case between columns (type of perceived regulation in the community gardens) and rows (19 categories describing different conflicts) of a contingency table. Associations that are related to one another are spatially close to each other in the figure. The correspondence analysis yielded a two-dimensional solution (see Figure 1).



**Figure 1.** Correspondence analysis of perceived regulation and conflicts in community gardens.

The analysis starts with a table of frequencies, where in the current analysis, the rows represent the different described conflicts and the four columns represent the groups’ high and low harsh forms of regulation (HR+/HR−) and high and low soft forms of regulation (SR+/SR−). For these two grouping variables, we split the sample (median) into two groups (high/low) per variable, resulting in four groups. Two dimensions explained 84.8% of the variance to the overall solution. A third dimension explained an additional 15.2% of variance, but will not be considered since the first two dimensions explain nearly 85% of the variance. The overall spatial variation (total inertia) was 0.58, meaning that the correlation between groups (columns) and conflicts (rows) was high.

Column and row points that significantly contribute to the two dimensions are displayed and discussed in the following. Therefore, 11 different conflict types and resolutions and three regulation conditions were included in the analysis.

Dimension 1 can be described by community interests and a long-term orientation with conflict resolution that builds on commonly agreed conclusions. In more detail, dimension 1 is built up by (a) perceptions of no regulations (no soft regulation, or SR–, and no harsh regulation, or, HR–), long-term task-related conflicts such as “task conflict (TC)—passing on checks”. The respective conflict resolution is “regulation”; and (b) community-related conflicts, such as “TC—sharing tasks in the community”, and solving these through “confliction resolution (CR)—democratic means, such as voting”.

Dimension 2 can be interpreted as differentiation between two different forms of perceived regulation, i.e., soft and harsh forms with respective conflicts (community, relationships, and task-related conflicts) and conflict resolutions. Dimension 2 distinguishes between (a) the perception of high harsh (low soft) forms of regulation that are associated with conflicts arising from relationships such as “relationship conflict (RC)—intruding/bad mouth” and “TC—rules”. The respective resolution is through “authority” and (b) perception of high soft (low harsh) forms of regulation that are associated with conflicts—if conflicts are perceived at all (no conflicts)—relating to tasks such as “TC—acquisition of equipment” and “TC—structural alteration”. Conflict resolution happens through “CR—democratic means, such as voting”.

Therefore, study 2 shows that different perceptions of regulations are associated with different types of conflicts and conflict resolution.

#### 4. Discussion

The current studies deal with the question of importance of social regulation in the sharing economy and how individuals think that communities should be regulated. Additionally, we examine how occurring conflicts in communities are related to the type of used regulation, with the aim to find out how to lower conflict frequency and ensure cooperative and sustainable behavior.

The sharing economy is discussed as a sustainable solution to environmental problems [111,112]. However, most people do not participate in the sharing economy for environmental reasons [26,113]; rather, they take part because of egoistic motives such as saving money [7]. Nonetheless, the valuable impact of the sharing economy can be assumed [27,28] independently of underlying motivations of consumers. A big goal of the sharing economy is global sustainable development. To achieve this goal, it is important that many people collaborate in the sharing economy, as an essential requirement for its success and secondary markets can be strengthened [16]. Therefore, regulation becomes important to prevent sharing communities from breaking down. Conflicts are especially likely to arise if community members act in their own interest without taking care of the group. In the worst case, these conflicts could mean the end of the sharing economy activity if no strategies exist to cope with them and too many people start leaving the group [39].

The first exploratory study in this paper approved that people at least wish for a moderate amount of regulation in sharing communities to prevent the exploitation of the group, as the first empirical studies suggested [62]. Despite regulation being welcomed, most participants in our study rejected the idea of using strict controls and punishment; this is related to the idea that punishment actually could undermine trust [63], but contradicts findings in the case of car-sharing [26], where customers support regulation mechanisms without the fear of disadvantages. In the current study, people mention that sharing communities should only rely on sanctions in extreme and severe cases, and that fair usage behavior should be fostered with soft forms of regulation. Furthermore, they report the importance of a well-functioning communication style and democratic discussions to prevent conflicts, build trust in members, and facilitate satisfaction with the group. Consequently, this should encourage people to stay and participate in the community [38]. Participants in the focus groups also mentioned that rules should be well defined and arranged together including all community members to ensure compliance. These results indicate that the type of regulation, especially soft forms, are crucial and other factors

such as trust should be considered as moderating factors for cooperation [13]. In the focus group, discussions regarding trust were an important factor for joining sharing communities, and therefore, only forms of regulation that do not undermine initial trust in other group members should be used.

Study 2 investigated which type of conflicts occur in sharing communities and how people try to solve them, focusing on community gardens as an example for sharing communities. To this extent, we wanted to examine at an exploratory level which type of regulation could be used to prevent negative impact of conflicts on group performance and satisfaction [72–74]. We distinguished between relationship and task conflicts [71], because it is widely approved that relationship conflicts have a strong negative impact, because people use their resources for solving the conflict rather than undertaking their actual work [76]. On the opposite, task conflicts that are constructively dealt with could have a positive value through helping a group achieve their shared goals [77].

The results of the regression show that trust is an important factor when it comes to relationship and task-conflict frequency. Furthermore, the use of harsh forms of regulation, such as controls and punishment, leaned towards conflict frequency. Based on these results, we assume that harsh forms of regulation could promote a task conflict evolving to a relationship conflict over time [78], which should be investigated in longitudinal studies in the future. Therefore, harsh forms of regulation seem to be the wrong choice for managing conflicts in sharing communities. As trust seems to reduce conflict frequency, and other studies already showed that soft forms of regulation are highly related to trust [114], soft forms of regulation could be the right choice for managing sharing communities.

Although we expected to find a significant impact of soft forms of regulation on conflicts in community gardens, the regression model did not reveal one. We assume that other factors, such as sense of community or reason-based trust are diminishing the impact of soft forms of regulation in the model. This could be explained through the high correlation between soft forms of regulation and sense of community ( $r = 0.58, p < 0.001$ ), and soft forms of regulation and reason-based trust ( $r = 0.53, p < 0.001$ ). Nonetheless, as expected, soft forms of regulation were significantly negative correlated with relationship and task conflicts, and significantly positively correlated with conflict resolution, as seen in Table 3. Additionally, participants of the focus group discussions supported this type of regulation, and furthermore the correspondence analysis showed that soft forms of regulation are also related with a better democratic conflict resolution style. These results suggest that soft forms are suitable for managing sharing communities and preventing negative outcomes of relationship conflicts, and should therefore be preferred over harsh forms such as sanction systems. In addition, a high degree of community sense seems to be important for conflict resolution in a sharing community, which could be strengthened through group activities in community gardens [50].

Certainly, there are limitations of the current studies, which must be discussed. The sample that was chosen in study 2 represents people who belong to community gardens; therefore, we can only make assumptions regarding sharing communities in this context. Future studies should also investigate whether the same results are found in other forms of the sharing economy. It should be noted that the sample of observations was quite small, and the results should be interpreted with caution. For more robust analysis regarding the relationships of variables in a multiple regression analysis, a larger sample size should be considered. Additionally, it would be interesting to survey a representative sample to investigate the range of regulation mechanisms here in Austria and make statements about the whole population. The current context further represents a form of sharing in which people are likely to meet each other in person. Nowadays, sharing often takes place via the internet; therefore, it would be necessary to examine which forms of regulation work in online communities, when people never see each other in person, and only communicate via technology.

## 5. Conclusions

The resulting insights have relevant value for practical application. Our exploratory results suggest that communities in the sharing economy should only use control and punishment in extreme cases when no other possibility exists. Instead, they should rely on soft forms of regulation and

establish trust between the members to prevent conflicts and encourage a better conflict resolution strategy. Furthermore, this means that rules should be developed together within the community to create legitimacy and a higher sense of community. Problems or conflicts should be discussed in democratic settings rather than that a single person or small subgroup decides how to deal with an ongoing conflict. As a result, people should feel more responsible for the community, which should lead to more cooperation among group members.

Overall, this paper manages to fill a research gap by investigating social interaction in the sharing economy concerning conflicts and regulation, and gives advice how sharing communities can use regulatory measures to prevent conflicts and to cope with them. If communities manage to work together as a team to achieve their goals, a positive impact on the environment can be expected. For this reason, it is important to establish conditions that enable strong group cohesiveness, a high sense of community, and make it possible for the group to regulate itself. We recommend that communities implement soft forms of regulation into their agenda, as our research indicates that this form of social regulation could be a key factor to cooperation and fostering sustainability.

**Author Contributions:** T.S. conducted the empirical work, analyzed the data and wrote the paper, B.H. contributed to data analysis and paper development, S.M. contributed to study 1 and analyzed the focus group discussions. E.H. and E.P. contributed by coding the open question of study 2 and helped with data preparation of the correspondence analysis. All authors contributed by reading and approving the final version of this manuscript.

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## Appendix A

**Table A1.** Scales for study 2.

Study Variable	Items Translated	Items Original (German)	Factor Loading
Implicit trust [13]	Most of the time I trust the garden community without thinking about it.	Ich vertraue der Gemeinschaft des Gartens meistens, ohne darüber nachzudenken.	0.704
	I trust the community without being preoccupied about it.	Ich vertraue der Gemeinschaft, ohne mich länger damit zu beschäftigen.	0.787
	In most cases, I trust the garden community automatically.	Ich vertraue der Gemeinschaft des Gartens in den meisten Fällen automatisch.	0.838
Reason-based trust [13]	I trust the community because their goals seem reasonable.	Ich vertraue der Gemeinschaft, da mir ihre Ziele plausibel erscheinen.	0.745
	I trust the garden community because they are dedicated.	Ich vertraue der Gemeinschaft des Gartens, weil sie engagiert ist.	0.810
	I trust the community because it does a good job.	Ich vertraue der Gemeinschaft, weil sie ihre Aufgaben gut erfüllt.	0.837
	I trust the community because it acts in a benevolent way toward its members.	Ich vertraue der Gemeinschaft, weil sie sich den Mitgliedern gegenüber wohlwollend verhält.	0.807
	I trust the community because they have the needed external support to do their work properly.	Ich vertraue der Gemeinschaft, weil sie die benötigte externe Unterstützung hat, ihre Arbeit auszuführen.	0.504
	I trust the community of the garden because good external conditions guarantee good work.	Ich vertraue der Gemeinschaft des Gartens, weil die günstigen äußeren Bedingungen ihre Arbeit gewährleisten.	0.575

Table A1. Cont.

Study Variable	Items Translated	Items Original (German)	Factor Loading
Harsh regulation adapted from coercive power [13]	The garden community pursues its members with penalties and checks.	Die Gemeinschaft des Gartens verfolgt die Mitglieder mit Strafen und Kontrollen.	0.939
	The garden community enforces its demands through checks and penalties.	Die Gemeinschaft des Gartens setzt ihre Forderungen mit Hilfe von Kontrollen und Strafen durch.	0.923
	The community punishes severely.	Die Gemeinschaft bestraft streng.	0.770
Soft regulation adapted from legitimate power [13]	The garden community makes how to behave within the community garden clear to all members.	Die Gemeinschaft des Gartens macht allen Mitgliedern verständlich, wie sie sich im Gemeinschaftsgarten verhalten sollen.	0.717
	The community passes on information in a comprehensive way.	Die Gemeinschaft gibt Informationen verständlich weiter.	0.742
	The community knows how to take care of the garden.	Die Gemeinschaft weiß, wie der Garten bearbeitet werden soll.	0.741
	The community is an expert for the rules within the community garden and their application.	Die Gemeinschaft ist Experte für die Regeln im Gemeinschaftsgarten und ihre Anwendungen.	0.606
	The community is appreciated by their members for its work.	Die Gemeinschaft wird von allen Mitgliedern für ihre Arbeit geschätzt.	0.855
	The garden community is respected by its members for its work.	Die Gemeinschaft des Gartens ist bei den Mitgliedern für ihre Arbeit angesehen.	0.819
	The community is an institution in which members feel obliged to cooperate because it has done a lot for them in the past.	Die Gemeinschaft ist eine Institution, bei der sich die Mitglieder zur Kooperation verpflichtet fühlen, weil sie in der Vergangenheit viel für die Mitglieder geleistet hat.	0.511
	The community serves its members in many ways.	Die Gemeinschaft kommt den Mitgliedern auf vielen Arten entgegen.	0.621
Reward power [13]	The community rewards members in many ways.	Die Gemeinschaft belohnt Mitglieder auf viele Arten.	0.846
	The community grants benefits to its members.	Die Gemeinschaft gewährt den Mitgliedern Vergünstigungen.	0.764

Table A1. Cont.

Study Variable	Items Translated	Items Original (German)	Factor Loading
Relationship conflicts [71]	How often is there friction among members of the community garden?	Wie oft gibt es Auseinandersetzungen zwischen den Mitgliedern des Gemeinschaftsgartens?	0.810
	How often are there personal conflicts in the community garden?	Wie oft gibt es persönliche Konflikte im Gemeinschaftsgarten?	0.900
	How often is there tension among members of the community garden?	Wie oft gibt es Spannungen zwischen den Mitgliedern des Gemeinschaftsgartens?	0.925
	How often is there emotional conflict among members of the community garden?	Wie oft gibt es emotionale Konflikte zwischen den Mitgliedern des Gemeinschaftsgartens?	0.919
Task conflicts [71]	How often do members of the community garden disagree about things that should be done?	Wie oft sind sich Mitglieder des Gemeinschaftsgartens über Dinge uneinig die getan werden sollten?	0.905
	How often are there conflicts about ideas in the community garden?	Wie oft gibt es Konflikte über Ideen im Gemeinschaftsgarten?	0.873
	How often are there conflicts revolving around your activities in the community garden?	Wie oft gibt es Konflikte über Ihre Tätigkeiten im Gemeinschaftsgarten?	0.683
	How often are there differences of opinion between members of the community garden?	Wie oft gibt es Meinungsverschiedenheiten zwischen Mitgliedern des Gemeinschaftsgartens?	0.888
Conflict resolution [71]	Disagreements about specific tasks are usually resolved within the community garden.	Unstimmigkeiten über bestimmte Aufgaben, werden in der Regel innerhalb des Gemeinschaftsgartens gelöst.	0.905
	Emotional conflicts are usually resolved within the community garden.	Emotionale Konflikte werden in der Regel innerhalb des Gemeinschaftsgartens gelöst.	0.869
	Disagreements about who should do what are usually resolved within the community garden.	Unstimmigkeiten darüber, wer was tun sollte, werden in der Regel innerhalb des Gemeinschaftsgartens gelöst.	0.930
Sense of community [98]	I feel connected to the community garden.	Ich habe einen Draht zur Gemeinschaft des Gartens.	0.884
	The community helps me fulfill my needs.	Die Gemeinschaft hilft mir meine Bedürfnisse zu erfüllen.	0.779
	I am a part of this community garden.	Ich gehöre zu der Gemeinschaft des Gartens.	0.841
	People in this community influence each other.	Die Personen in der Gemeinschaft nehmen Einfluss auf einander.	0.787
	I feel like a member of this community garden.	Ich fühle mich als Mitglied der Gemeinschaft des Gartens.	0.896
	I can get what I need in this community.	Ich kann in der Gemeinschaft bekommen, was ich brauche.	0.773
	I have a say about what goes on in my community.	Ich habe ein Mitspracherecht bei dem, was in der Gemeinschaft des Gartens vor sich geht.	0.616
I have a good bond with others in this community.	Ich fühle mich mit den anderen Mitgliedern der Gemeinschaft verbunden.	0.877	

Table A1. Cont.

Study Variable	Items Translated	Items Original (German)	Factor Loading
Trustfulness [99]	I trust what people say.	Ich vertraue auf das, was Menschen sagen.	0.798
	I trust others.	Ich vertraue anderen.	0.906
	I believe that others are of good will.	Ich glaube, dass andere guten Willens sind.	0.852
	I believe that people are fundamentally moral.	Ich glaube, dass Menschen grundsätzlich moralisch sind.	0.814
Risk-seeking [100]	I enjoy being reckless.	Ich genieße es waghalsig zu sein.	0.822
	I take risks.	Ich gehe Risiken ein.	0.800
	I seek danger.	Ich suche die Gefahr.	0.798
	I seek adventure.	Ich suche das Abenteuer.	0.720
Materialism [101]	I admire people who own expensive homes, cars, and clothes.	Ich bewundere Leute, die teure Häuser, Autos und Kleider besitzen.	0.803
	Buying things gives me a lot of pleasure.	Dinge zu kaufen bereitet mir viel Vergnügen.	0.681
	I'd be happier if I could afford to buy more things.	Ich wäre glücklicher, wenn ich es mir leisten könnte, mehr Dinge zu kaufen.	0.753
	I try to keep my life simple as far as possessions are concerned. [R]	Ich versuche mein Leben einfach zu halten, was meine Besitztümer betrifft. [R]	−0.387
	The things I own say a lot about how well I'm doing in life.	Die Dinge, die ich besitze, sagen viel darüber, wie gut ich im Leben vorankomme.	0.356
	I like a lot of luxury in my life.	Ich mag es, viel Luxus in meinem Leben zu haben.	0.627
	My life would be better if I owned things I don't have.	Mein Leben wäre besser, wenn ich bestimmte Dinge besitzen würde, die ich nicht habe.	0.692
	I like to own things that impress people.	Ich mag es, Dinge zu besitzen, die Leute beeindrucken.	0.750
	It sometimes bothers me that I can't afford to buy all the things I'd like.	Es stört mich manchmal, dass ich mir nicht alle Dinge leisten kann, die ich gerne hätte.	0.677
	Greed [102]	I always want more.	Ich möchte immer noch mehr haben.
I'm kind of greedy.		Ich bin schon ein bisschen gierig.	0.730
One can never have too much money.		Man kann niemals zu viel Geld haben.	0.605
As soon as I buy something, I start to think about the next thing I want.		Sobald ich etwas gekauft habe, denke ich darüber nach, was ich als nächstes will.	0.830
It doesn't matter how much I have. I'm never completely satisfied.		Es spielt keine Rolle, wie viel ich habe. Ich bin nie ganz zufrieden.	0.673
My life motto is 'the more the better'.		Mein Lebensmotto ist "mehr ist besser".	0.799
I can't imagine having too many things.		Ich kann mir nicht vorstellen, zu viele Dinge zu haben.	0.563

Note: R = Reversed Item.

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