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Dyadic Analysis of a Speed-Dating Format between Farmers and Citizens

Jessica Berkes, Iris Schröter and Marcus Mergenthaler *

Department of Agriculture, South Westphalia University of Applied Sciences, Lübecker Ring 2, 59494 Soest, Germany; jessica.berkes@posteo.de (J.B.); schroeter.iris@fh-swf.de (I.S.)
* Correspondence: mergenthaler.marcus@fh-swf.de

Abstract: Alienation between farmers and citizens has increased amid complex developments of agriculture's intensification, urbanization processes, demographic change, and specialization in food supply chains in developed countries. Traditional public relations instruments have failed to generate societal acceptance of today's intensive agricultural practices. At the same time, the agricultural sector feels alienated from societal value changes. Other controversial contexts showed that open face-to-face encounters at eye level hold the potential to promote mutual understanding and acceptance. The study aims to analyze how speed-dating conversations between farmers and citizens, considering participants' characteristics, impact different outcome variables. 24 farmers and 22 citizens specifically recruited for participation in the speed-dating were organized to have short conversations of 10–15 min in different farmer-citizen-constellations. Each conversation had a specific overall agricultural topic including animal welfare, agricultural technology, environmental protection, agricultural policy, and esteem for food. Four months after, different outcomes were measured in a follow-up survey. For 84 person-constellations complete dyadic data were available to be analyzed by hierarchical regression analyses. Participants were mostly satisfied with the dialogue format and gained new factual and personal information. Results indicate stronger impacts of socio-demographic characteristics and personality traits than characteristics of the conversations themselves. Constellations with male citizens, female farmers, more educated farmers, extroverted participants, emotionally stable farmers, and more open participants tended to have higher dyadic outcome variable values. The results call for a re-design of farmer-citizen dialogue formats to facilitate more direct interpersonal communication.

Keywords: speed-dating; farmer-citizen-dialogue; communication of values; Big-Five personality; dyadic communication

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1. Introduction

Alienation between farmers and citizens has increased amid complex developments of agriculture's intensification, urbanization processes, demographic change, and specialization in food supply chains [1,2]. In the last decades, farmers felt the need to focus their work on efficiency and profitability [3], while neglecting communication efforts with society [4]. With advancing knowledge in biological, ecological, and earth sciences, society's values towards animals and the environment have become more important and have changed in a way that animal welfare and environmental sustainability have become a much higher priority [5]. As a consequence, attitudes about intensive farming practices diverge between farmers and citizens, and the intensive farming sector's social license to operate is at stake in industrialized countries [2]. Depending on the specific issues, different and sometimes confrontational attitudes appear [6].

Despite the overall positive attitude of society towards farmers themselves [5,7], the agricultural sector feels faced with persistent critical generalizations and perceives media portrayals as confrontational [8,9], indicating dwindling trust between farmers and

citizens and alienation between the two groups. Although media reports on agriculture show very diverse images and attitudes towards agricultural production systems [10], the critiques and negative images are manifested in people's minds [11]. This might be the reason for ongoing, partly harsh critiques in letters to the editor in classical print media, in direct contacts in peri-urban and rural settings, and in social media discussions [12]. The criticism relates, for example, to residues in food, farm size structures, monocultures, pesticide use, animal husbandry practices, genetic modification, or the distribution of farm subsidies [13,14]. Social groups, some of which are non-governmental organizations (NGOs), share this criticism. They achieve external impact by claiming to represent broader social movements. Wolfram et al. [10] have shown in their media content analysis that social actors and interest groups have their say, especially in media frames that emphasize the negative sides of animal husbandry and make increased demands on policy and the agricultural sector as a consequence. Employing certain media frames might attract specific recipients and could thereby explain why media coverage is sometimes perceived as one-sided, e.g., articles with negative valence (e.g., animal diseases) portray a positive solution approach by intensive animal husbandry (e.g., high hygiene standards).

A wider census among affected stakeholders indicates that the agricultural sector needs more public relations work [15]. This has been neglected for a long time, and a growing number of supporters in critical stakeholder groups now confront the agricultural sector in finding ways to tackle this criticism. Thus, farmers increasingly acknowledge the need to handle the criticism and—in addition to the knowledge transfer that is considered important—engage with the concerns of the population in open discussions and dialogues [4,15]. Production processes and the products themselves have become in need of explanation [16]. In order to sustainably improve acceptance and image as well as to achieve more appreciation, it seems important against this background to sustainably build trust. Personal contacts and the recommendations of opinion leaders can increase the willingness to trust [17]. In addition, it is advisable to consider aspects such as credibility and competence more strongly in communication strategies that might have wider relevance for industries beyond agriculture that are also facing heightened scrutiny and criticism such as the car industry, mining, or certain areas of healthcare [18,19].

In the meantime, studies show that image problems, e.g., in the meat industry, are inherently linked to consumer behavior [20,21]. For example, the better respondents evaluate their own knowledge about nutrition and animal husbandry, the less meat they consume [20]. Corresponding change processes proceed relatively slowly but offer starting points for new marketing and communication concepts [20]. Up to now, farmers have mainly come into direct contact with consumers in a marketing context, especially in local farmer markets and direct marketing contexts such as farm shops [22].

According to previous findings, personal contact between farmers and consumers can help to build trust and thus increase appreciation and mutual benefits [23,24]. This direct contact with the producer is associated on the part of consumers with high-quality products and represents a counterweight to anonymous mass production and mass consumption [25,26]. For consumers, trust provides relief in purchase decisions [17]. Some research suggests that the esteem and trust shown to direct marketers and other farmers who are in close personal contact with consumers and social groups is not enough to regain more general trust in agricultural production as a whole [27]. Based on this conclusion, it can be argued that to strengthen the reputation and acceptance of the entire industry and the agricultural production processes, different and new communication approaches and tools are required.

Classical, currently applied public relations strategies from the farming sector aim to convince non-farming rural and urban target groups of the general population by unidirectional communication and education [15]. Dialogue-oriented communication formats constitute attempts for more integral agricultural public relations strategies. These communication formats aim to equalize constellations of experts and laypersons and to build trust [28]. Dialogue is a mechanism of meaningful, authentic, and inclusive engagement, which constitutes a basis for a "license to operate" [29]. Still, most farmer-driven initiatives

employ such formats aiming to achieve a change in citizens' attitudes and to gain the population's approval of current farming practices. However, effective communication strategies that deal with the voiced concerns of the public are not sufficiently addressed [4].

Open, face-to-face encounters at eye level hold the potential to promote mutual understanding and acceptance [30]. Although speed-dating formats were originally introduced for romantic purposes, their possibilities for implementation have been broadened to several different application contexts. Examples include technology transfer in fragmented regional innovation systems [31], student-driven feedback and engagement [32], conveying science from scientists to journalists [33], a tool for building research culture [34] customer-to-customer interactions [35], and others. The advantage of these one-to-one encounters is that the dialogue partners can better understand the level of knowledge of their respective counterparts and respond to it, thus preventing intimidation of the partner due to knowledge differences [36]. Direct contacts between producers and consumers lead to greater knowledge of the production context and an appreciation of agricultural production [22] At the same time, direct contact might also increase knowledge of the consumptions' context and appreciation for food consumers.

More dialogue-oriented communication strategies can potentially rebuild trust between citizens and farmers [37,38] as has been demonstrated in other industries [39,40]. Direct forms of communication that appeal to the breadth of society and agriculture offer the potential to sustain agriculture's social license to operate and give farmers more insights into the reasoning of critical citizens [41]. For the farming sector it holds the potential for better marketing of its products, whereas, for citizens, direct encounters with farmers might strengthen their appreciation and raise awareness of food production.

No systematic investigation could be found of how the attitudes of citizens and farmers are portrayed when the anonymity of social discourse or protection of peer groups in homogenous social contexts including social media is broken through an organized and prepared personal encounter. For this study, one-to-one conversations were arranged in order to make a personal exchange on agriculture and social expectations possible. Thereby our research aims to analyze how the characteristics of participants and speed-dating conversations impact outcome indicators four months after the conversations.

The empirical study focuses on Germany. In the last decades, structural change has characterized Germany's farming sector. Increasing involvement in global competition, the EU's common agricultural policy (CAP), and technological progress are drivers of structural change. In 1950 there were still more than 1.6 million farms in Germany. From 2010 to 2020 the number of farms in Germany has fallen by 12% from 299,800 to 262,776 farms. The area used for agriculture remained almost constant at 16.6 million hectares—the main pressure comes from housing, industry, and traffic. The average size of farms in 2020 was 63 hectares of farmland per farm. Farms are becoming larger, and the concentration of production and land is increasing. Although family farms still dominate, an increasing number of farms are being organized in the form of different legal and constitutional settings [42]. Increasing labor productivity and rising capital input reduce the number of farm laborers and lead to less interaction between farmers and the general population. Livestock farming is concentrated in some regions of northwestern Germany, causing problems for the environment. Southern Germany is characterized by smaller farms due to inheritance rules where farms were divided among siblings in the past. Eastern Germany is characterized by large cooperative farmers stemming from the socialist era until 1990. Intensive livestock husbandry and bioenergy are some of the most controversial topics in German agriculture public discourse [43].

2. Data and Methods

2.1. Participants

In a speed-dating format between farmers and citizens, short conversations were organized. Citizens were defined as "non-farmers" i.e., not being involved in any (semi-)professional primary agricultural activities. All recruited citizens declared "never" to the following

statement: "I work in the agricultural industry or have worked in the agricultural industry in the past." The speed-dating took place in June and July 2019 in four different locations in the state of North Rhine-Westphalia (NRW) in Western Germany. Two locations were rather rural (Brilon in Westphalia & Wesel in the Rhineland) while two locations were rather urban (Münster in Westphalia & Cologne in the Rhineland). Citizens and farmers were recruited in the wider vicinity of these places. The speed-dating was implemented at a neutral venue, not open to the public, without spectators nor revealing full names. Participants were recruited via a commercial market research company according to the following criteria: age, sex, education, nutritional habits, and work (yes/no) in the agricultural sector or animal husbandry (cow, pig, poultry, horses/arable farming) respectively for citizens or farmers. Participants were between 22–68 years old. All participants received financial compensation.

In five rounds of conversations, one topic from agriculture or nutrition was discussed per round. Table 1 indicates how the conversations were arranged in each of the four locations between farmers (F) and citizens (C). The participants sat at a table directly facing each other. Some basic communication rules were given to all participants, which they agreed to follow. Each conversation lasted 14 min on average. Each participant moved to the next conversation at a different table according to the seating plan and his or her numbering. In this way, double constellations were prevented. In order to avoid a perceived home-field advantage, each participant had to change her or his seat after each conversation. All conversations were audio-recorded and transcribed.

Table 1. Empirical strategy to arrange individual speed-dating conversations between farmers (F) and citizens (C) about different topics.

	Topic 1	**Topic 2**	**Topic 3**	**Topic 4**	**Topic 5**
Conversation 1	C1 + F1	C2 + F3	C3 + F5	C4 + F2	C5 + F4
Conversation 2	C2 + F2	C3 + F4	C4 + F6	C5 + F3	C6 + F5
Conversation 3	C3 + F3	C4 + F5	C5 + F1	C6 + F4	C1 + F6
Conversation 4	C4 + F4	C5 + F6	C6 + F2	C1 + F5	C2 + F1
Conversation 5	C5 + F5	C6 + F1	C1 + F3	C2 + F6	C3 + F2
Conversation 6	C6 + F6	C1 + F2	C2 + F4	C3 + F1	C4 + F3

The topics covered livestock husbandry and animal welfare, agricultural technology, environmental protection in agriculture, agricultural policy, and esteem for food. The topics were chosen, and respective general guiding questions were developed based on existing literature (Table 2). The guiding questions were meant to stimulate individual conversations and were written on small cards that were placed on the tables. Individual conversations were not moderated individually. After a starting signal, conversations developed according to participants' initiatives. After 12 min, participants were requested to end their respective conversations. After short breaks of 2–4 min, participants sat at another table with the new conversation partner and the next topic.

Each of the 46 participants, of which 24 were farmers and 22 were citizens, (3 locations with 12 participants each and 1 location with 10 participants) had 5 conversations with one participant of the other group respectively (5 farmers only had 3–4 conversations due to missing citizens). This resulted in a total of 110 specific topic-person constellations. Complete data after 4 months were available for 84 constellations that could be analyzed finally.

Table 2. Topics with respective guiding questions given to participants in individual conversations [44].

Topics	Guiding Questions
livestock husbandry and animal welfare	What is the importance of a farm animal for you? When is the use of medication legitimate for you personally in farm animal husbandry? What does animal welfare mean for you personally?
agricultural technology	What do you think about the use of drones in agricultural production? How important is technology in agricultural production for you? Does better housing technology also mean more animal welfare for you?
environmental protection in agriculture	What does the protection of soil, water, and air mean to you? What does genetic engineering mean to you? Who do you think should contribute to the maintenance and preservation of the landscape? Why? How important is the cultivation method (conventional/organic) of agricultural products to you?
agricultural policy	How important is it to you that your interests regarding food/agriculture are represented? What does planning security mean to me? What does the use of agricultural land for renewable energies mean to you?
esteem for food	What does food mean to you? How is your importance for food reflected in your shopping behavior? Why? How important is direct marketing for you? How important is contact with the farmer/consumer for you?

2.2. Materials

Three groups of independent variables were hypothesized to impact the outcomes of the conversations. They included conversation-specific variables, socio-demographics, and the personality traits of the participants.

Conversations were analyzed based on a quantitative content analysis by identifying the number of factual statements and the number of personal statements made by the interlocutors. In order to make them comparable to each other, statements were counted and summarized per conversation and thus quantified [44]. The statement as such was identified per the thematic aspect discussed in the conversation and not by the time length or the number of sentences employed. Personal statements were considered emotional or ethical expressions whereas factual statements were identified by an informative or explaining character. Coding was validated by an intra-coder reliability test whereby the same coder recoded a subsample of conversations after 21 days. This test revealed a correlation with an average value of 0.82.

To take socio-demographic characteristics into account, gender (female vs. male), education (having an A-level school leaving certificate vs. lower education), and age (years) were surveyed in the pre-conversation survey.

Personality traits were measured with the help of the Big Five Inventory BFI-10 being a validated item battery of the Big-Five personality model [45] in the pre-conversation survey. The BFI-10 was considered suitable for our context since it measures the five dimensions with a total of only ten items and an average processing time of approximately one minute (Table 3). In the process of establishing the Big Five personality model, such short item scales were developed to capture personality traits in contexts outside psychology in studies where time is lacking for the conventional procedures, i.e., long item scales, for capturing Big Five personality traits [46].

To measure the outcomes of the speed-dating format, a follow-up survey was conducted four months after the speed-dating took place. The time span was determined by theoretical and practical constraints: longer time periods decrease the reachability of participants and willingness to participate. In addition, administrative and contractual requirements derived from project management limited the maximum time span for the follow-up survey. The items in Table 4 were surveyed. Answers were recorded on visual analog scales (VAS) with ranges from 0 to 10. These items referred to the whole dialogue format and not single bilateral conversations. This is critical as it was not considered valid to collect conversation-specific outcomes after a period of four months. To generate outcome dyadic variables proxying conversation-specific impacts, person-specific outcome variables

of a person related to all bilateral dialogues as a whole were calculated. These scores were combined by calculating simple means of a farmer-specific score and a citizen-specific score. In other words, each farmer's dialogue score was combined with the respective citizen's dialog score, resulting in variables that aim to proxy the conversation-specific outcomes of individual conversations between an individual farmer and an individual citizen.

Table 3. Big-Five personality traits with respective items of the BFI-10 [45].

I See Myself as Someone Who . . . (Strongly Disagree 1–Strongly Agree 5)		
Extraversion	. . . is outgoing, sociable	
	. . . is reserved	reversed scaled
Agreeableness	. . . is generally trusting	
	. . . tends to find fault with others	reversed scaled
Conscientiousness	. . . does a thorough job	
	. . . tends to be lazy	reversed scaled
Neuroticism	. . . gets nervous easily	
	. . . is relaxed, handles stress well	reversed scaled
Openness	. . . has an active imagination	
	. . . has few artistic interests	reversed scaled

Table 4. Items used to measure outcomes of the dialogue formats after four months.

Short Description and Abbreviation	**Item**	**Response 5-Point Likert Scale**
Satisfaction (satis)	When you think back to the event, to what extent were you satisfied with your own way of conducting the conversation?	very satisfied–very unsatisfied
Factual news (fact)	On a factual level, did you gather new facts, information, or knowledge for yourself?	yes, very much–no, not at all
Personal news (pers)	On a personal level, did you gain new impressions, experiences, or ideas for yourself?	yes, very much–no, not at all
Future behavior (beha)	How likely is it that you will change something about your behavior in the future as a result of the conversations you have had?	Very likely–very unlikely
Future contacts (cont)	How likely is it that you will seek more personal contact with consumers/farmers in the future than you did before the conversations?	Very likely–very unlikely
Overall outcomes (all)	Mean of individual indicators	

2.3. Procedures

To analyze the impact on the outcome of dyadic variables derived from the follow-up survey four months after the conversations, hierarchical regressions were estimated by a step-wise inclusion of groups of independent variables collected at the time of the speed-dating (Table 5). First, individual conversation-specific variables were included based on quantitative content analysis of the transcribed conversations. These variables directly refer to the time when the conversations were taking place. They include the number of factual and personal statements employed by each person within a specific conversation. We developed this approach based on previous inductive content analysis with the same empirical material [44]. Next to basic socio-demographic variables, (gender, age, education) were added. In the last step, Big-Five personality traits were included in the estimation. From a total of 110 individual conversations, 84 complete dyadic datasets were available for the regression analyses.

Table 5. Descriptive statistics of independent variables employed in the hierarchical regression analysis (means and standard deviations).

Group of Independent Variables (I)	Individual Independent Variable (II)	Citizens (n = 22) (III)	Farmers (n = 24) (IV)
1st step: Conversation	Factual statements (no.)	0.98 ± 1.51	6.19 ± 3.50
	Personal statements (no.)	5.45 ± 3.39	5.63 ± 3.02
2nd step: Socio-demographics	Female (dummy)	0.55	0.26
	Age (decades)	4.04 ± 1.39	4.00 ± 1.24
	High education (dummy)	0.56	0.56
3rd step: Big-Five personality	Extraversion (1–5)	4.08 ± 0.71	3.68 ± 0.69
	Agreeableness (1–5)	2.95 ± 0.72	3.11 ± 0.61
	Conscientiousness (1–5)	4.42 ± 0.62	4.09 ± 0.73
	Neuroticism (1–5)	2.52 ± 1.00	2.48 ± 0.76
	Openness (1–5)	3.73 ± 0.95	3.10 ± 0.70

3. Results

3.1. Descriptive Statistics

Figure 1 shows the means and standard deviations of the outcome variables differentiating between citizens and farmers. Most outcome variables have mean values in the upper tercile of possible values between 0 and 10. 'Factual news' is rated highest whereas 'future behavior' is rated lowest. All outcome variables display considerable standard deviations, indicating that the outcomes of conversation were rated quite differently by different participants. The largest differences between farmers and citizens are found for 'factual news', which was rated considerably higher by citizens whereas farmers rated the 'future contact' outcome considerably higher. The overall outcome was rated very similarly between farmers and citizens. As these ratings relate to the overall dialogue format and are person-specific but not conversation-specific, conversation-specific outcomes were proxied by calculating the means of those two persons who talked to each other in specific conversations as described in the section on data and methods above. These conversation-specific outcome variables were employed as dependent variables in the hierarchical regression analyses below.

3.2. Model Summaries

Table 6 summarizes the hierarchical regression models. Employing the conversation variables in the first step gives only a few significant model results. Only 'future contacts' as an outcome variable can be explained by the conversation variables—with a rather low corrected R-square. If additional socio-demographic variables are included, four of the six models are significant at the 5%-threshold. Values for corrected R-square for these models range between 0.14 and 0.23. If Big-Five personality traits are included, all models are significant at $p < 0.001$. Corrected R-square for the full models with conversation variables, socio-demographics, and personality traits ranges between 0.42 and 0.64.

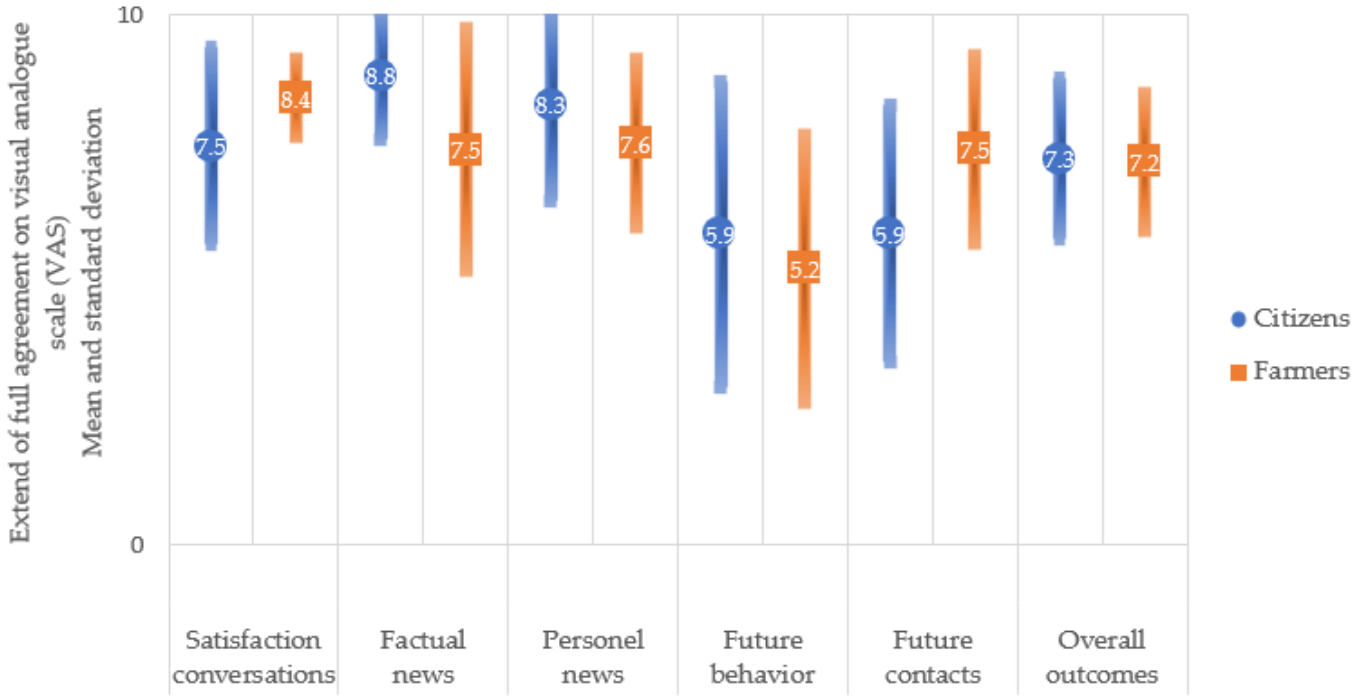

Figure 1. Outcomes of dialogue formats (means and standard deviations) after four months differentiated for farmers (n = 24) and citizens (n = 22).

Table 6. Summary statistics of the hierarchical regression analyses based on six different dependent outcome variables, explained by three sets of independent variables each.

Dependent Outcome Variables	*Sets of Independent Variables*	*Corrected R-Square*	*Change in R-Square*	*Change in F*	*Sig. Change in F*
Satisfaction	Conversation	−0.02	0.03	0.65	0.626
	Socio-demographics	0.14	0.21	3.45	0.005
	Big-Five personality	0.55	0.41	7.50	<0.001
Factual news	Conversation	0.00	0.05	0.94	0.447
	Socio-demographics	0.27	0.32	6.00	<0.001
	Big-Five personality	0.62	0.35	7.58	<0.001
Personal news	Conversation	0.00	0.05	0.99	0.416
	Socio-demographics	0.03	0.10	1.38	0.236
	Big-Five personality	0.42	0.42	5.98	<0.001
Future behavior	Conversation	−0.02	0.03	0.56	0.695
	Socio-demographics	0.17	0.24	3.94	0.002
	Big-Five personality	0.58	0.42	8.21	<0.001
Future contacts	Conversation	0.11	0.15	3.50	0.011
	Socio-demographics	0.18	0.13	2.16	0.057
	Big-Five personality	0.45	0.30	4.51	<0.001
Overall outcomes	Conversation	0.03	0.07	1.58	0.188
	Socio-demographics	0.23	0.25	4.50	0.001
	Big-Five personality	0.64	0.40	9.19	<0.001

3.3. Model Coefficients

Figure 2 displays the estimated coefficients including the 95%-confidence intervals of the hierarchical regression analyses of the last step where all groups of independent variables have been included. Our results indicate stronger impacts of socio-demographic characteristics and personality traits than characteristics of the conversations themselves.

For the conversation variables, most of the estimated coefficients are not significant as their confidence intervals include the zero-line. Only the number of factual and personal statements employed by farmers has a negative impact on intentions for future contacts. This means, that the more statements farmers employed in individual conversation the lower the dyadic outcome variable was rated four months after with respect for a desire to have more contact with persons from the other side in the future as compared to before the dialogue format, i.e., the less the farmer said, the more likely partners wanted to meet again.

With respect to socio-demographics, results are more differentiated. If female citizens were part of a specific constellation, the overall dyadic outcome variable value was lower but also for the backward-looking satisfaction, for gaining personal news, and for future contacts with the respective other side. If a female farmer was part of a specific conversation the specific dyadic outcome variables were higher for gaining factual news, for an intention to change future behavior due to the participation, and for the overall outcome. For the impact of age, the pattern is more diverse. Older citizens led to higher dyadic outcome variable values for backward-looking satisfaction and for gain in factual news. Older farmers had a significant positive impact on backward-looking satisfaction and intentions for future behavioral change but a negative impact on the desire for future contacts with the respective other side. Education's impact on the outcome variables was mostly not significant, except for citizens' education' negative impact on future contacts and farmers' education' positive impact on gaining new factual information. In summary, constellations with male citizens, female farmers, and more educated farmers tended to be evaluated more positively after four months.

Personality traits showed some specific impacts on the dyadic outcome variables. While more extroverted citizens were associated with higher dyadic outcome variable values except for factual news, the impact of extroverted farmers is only significant for change in future behavior, more contact with the respective other side, and the overall outcome. Agreeableness generally has no significant impact on the dyadic outcome variables, except for farmers where a higher level of agreeableness is associated with significantly lower gain in factual news. Conscientiousness has differential impacts on the dyadic outcome variables. Citizens' conscientiousness has a significant impact on the intention for more contact with the respective other side. Farmers' conscientiousness is associated with higher backward-looking satisfaction and lower outcomes for future behavioral changes, for the desire for more future contact with the respective other side, and for the general dyadic outcome variable. Neuroticism has a significantly positive impact on the intention for future contact with the respective other side and a negative impact on intentions to change behavior. Farmers' neuroticism has a negative significant impact on all outcome variables except for backward-looking satisfaction. Openness tends to have positive impacts on outcome variables for citizens and farmers. Citizens' openness has positive significant impacts on backward-looking satisfaction, gaining new factual information, and gaining new personal information. Farmers' openness positively impacts intentions for behavioral changes in the future and the overall dyadic outcome variable. In summary extroverted participants, emotionally stable farmers, and more open participants led to more positive outcome evaluations after four months.

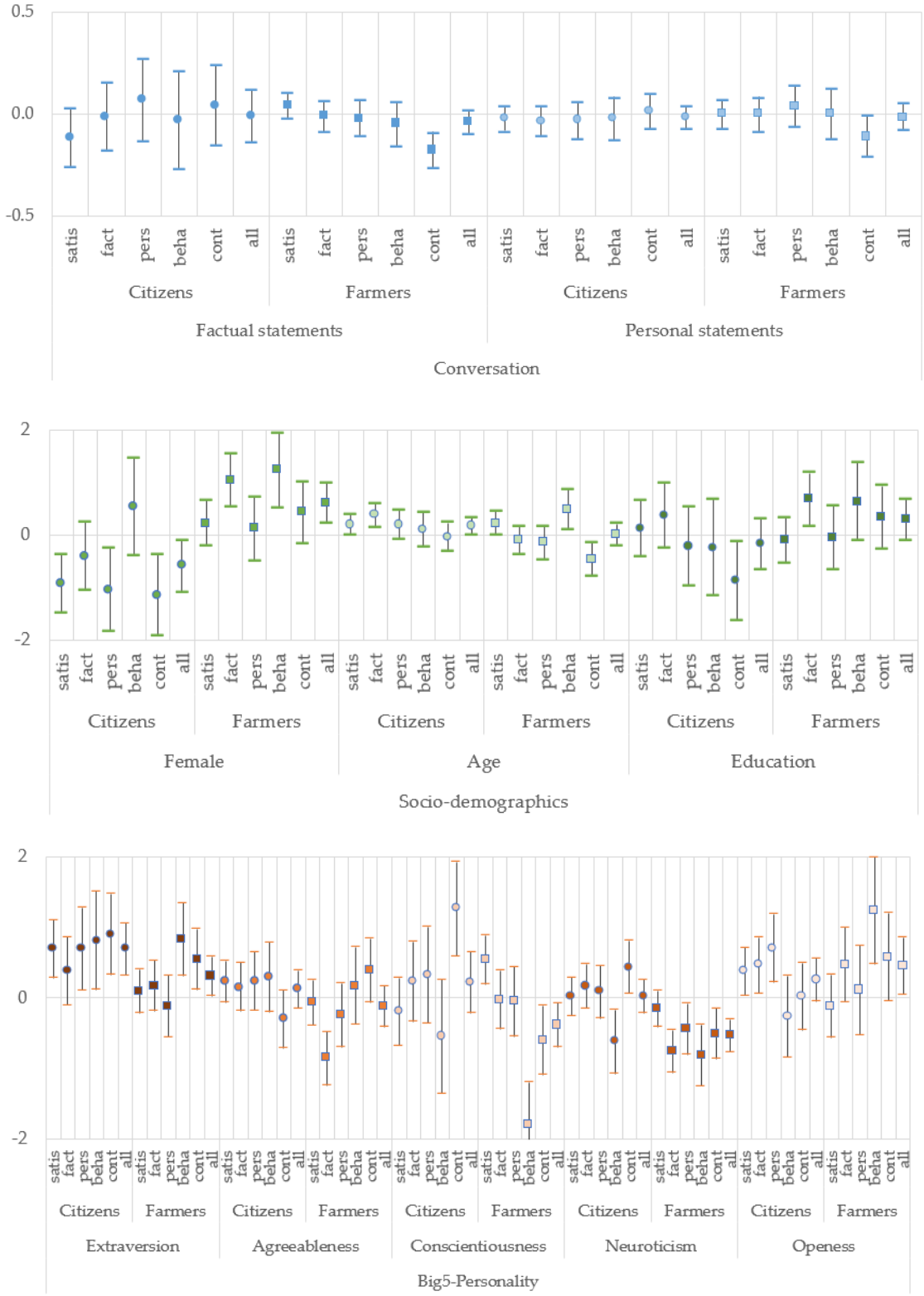

Figure 2. Estimated coefficients with 95%-confidence intervals for the individual variables included in the third step of the hierarchical regression analyses on the different outcome variables for conversation variables (**upper panel**), socio-demographic variables (**middle panel**), and personality traits (**lower panel**). Note: satis: satisfaction; fact: factual news; pers: personal new; beha: future behavior; cont: future contact; all: overall outcome.

4. Discussion

The study aimed to analyze how speed-dating conversations and participants' characteristics impact different outcome variables. Our results indicate that participants were mostly satisfied with the dialogue format and gained new factual and personal information. Outcomes were weaker for intentions to change behavior and to seek more personal contact in the future. However, the large standard deviations indicate substantial heterogeneity and uncertainty, which could be a result of having a small number of research participants. Therefore, it might be worth testing the reliability of our results in larger samples. To validate externally the satisfaction, not only sample size should be increased but also different experimental contexts should be tested for. Especially framework conditions of the experiment could be arranged to be more realistic and resemble dialogue situations in real life.

The results of the hierarchical regression analyses show stronger impacts of socio-demographic characteristics and personality traits than characteristics of the conversations themselves. Constellations with male citizens, female farmers, more educated farmers, extroverted participants, emotionally stable farmers, and more open participants tended to have higher dyadic outcome variable values. Thus, mutual understanding and successful exchange in a one-to-one encounter are based on varying factors such as personal or factual statements, socio-demographic factors, and personality traits. Some of those factors might be considered in future dialogue designs. Based on, i.e., education, age, or gender, target groups can be formed in order to adjust the type and format of the communication [47]. This is how communication might become more effective and outcome-oriented. In this way, our results might be used to improve the design of farmer-citizen dialogue formats according to the following recommendations.

A high number of factual statements as a knowledge transfer strategy does not lead to higher outcomes in one-to-one encounters according to our results. Knowledge transfer is a topic discussed also in other selected contexts with conflictive issues [48,49] The selected studies show that factual information is usually integrated into personal encounters having an especially strong impact on trust-building. The intensive farming sector in Germany holds the view that public opposition to intensive farming mainly stems from limited knowledge of farming [38]. In consequence, there is a general perception in the farming sector that more fact-based education campaigns help to spread a more realistic picture of agriculture in public and to regain societal acceptance of their production systems [27], i.e., the license to operate. Thus, farmers might have felt pressured to include many factual statements. However, as indicated, results show that the communication dynamics between citizens and farmers are far more complex than this. Regarding the number of statements used by farmers in the conversation, it is advisable that farmers should keep a stronger balance between personal and factual statements meaning that they should reduce the number of factual statements and put more attention to ethical values and emotional topics [50]. This might have a longer-lasting effect on pursuing future contacts.

With regard to the socio-demographics in the selection process for future dialogue formats, it might be helpful to focus on gaining more female farmers and more male citizens. These constellations might improve outcomes as they break stereotypical gender constellations. With a male-dominated farming sector [51,52], this would require specific efforts to recruit female farmers. Consequently, the results might have been caused by gender-specific communication styles. Authors in the 1990s controversially discuss that women's communication goals focus on gaining trust, developing consensus, and establishing relationships with others, while men's communication tends to be more task-oriented with the goal of winning [53,54]. Therefore, it might be helpful to teach male farmers communication strategies that overcome stereotypically masculine behavior and improve conversations with female citizens. Accordingly, teaching female citizens communication strategies and techniques might help them to improve their conversations with male farmers. The latter might be difficult to implement in broader target groups. Training courses on communication styles could be applicable for representatives of consumer protection

organizations and farmers' associations who participate in such communication formats, especially for those in public. Still, it is challenging to come up with hard and fast rules for what works and what does not work in a given setting. Some meta talk before such formats might help to better prepare participants and make the encounters more beneficial for participants.

Recruitment strategies for future dialogue formats might have a stronger focus on farmers looking at things in their entirety and having a higher educational background if the outcomes of dialogue formats are to be improved. More educated farmers might be more experienced in discussions of controversial topics and might be more open to accepting opposing views and opinions. Farmers who are involved in social voluntary services [55] can be assumed to be in closer contact with people outside the agricultural context and thus have more practice in communicating.

Yet, it would have to be validated if our results would be confirmed in contexts with longer conversations and with no observation of the conversations. As mentioned before, it might be the case that lower-educated farmers might have felt pressured by the specific format applied in this study to include many factual statements in their conversations. Feeling pressured might have compromised the communication atmosphere, which has led to less positive outcomes for less-educated farmers. If farmers are to be prepared in future dialogue formats it might be helpful to lower expectations, especially towards lower educated farmers not to use too many factual statements. Additionally, more general meta-talk as mentioned before might be helpful to prepare participants.

The influence of personality traits on dialogue outcomes is consistent with previous research. This research shows that people who are more socially outgoing as well as engaging and thereby inclined to intellectual and/or imaginative experiences are better able to meet the goals of collaborative interaction [56]. Still, the conclusions regarding personality traits are more challenging as they cannot easily be used in the recruitment process for future dialogue formats. As personality traits are difficult to assess for others, they can less easily be used as quota variables or as segmentation variables in identifying target groups. Targeting persons with specific personality traits might be better achieved by redesigning the conversation format to better suit the inherent preferences of certain personality traits. By describing the details of a planned conversation format, more specific self-selection processes could be initiated. Additionally, using communication platforms more frequently used by certain personalities might help to specifically recruit participants that might be under-represented otherwise. The communication format might be adapted to better take into consideration the desires and wishes of different personalities. While extroverted persons might enjoy coming to know several new persons within a short period of time, this might be less desirable for introverted persons. For them, fewer changes of conversation partners and longer conversations that allow for more in-depth exchange might be more advantageous. Since personality traits are difficult to assess in advance, communication formats should allow different options for conversation. For agreeableness, no conclusions can be drawn.

Regarding conscientiousness citizens' selective positive and farmers' rather negative impacts indicate asymmetric impacts. It might indicate that farmers should not use such formats for well-structured lectures to teach less knowledgeable citizens—considering the asymmetric gender distribution, "mansplaining" should be avoided. As these conversations rather resemble random everyday small-talk, they should be treated as such. It could also be that the negative impact on the dyadic variable was largely due to evaluations by the conscientious farmers who might have perceived conversations were too superficial for them, and so are rated lower in retrospect. Neuroticism's rather negative impacts on the outcomes indicate that a certain emotional stability would be helpful for short conversations. It is open if these results would also hold in longer conversations that would give more time to trust-building among conversation partners. Additionally, for openness, it might be questioned if this positive impact on different outcome variables would also apply in longer conversations.

Low outcomes for the intention for future contacts seem understandable in a first and short encounter of people unknown to each other within the speed-dating conversation, which does not allow for profound trust-building [57]. Longer lasting conversations might strengthen a deeper understanding of the "other's" situation and increase trustworthiness. However, the educational component seems unavoidable in generating trust and convergence [58]. Surveys in Germany indicate [59] that the population has an interest in more direct contact with farmers. Our dialogue format could be further developed to allow more freedom in the topics to be discussed and to give participants also more time. In addition, the observational situation might have influenced participants' communication behavior. Therefore, it could be verified in future studies if outcomes can be improved by allowing longer conversation formats without being observed and without being recorded for deeper analyses. This should be validated by more qualitative follow-up research.

The overall positive attitude towards conversations about critical issues between citizens and farmers might show that there is future potential to find compromises also between different conflictive stakeholder interests such as environmental sustainability, animal well-being, and farm profitability. At the same time, it might be the case that there are actual incompatible or not compensable conflicts linked to agriculture, which cannot be solved in agricultural practice [60]. In these cases, efforts should be made to find compromises for trade-offs of those issues with the engagement of the different social groups involved. For this, deep discussions about access and equity might be necessary to understand possible consequences for both groups [61]. Additionally, technical or organizational innovations hold the potential to relax trade-offs and find solutions for conflicting positions. As our results have shown, dialogue-oriented communication formats might have the potential to generate these kinds of new ideas.

The speed-dating format appears as a feasible and effective instrument for implementing discussions between stakeholders with differing – but not highly contradicting - attitudes and interests. Our outcome indicators partly show how far they are suitable for educational, trust-building, or some combined purposes. Due to usually high local and social involvement and engagement of farmers in rural as well as peri-urban and urban areas [55,62], such dialogue formats seem to be suitable for exchanging interests and finding ways for joint initiatives. Since cooperation at the intercompany level is still weak [63], it is thus recommendable to establish speed-dating formats or alike not only between citizens and farmers, but for actual representatives of those stakeholder groups in order to support the process of building up cooperative structures between farmers, citizens, environmentalists and other supply chain actors including traders, processors, and retailers. In Germany, different formats are experimented with at higher policy levels for specific policy areas or within transformative research projects.

5. Limitations

Our study has several limitations: most critically it has to be stressed that we were not able to collect conversation-specific outcome measurement variables in our primary data collection, i.e., in our follow-up survey after four months. The outcome variables surveyed contain impacts of all conversations of one person, i.e., the outcomes of the whole dialogue format. Only by combining farmers' and citizens' respective individual outcome ratings, we were able to technically generate constellation-specific outcome variables. Although it would be possible to include constellation-specific items in future surveys on outcome measurement, we assume that it would still be difficult to separate the effects of individual conversations from the effects of the format in general by the respondents. This problem could be avoided by organizing only one conversation for each person. Yet even then, the ultimate effect on any one individual is indeed cumulative across all of their encounters—both inside and outside of the respective communication experiment. To account for this, personal histories of attempting such conversations should be included as controlling variables in similar future experiments.

Another limitation is that we asked for behavioral intentions as an outcome variable. This leaves open whether actual changes in behavior will take place after participation in the dialogue format. Therefore, it remains unclear, whether a better understanding of the other side leads to behavioral changes that might have a broader effect. Further follow-up surveys after longer periods of time might be able to better catch these effects. More qualitative follow-up interviews might generate data with more validity as compared to standardized survey instruments asking for behavior. For some participants, the speed dating might have stimulated further interactions that then build on one another. To go into more contextual details, ethnographic research might generate further explanatory potential.

Furthermore, it remains unclear whether the rather positive attitudinal outcomes of the individuals participating in the dialogue format will be passed on e.g., to friends, acquaintances, or professional colleagues—for which there is limited anecdotal evidence. Therefore, it remains unclear whether the format has broader impacts in farming or general public communities or whether the impacts remain limited to the participants. The format could be scaled-out and gain more democratic legitimacy if a group sends a representative who is meant to report back to their community or network. Network analyses of participants might be an approach to clarify these open questions. It would be particularly interesting to analyze impacts in broader societal groups and to verify if such communication formats impact the general social license to operate in the intensive farming sector. An analysis of how the encounters impact the farming community would be equally interesting.

Our study is also limited by the possibility of conversations' characteristics possibly being influenced by socio-demographics and personality—a possible endogeneity problem with conversations' characteristics. Therefore, individual conversations' impacts on outcomes might be masked. This might also explain why the conversation-specific variables had rather few significant impacts on the outcome variables as they themselves might have been influenced by socio-demographics and personality traits. Further analyses might look at this endogeneity issue. In this respect, also the interaction between fact-based and personal statements could be further analyzed: perhaps fact-based explanations only achieve an effect when one has found a personal approach through personal statements [18,64].

Our ad-hoc sample does not allow any generalization of the results beyond the sample surveyed in our study. Although it is desirable to generate random samples that would allow broader generalizations, this is limited by persons' willingness to participate in such a dialogue format. The generally high values for extraversion in the personality profile might give some indication of inherent biases in such a format. In order to avoid such biases, it might be necessary to include personality traits as quota sampling criteria—which would then limit again the possibilities for several statistical procedures.

6. Conclusions and Outlook

Fueled by the shortcomings described above, researchers on similar topics might learn several lessons from our study's methodological approach: factors to be varied in such an experiment are almost countless and increase exponentially as many can be combined. This challenge can only be solved by an in-depth understanding of the addressed target groups and the specific requirements posed by the topics to be discussed. Although this high variability limits the possibility of gaining generally applicable knowledge by a single study as in our case, a growing body of literature will allow meta-analyses in the future. Such approaches might be able to generate more widely applicable knowledge. A better understanding of dialog processes seems to be an important ingredient in communication-based transformation processes. As these transformational processes are found to be crucial to facing the many sustainability challenges in a world increasingly crossing planetary boundaries, a better understanding of the communication process might be a small but still necessary component in such transformations.

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References

1. Demuth, B.; Heiland, S.; Wojtkiewicz, W.; Wiersbinski, N.; Finck, P.S. Landschaften in Deutschland 2030—Der große Wandel. *BfN Skr.* **2010**, *284*. Available online: https://www.bfn.de/publikationen/bfn-schriften/bfn-schriften-284-landschaften-deutschland-2030-der-grosse-wandel (accessed on 17 January 2021).
2. Williams, J.; Martin, P.; Martin, P.V. (Eds.) *Defending the Social Licence of Farming: Issues, Challenges and New Directions for Agriculture*; CSIRO Publishing: Clayton, Australia, 2011.
3. Meerburg, B.G.; Korevaar, H.; Haubenhofer, D.K.; Blom-Zandstra, M.; Van Keulen, H. The changing role of agriculture in Dutch society. *J. Agric. Sci.* **2009**, *147*, 511. [CrossRef]
4. Albersmeier, F. Reputationsmanagement im Agribusiness. Ph.D. Thesis, Niedersächsische Staats- und Universitätsbibliothek Göttingen, Göttingen, Germany, 26 January 2010.
5. Helmle, S. *Images der Landwirtschaft*; Margraf Publishers: Weikersheim, Germany, 2013.
6. Rovers, A.; Mergenthaler, M.; Wildraut, C.; Sonntag, W.I.; von Meyer-Höfer, M.; Christoph-Schulz, I. Roundtable on hotspots in livestock production—A mixed-methods-approach for a better understanding of farmers' and consumers' views. In *Towards Sustainable Agri-food Systems: Balancing between Markets and Society, Proceedings of the XV EAAE Congress, Parma, Italy, 29 August–1 September 2017*; Oxford University Press: Oxford, UK, 2017.
7. Zander, K.; Isermeyer, F.; Bürgelt, D.; Christoph-Schulz, I.; Salamon, P.; Weible, D. *Erwartungen der Gesellschaft an die Landwirtschaft*; Stiftung Westfälische Landschaft: Münster, Germany, 2013.
8. Ermann, M.; Christoph-Schulz, I.; Spiller, A. Wie nimmt die deutsche Landwirtschaft externe Stakeholder wahr? In Proceedings of the 26 Jahrestagung der Österreichischen Gesellschaft für Agrarökonomie, Wien, Austria, 15–16 September 2016.
9. Kothe, C.; Wolfram, J.; Mergenthaler, M. Landwirtschaftliche Tierhaltung in den Medien—Eine qualitative Analyse von Experteninterviews mit Journalisten regionaler und überregionaler Allgemein- und Fachmedien. *Ber. Über Landwirtsch.-Z. Für Agrarpolit. und Landwirtsch.* **2020**. [CrossRef]
10. Wolfram, J.; Kothe, C.; Brümmer, N.; Mergenthaler, M. Medien-Frames in der Berichterstattung über landwirtschaftliche Tierhaltung. *Ber. Über Landwirtsch.-Z. Für Agrarpolit. Und Landwirtsch.* **2021**. Available online: https://buel.bmel.de/index.php/buel/article/view/313 (accessed on 17 January 2021).
11. Rozin, P.; Royzman, E.B. Negativity bias, negativity dominance, and contagion. *Personal. Soc. Psychol. Rev.* **2001**, *5*, 296–320. [CrossRef]
12. Dürnberger, C. You should be slaughtered! Experiences of criticism/hate speech, motives and strategies among German-speaking livestock farmers using social media. *Int. J. Livest. Prod.* **2019**, *10*, 151–165.
13. Rovers, A.; Christoph-Schulz, I.; Brümmer, N.; Saggau, D. Trust no one? Citizens' concerns regarding the pork and dairy supply chain. *Proc. Food Syst. Dyn.* **2017**, 87–93.
14. Rovers, A.; Christoph-Schulz, I.; Brümmer, N. Citizens' perception of different aspects regarding German livestock production. *Int. J. Food Syst. Dyn.* **2019**, *10*, 361–374.
15. Ermann, M. *Stakeholderorientiertes Kommunikationsmanagement in der Agrar-und Ernährungswirtschaft*; Verlag Dr. Kovač: Hamburg, Germany, 2018.

16. Frick, M.J.; Birkenholz, R.J.; Gardner, H.; Machtmes, K. Rural and urban inner-city high school student knowledge and perception of agriculture. *J. Agric. Educ.* **1995**, *36*, 1–9. [CrossRef]
17. Lazaroiu, G.; Andronie, M.; Uţă, C.; Hurloiu, I. Trust Management in Organic Agriculture: Sustainable Consumption Behavior, Environmentally Conscious Purchase Intention, and Healthy Food Choices. *Front. Public Health* **2019**, *7*, 340. [CrossRef]
18. Chess, C.; Hance, B.J.; Sandman, P.M. *Improving Dialogue with Communities: A Short Guide for Government Risk Communication*; Division of Science and Research, New Jersey Department of Environmental Protection: Trenton, NJ, USA, 1988.
19. Hunecke, C.; Mehlhouse, C.; Busch, G.; Spilller, A.; Brümmer, B. Der Markt für Milch und Milcherzeugnisse im Jahr 2019. *Ger. J. Agric. Econ.* **2020**, *69*, 67–92. [CrossRef]
20. Cordts, A.; Spiller, A.; Nitzko, S.; Grethe, H.; Duman, N. Imageprobleme beeinflussen den Konsum-Von unbekümmerten Fleischessern, Flexitariern und (Lebensabschnitts-) Vegetariern. *FleischWirtschaft* **2013**, *7*, 59ff.
21. Guenther, P.M.; Jensen, H.H.; Batres-Marquez, S.P.; Chen, C.F. Sociodemographic, knowledge, and attitudinal factors related to meat consumption in the United States. *J. Am. Diet. Assoc.* **2005**, *105*, 1266–1274. [CrossRef] [PubMed]
22. Kreutzberger, S. Die Gräben zwischen Bauern und Verbrauchern überwinden—Vernetzungsansätze in Deutschland. In *Transistorische Stadtlandschaften*; Köst, S., Kölking, C., Eds.; Springer: Berlin/Heidelberg, Germany, 2017; pp. 40–54.
23. Kayser, M.; Bohm, J.; Spiller, A. Zwischen Markt und Moral–Wie wird die deutsche Land-und Ernährungswirtschaft in der Gesellschaft wahrgenommen. In *Schriften der Gesellschaft für Wirtschafts-und Sozialwissenschaften des Landbaues eV*; Springer: Berlin/Heidelberg, Germany, 2012; Volume 47, pp. 329–341. Available online: https://ageconsearch.umn.edu/record/114491/?ln=en (accessed on 17 January 2021).
24. Brinson, A.; Lee, M.-Y.; Rountree, B. Direct marketing strategies: The rise of community supported fishery programs. *Mar. Policy* **2011**, *35*, 542–548. [CrossRef]
25. Grebitus, C.; Printezis, I.; Printezis, A. Relationship between Consumer Behavior and Success of Urban Agriculture. *Ecol. Econ.* **2017**, *136*, 189–200. [CrossRef]
26. Yue, C.; Tong, C. Organic or local? Investigating consumer preference for fresh produce using a choice experiment with real economic incentives. *HortScience* **2009**, *44*, 366–371. [CrossRef]
27. Starr, A.; Card, A.; Benepe, C.; Auld, G.; Lamm, D.; Smith, K.; Wilken, K. Sustaining local agriculture barriers and opportunities to direct marketing between farms and restaurants in Colorado. *Agric. Hum. Values* **2003**, *20*, 301–321. [CrossRef]
28. Matoba, K.; Scheible, D. Interkulturelle und Transkulturelle Kommunikation. Working Paper of International Society for Diversity Management e.V., No. 3. 2007. Available online: https://www.idm-diversity.org/files/Working_paper3-Matoba-Scheible.pdf (accessed on 17 January 2021).
29. Mercer-Mapstone, L.; Rifkin, W.; Louis, W.; Moffat, K. Meaningful dialogue outcomes contribute to laying a foundation for social licence to operate. *Resour. Policy* **2017**, *53*, 347–355. [CrossRef]
30. Finkel, E.J.; Eastwick, P.W. Speed-dating. *Curr. Dir. Psychol. Sci.* **2008**, *17*, 193–197. [CrossRef]
31. Kadlec, V. Speed dating: An effective tool for technology transfer in a fragmented regional innovation system? *AUC Geogr.* **2019**, *54*, 57–66. [CrossRef]
32. Moussawi, S.; Quesenberry, J.; Weinberg, R.; Sanders, M.; Lovett, M.C.; Heimann, L.; Taylor, D.P. Improving student-driven feedback and engagement in the classroom: Evaluating the effectiveness of the speed dating model. *Int. J. Innov. Educ.* **2020**, *6*, 95–112. [CrossRef]
33. Dybas, C.L. News "Speed Dating" for Scientists and Journalists: Conveying geoscience news in haiku-short form. In *AGU Fall Meeting Abstracts*; 2006; Volume 2006, p. U43D-01. Available online: https://ui.adsabs.harvard.edu/abs/2006AGUFM.U43D.01D/abstract (accessed on 17 January 2021).
34. Muurlink, O.; Matas, C.P. From romance to rocket science: Speed dating in higher education. *High. Educ. Res. Dev.* **2011**, *30*, 751–764. [CrossRef]
35. Baron, S.; Patterson, A.; Harris, K.; Hodgson, J.; Cassidy, K. Strangers in the night: Speeddating, CCI and service businesses. *Serv. Bus.* **2007**, *1*, 211–232. [CrossRef]
36. Clarke, B. Report: Farmers and scientists. A cast study in facilitating communication. *Sci. Commun.* **2003**, *25*, 198–203. [CrossRef]
37. Spiller, A.; von Meyer-Höfer, M.; Sonntag, W. Gibt Es Eine Zukunft Für Die Moderne Konventionelle Tierhaltung in Nordwesteuropa? (No. 1608). *Diskussionsbeitrag* **2016**. Available online: http://hdl.handle.net/10419/147501 (accessed on 5 November 2019).
38. Berkes, J.; Wildraut, C.; Mergenthaler, M. Chancen und Perspektiven für einen Dialog zwischen Landwirtschaft und Gesellschaft für mehr Akzeptanz und Wertschätzung—Einschätzungen von Branchenvertretern aus NRW. *Ber. Über Landwirtsch.* **2020**, *98*. [CrossRef]
39. Zöller, K. Acceptance through Dialogue? A geographic study of German and American chemical dialogues. Doctoral Dissertation, University of Stuttgart, Stuttgart, Germany, 2005.
40. Mercer-Mapstone, L.; Rifkin, W.; Louis, W.R.; Moffat, K. Company-community dialogue builds relationships, fairness, and trust leading to social acceptance of Australian mining developments. *J. Clean. Prod.* **2018**, *184*, 671–677. [CrossRef]
41. Benard, M.; Buning, T.D.C. Exploring the potential of Dutch pig farmers and urban-citizens to learn through frame reflection. *J. Agric. Environ. Ethics* **2013**, *26*, 1015–1036. [CrossRef]
42. Destatis. Landwirtschaftszählung. 2020. Available online: https://www.destatis.de/DE/Themen/Branchen-Unternehmen/Landwirtschaft-Forstwirtschaft-Fischerei/Landwirtschaftszaehlung2020/_inhalt.html (accessed on 11 June 2022).

43. Thünen Institut. Dossier—Wohin Steuern (wir) Unsere Agrarstrukturen? Available online: https://www.thuenen.de/de/thema/wettbewerbsfaehigkeit-und-strukturwandel/wohin-steuern-wir-unsere-agrarstrukturen/ (accessed on 11 June 2022).
44. Berkes, J.; Mergenthaler, M. Speed-Datings Zwischen Menschen aus der Landwirtschaft und der Gesellschaft als Neues Dialogformat: Eine kommunikationswissenschaftliche Untersuchung. In Proceedings of the bei 60. Jahrestagung der GEWISOLA (Gesellschaft für Wirtschafts- und Sozialwissenschaften des Landbaues e.V.) Herausforderungen für die ländliche Entwicklung-Wirtschafts- und sozialwissenschaftliche Perspektiven, Online Conference, 23–25 September 2020.
45. Rammstedt, B.; Kemper, C.; Klein, M.C.; Beierlein, C.; Kovaleva, A. Eine kurze Skala zur Messung der fünf Dimensionen der Persönlichkeit: Big-Five-Inventory-10 (BFI-10). *Methoden Daten Anal.* **2013**, *7*, 233–249.
46. Donellan, M.B.; Oswald, F.L.; Baird, B.M.; Lucas, R.E. The Mini-IPIP Scales: Tiny-yet-effective measures of the Big Five factors of personality. *Psychol. Assess.* **2006**, *18*, 192–203. [CrossRef]
47. Kleinhückelkotten, S. *Suffizienz und Lebensstile. Ansätze für Eine Milieuorientierte Nachhaltigkeitskommunikation*; Berliner Wissenschafts-Verlag GmbH: Berlin, Germany, 2005.
48. Masser, K.; Ritter, T.; Ziekow, J. *Erweiterte Bürgerbeteiligung bei Großprojekten in Baden-Württemberg-Abschätzung der Auswirkungen der Verwaltungsvorschrift "Bürgerdialog" und des "Leitfadens für Eine Neue Planungskultur" der Landesregierung*; Deutsches Forschungsinstitut für öffentliche Verwaltung Speyer: Speyer, Germany, 2014. Available online: https://dopus.uni-speyer.de/frontdoor/index/index/year/2016/docId/608 (accessed on 17 January 2021).
49. Kühl, S. Gruppen, Organisationen, Familien und Bewegungen. Zur Soziologie mitgliedschaftsbasierter Systeme zwischen Interaktion und Gesellschaft. In *Interaktion–Organisation–Gesellschaft Revisited*; De Gruyter Oldenbourg: Berlin, Germany, 2016; pp. 65–85.
50. Dietz, T. Bringing values and deliberation to science communication. *Proc. Natl. Acad. Sci. USA* **2013**, *110*, 14081–14087. [CrossRef] [PubMed]
51. Glazebrook, T.; Noll, S.; Opoku, E. Gender matters: Climate change, gender bias, and women's farming in the global South and North. *Agriculture* **2020**, *10*, 267. [CrossRef]
52. Dehoff, A.; Roosen, J. Bäuerinnenstudie Bayern 2019—Ein Stimmungsbild zur Arbeits- und Lebenssituation sowie der sozialen Absicherung der Bayerischen Bäuerinnen. 2020. Available online: https://www.msl.mgt.tum.de/mcr/forschung/baeuerinnenstudie-2019/ (accessed on 17 January 2021).
53. Tannen, D. Gender differences in topical coherence: Creating involvement in best friends' talk. *Discourse Processes* **1990**, *13*, 73–90. [CrossRef]
54. Troemel-Ploetz, S. Review Essay: Selling the Apolitical. *Discourse Soc.* **1991**, *2*, 489–502. [CrossRef]
55. Lorleberg, W.; Hennemann, M.; Ring, L. Unternehmerische Verantwortung und Leistungen der Landwirtschaft für die Gesellschaft. *Agra Eur.* **2006**, *10*, 6.
56. Chen, S.-J.; Caropreso, E.J. Influence of Personality on Online Discussion. *J. Interact. Online Learn.* **2004**, *3*, 1–17.
57. Wüst, C. Corporate Reputation Management–die kraftvolle Währung für Unternehmenserfolg. In *Corporate Reputation Management*; Gabler: Wiesbaden, Germany, 2012; pp. 3–56.
58. Akitsu, M.; Aminaka, N. The development of farmer-consumer direct relationships in Japan: Focusing on the trade of organic produce. *Asian Rural. Sociol.* **2010**, *4*, 509–520.
59. Forsa. Kontakt zu Landwirten. Forum Moderne Landwirtschaft e.V. Gesellschaft für Sozialforschung und Statistische Analysen mbH. 2018. Available online: https://docplayer.org/123337046-Kontakt-zu-landwirten.html (accessed on 17 January 2021).
60. Spiller, A.; Gauly, M.; Balmann, A.; Bauhus, J.; Birner, R.; Bokelmann, W.; Weingarten, P. Wege zu einer gesellschaftlich akzeptierten Nutztierhaltung. *Ber. über Landwirtsch. -Z. Für Agrarpolit Und Landwirtsch.* **2015**. Available online: https://buel.bmel.de/index.php/buel/article/view/82 (accessed on 17 January 2021).
61. Taylor, M. Climate-smart agriculture: What is it good for? *J. Peasant. Stud.* **2018**, *45*, 89–107. [CrossRef]
62. Suarsena, L. Die LandFrauenorganisationen und ihr lokales Engagement im Spiegel der Regionalentwicklung. *Raumforsch. Und Raumordn. Spat. Res. Plan.* **2017**, *75*, 527–542. [CrossRef]
63. Feindt, P.H.; Dietze, V.; Krämer, C.; Thomas, F.; Lukat, E.; Häger, A. Kooperationsprogramm Natur und Landwirtschaft—Eine Möglichkeit zur Stärkung des Naturschutzes und der Zusammenarbeit von Akteuren im ländlichen Raum. Herausforderungen für die ländliche Entwicklung- Wirtschafts- und sozialwissenschaftliche Perspektiven. 2020. Available online: https://ageconsearch.umn.edu/record/305584 (accessed on 17 January 2021).
64. Fuchs, C.; Schreier, M.; Kaiser, U.; van Osselaer, S.M. Reducing Consumer Alienation: The Effect of Making Product Producers Personal. *ACR N. Am. Adv.* **2016**.