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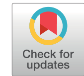
Forestry in interaction. Shedding light on dynamics of public opinion with a praxeological methodology



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ABSTRACT

Forestry institutions integrate divergent interests in forest uses into their management concepts, like recreation, timber production and nature protection. In this context, knowledge on public expectations of forestry is valuable to forest owners as well as administrations, especially in the face of the growing critical citizenship they encounter during their work. This paper examines findings from opinion surveys as well as studies of conflict and participation in order to describe the current dynamics in the relationship between forestry and the general public. It then explains in detail how a praxeological research design, grounded in American pragmatism, helps to conceptualize forest conflicts as interactional phenomena. The value of such an approach is exemplified through one case analysis from a broader "Sociocultural Forest Monitoring" carried out by *institution anonymized*. The article concludes with an assessment of the knowledge to be gained by the conceptualization of citizens' relationship to forestry as dynamic opinion formation with the help of a praxeological epistemology and methodology.

1. Introduction

Forests are important and contested resources, not only in the economic sense but for society's diverse and at times contradictive needs (McDermott et al., 2010). Especially in densely populated areas, the diversity of interests occasionally takes the shape of a conflict (Konijnendijk, 2008; Gritten et al., 2012). One widespread discord around forest uses is grounded in the competing rationales of timber production versus nature conservation, the latter having developed into a major policy objective on regional, national, and international level in the last decades (Niemelä et al., 2005). The resulting complex network of regulations, gives ongoing occasion for negotiation and struggle about the legitimacy of forestry practices. While many of these conflicts have developed into fairly institutionalized processes with political and administrative agencies, NGOs and associations as routine actors (cf. Krott, 2005, pp. 69–149), the interest of the study at hand is in understanding a more recent and a less established frontline: regional conflicts between citizens and forestry administrations or forest owners when forest management is perceived to be in opposition to public expectations of recreation or nature conservation. In such cases, the 'opponent' to forestry practices is a heterogenous general public, comparatively unorganized, and accordingly difficult to grasp. Broader developments in forest policy leave their mark on such conflicts, e.g. a general commitment to the importance of nature conservation on the part of citizens, but they usually occur and evolve outside of political arenas. In Germany, several forestry administrations were shaken by conflicts of this kind in recent years. The instances are few when measured against the overall contentment with forestry, as several surveys have pointed out (cf. Bethmann and Wurster, 2016). But contextualizing them within Europe-wide tendencies for an erosion of trust in administrations and changing expectations of forests in urbanized societies, they demand administrative, political and scientific attention.

In several countries, politicians and administrations have begun to actively request social scientific support to facilitate foresighted management and conflict resolution with regard to demands of the general public and civil stakeholders.[1] For some administrative goals, for example in the case of sustainable development, it is common practice to include the public in management decisions to some degree (Primmer and Kyllönen, 2006). Strategies range from incorporating evidence from social science research, to providing information for the public unilaterally, and to participatory committees with or without real political influence. In this context, the survey has become an important instrument to understand the public's relationship with forestry. But opinion surveys have limitations, especially when it comes to understanding challenges in the communication between forestry officials and citizens.

A growing corpus of literature on conflicts and participatory process sheds light on these blind spots (Eckerberg and Sandström, 2013).

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[1] In the German-speaking countries, one large resulting survey is the Swiss *Sociocultural Forest Monitoring* (Hunziker et al., 2012a, 2012b). Another study has been initiated by the state forestry administration of Baden-Württemberg, Germany.

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These studies show that the relationship to forests and opinions of forestry are dynamic phenomena that are partly shaped by communication and interaction with forestry representatives. Often, they mainly focus on procedural issues and put less effort into systemizing the attitudes citizens hold on the institutions they engage with. In the following section, we bring together insights from public opinion surveys as well as more process-oriented research into conflict and participation in forestry. From the literature, we bring out the argument that opinion is something that takes shape and is expressed situationally, and we suggest to explore the role of public opinion in forest conflicts as a dynamic object. After that, we unfold a methodology driven by a theoretical conception of interaction informed by the praxeological theory of American pragmatism. Specific methodological principles are defined so as to enable the analysis to establish a connection between the actions of conflict opponents and the contradictive worldviews that are documented within such actions. The methodology is put to practice with one case study from the *Sociocultural Forest Monitoring* research project (2015–2020), a study with a regional focus on forest-related conflicts in Baden-Württemberg in southern Germany, funded and conducted by *institution anonymized*. The article concludes with an assessment of the knowledge to be gained from the conceptualization of citizens' relationships to forestry as dynamic opinion formation.

2. Understanding the public's relationship with forestry

With the paradigm of sustainable forest management (SFM), forestry institutions have incorporated the ideal of providing services for multiple needs and expectations of the societies they serve. Given the complexity and contradictions within the goal to provide public goods for all citizens, social conflicts over the appropriate objectives of forestry institutions are inevitable (Eckerberg and Sandström, 2013). The developments in some regions of the world have shown that such conflicts can induce dramatic changes and challenges for the forest sector, especially when administrations cannot maintain the public's goodwill, respect and trust. In some countries, forestry has undergone an extreme transition after a crisis that began with the environmental movement of the 1980s (Maier and Abrams, 2018; Halvorsen, 2003; Dennis, 1988), though of course the history of social conflicts about forests' resources goes back much further (Niemelä et al., 2005). The US Forestry Service (USFS) is a particularly indicative example of escalating conflict: Over the years, the USFS has lost its authority to define objectives single-handedly and was forced to include participatory planning in almost every decision. Despite new management strategies, social groups' conflicting interests and the looming threat of administrative appeals and lawsuits, USFS administrations are still occasionally caught up in a gridlock with problematic consequences both economically and ecologically (Maier and Abrams, 2018; Germain et al., 2001).

In contrast, surveys throughout Europe indicate that so far, citizens trust the administrations that tend to their forests (Hunziker et al., 2012a, 2012b; Wippermann and Wippermann, 2010; Rametsteiner et al., 2009; Grant and Smillie, 2007). While conflicts occur between particular stakeholder groups (e.g. hunters, environmentalists and forest owners), the legitimacy of forestry practices and policies is largely uncontested in the general population. For example, a Swiss national survey (Hunziker et al., 2012a, 2012b) has documented widespread satisfaction: 88% of the participants are content with their visits to the forest. 68% agree with the amount of timber production in Switzerland. This number has almost doubled since 1997, indicating an increasingly positive image of the forestry sector. Similar tendencies have emerged from surveys in several German regions (see Bethmann and Wurster 2016; Wippermann and Wippermann, 2010), and likewise in a UK as well as a European meta-study (Grant and Smillie, 2007; Rametsteiner et al., 2009). Only a small percentage of people appear to be critical of tree felling per se, or of forest management standards more generally (Grant and Smillie, 2007, p. 13; Wippermann and Wippermann, 2010; Bethmann and Wurster, 2015). The UK meta-study holds evidence that citizens are more skeptical of forestry practice in their own local forests than they are of forestry in general (Grant and Smillie, 2007, p. 9) – an attitude that commonly leads to the stigmatizing labeling “Nimby” (“not in my backyard”) (Marg and Walter, 2013, p. 103). One might deduce from that a rather indifferent attitude of citizens as long as they are not directly affected or distressed by the consequences of forest management. Or, as experiences from participatory processes show: Citizens' interest in forestry is mostly incident-related. When there is no particular reason to engage with the topic, people give little thought to the fact that forests are managed (Bethmann and Wurster, 2016). In this context, Valkeapää and Karppinen (2013, p. 58) have contributed an interesting insight from Finland: “The more people knew about forest policy, the less legitimate they consider it to be.” Stakeholders such as private forest owners not only have more knowledge but also notice the effects of forest policy much more immediately than do ordinary citizens.

Looking at a range of literature that addresses forest conflicts (Niemelä et al., 2005; O'Brien, 2003; Halvorsen, 2003; Hellström, 2001; Rametsteiner et al., 2009), a number of relevant contexts can be identified for the decline of trust: changes in forest management (e.g. the implementation of automized procedures and altered woodland aesthetics due to natural regeneration) or increased environmental awareness, but also, more universally, a tendency towards distrust in public administrations and elected representatives. A growing relevance of critical citizenship can be observed in several European countries. In Germany, a term has been coined for this pheonomenon: “Wutbürger” (“anger citizens”). The *society of German language* voted for this expression as “word of the year” in 2010 (GFDS, 2010). Remarkably, it was first used in the context of cutting down old trees in an urban park in Stuttgart for a major railway infrastructure project (Kurbjuweit, 2010; cf. Stürmer, 2011). Certainly, administrations from other sectors are forced to respond to growing expectations on democratic standards in their procedures as well, but for forestry, the specific challenge is connected to the complex values and emotions attached to their objects: trees and woods (O'Brien, 2003). People have strong emotional ties to trees and forests, especially when they form landmarks at particular places people feel attached to (Creighton et al., 2008). As O'Brien (2003, p. 11) states: “Trees are potent symbols of nature, and eco-protesters have chained themselves to trees in acts of protest to stop the destruction of the countryside” – or, in the case of Stuttgart, in opposition to the perceived destruction of a public space. The aforementioned study on forest policy's perceived legitimacy in Finland (Valkeapää and Karppinen, 2013, p. 57 f.) has shown that laypersons have a particularly critical view of procedures such as clear-cutting and even-aged forest management. But more importantly, they question the procedural justice within forest policy and administrations – topics that our analysis of German citizens' initiatives turns up as well (see below). In this context, some citizens express their concerns on the internet, in social media and newspapers; they approach politicians, collect signatures and form citizens' initiatives[2]; and thus, foresters are prone to lose their exclusive expert status and power of definition (cf. Hellström, 2001, p. 37). Therefore, while the status quo (as reported from surveys) is a trustful attitude of the public towards forestry institutions in general, the legitimacy of the latter's procedures is fragile under current social conditions. Conflicts do occur when people feel affected by forestry measures.

One strategy for intensifying the dialogue with the public in the European forestry sector has been the implementation of participatory processes in management decisions, driven by the SFM paradigm (Tabbush, 2004; Kangas et al., 2010). Compared to the US example, procedures are usually less obligatory and less strictly defined.

[2] A national initative as recently been founded that serves as an umbrella organization: https://www.bundesbuergerinitiative-waldschutz.de/ (accessed: 10.12.2017).

Ambiguities over the possible extent and value of public access to decision-making hinder radical implementations (Rosenauer, 2011; Tabbush, 2004). Many foresters consider it unnecessary to follow through with public participation because they find their professional actions sufficiently legitimated in the mandate that stems from general elections and functional responsibility (Böhnke, 2011). Due to their professional socialization and self-definition as rational managers, they find it difficult to empathize with citizens' views (Buijs and Lawrence, 2013; O'Brien, 2003, p. 7). Nor are the responsible political authorities eager to implement participation measures (Maier et al., 2014). Furthermore, numerous aspects of social selectivity have been found to operate in participatory committees, giving rise to questions of environmental justice (Robson and Parkins, 2010; Halvorsen, 2003). Especially stakeholders who have a certain degree of professional interest more readily engage and get involved in forest politics, e.g. hunters, interest groups, NGOs – and the views of these groups are markedly different from the ones of ordinary citizens (Elsasser, 2007; see also Valkeapää and Karppinen, 2013; Tampakis, 2011).

Therefore, public opposition may be out there but might go unnoticed until conflict has turned into fact. Communication is then implemented bottom-up by protesting groups – and in this situation, trust and goodwill are fragile on both sides. Empirical inquiries into nature conservation attitudes and conflicts have underlined the importance of trust as a mediator in conflicts (Young et al., 2016), a predictor of acceptability of forest management (Ford et al., 2014) and a premise for successful participatory procedures (Robson and Parkins, 2010). Halverson (2003, p. 535ff.) has concluded from her quantitative case study of participatory processes that trust in institutions can also be transformed during the process if this process is perceived as fair and participants feel that they have "opportunities to speak and to be listened to" (ibid., p. 540). She found that laymen go into participation without fixed opinions; what they develop to believe depends on the quality of interaction they experience (Halvorsen, 2003, p. 535ff.) – and so does the likeliness of resolving conflict (Ångman et al., 2011, p. 1).

Another strategy to explore the public mind in forestry matters is to incorporate results from social science studies on the topic into management procedures. The aforementioned studies of citizens' perspectives on forest management can be distinguished into two different types of studies.

The first type is the opinion survey that has a long-standing tradition in forestry research (e.g. Hockenjoss, 1968; Dennis, 1988; Kangas and Niemeläinen, 1996; Rametsteiner and Kraxner, 2003; Grant and Smillie, 2007; Rametsteiner et al., 2009). Rametsteiner et al. (2009), who did a comparative study of EU-wide public perceptions of forests and forestry, can serve as an indicative example of opinion surveys that demonstrates the value, but also questions left unanswered by this methodology: The authors combine a meta-analysis of previous public opinion surveys with their own one as well as a smaller stakeholder survey. In the latter, experts from the forest sector across Europe are asked about their views on the public's forest-related perceptions. With this combination of complementary perspectives, the study slightly shifts its focus to the more dynamic matter of mutual understanding between the public and professional stakeholders. As a result, expert misjudgments can be identified: They falsely anticipated opportunities for recreation to be ranked as one of the most important topics. They also completely misinterpreted the correlation between age and the importance of recreation. But within the logics of survey methodology, it cannot be specified at which points experts misconceive the formation of public opinion: How does the public develop opinions on forestry? Which aspects do experts oversee, and why? Looking at the other studies quoted above, a similar pattern emerges: Opinion research does not pay attention to the processes of public opinion formation. They provide generalizable data, but little knowledge of the dynamics of opinion formation, communication and trust-building. As has been argued above, people with little knowledge of forestry do not have explicit opinions at hand that can easily be collected in a questionnaire, and their answers are unlikely to be consistent and deeply rooted in the complex values that underlie their thought and action (cf. O'Brien, 2003, p. 3–5; Krott, 2005, p. 18).

All of this becomes a more urgent question in the face of increasing conflicts and signs of an erosion of trust in forestry institutions. Picking up the example of Rametsteiner et al. (2009), a study by Vining (1992) that focused on preconditions of interaction between different groups has shown that mutual misapprehension is a major obstacle to successful conflict resolution in forestry, pointing to the importance of a more process-oriented understanding of meaning-making. As a second type of research, more recent studies of interactions between forestry and the public have emerged, e.g. case studies of conflicts, participatory processes and civic engagement. Within this field, there are many examples of insightful quantitative research on conflicts and participation in the context of forestry (Halvorsen, 2003; Gritten et al., 2012; Germain et al., 2001; Tindall et al., 2010; Tindall, 2003). But also, this line of research has often benefited from the capability of qualitative methods for capturing processes (cf. Robson and Parkins, 2010; Schlüter and von Detten, 2011; e.g. Hellström, 2001; Juerges and Newig, 2015; Tuler and Webler, 1999).

While studies of interactions between forestry and the public make important observations about legitimacy issues and criteria for successful communication, they do not systematically conclude from their data tendencies in public opinion on forestry. They rather say which features determine a positive outcome of a processes and what participants' strategies are (e.g. Young et al., 2016; Juerges and Newig, 2015; Kangas et al., 2010; Elsasser, 2007; Aasetre, 2006; Niemelä et al., 2005; Halversons, 2003; Buchy and Hoverman, 2000; Tuler and Webler, 1999;) than providing an analysis of how people relate to forestry as such. In this sense, the two types of research we have distinguished here serve separate and complimentary perspectives. The study presented in this paper is more in line with studies of interaction, but simultaneously makes an effort to analyze from instances of interaction what characterizes citizens' attitudes and opinions and how their attitudes on forests operate as a driving force in their involvement in conflicts. The study does so by grounding analysis in theoretical and methodological considerations that regard practice and meaning as inseparable notions. Qualitative researchers within the interpretive and the praxeological paradigm have argued that categories like opinion, attitude, perception, or value must not be operationalized as properties of individuals, but have to be understood in terms of process: They dynamically evolve, change and are negotiated within social interaction (Blumer, 1969; Bohnsack, 2010; O'Brien, 2003). They are produced and modulated within learned cultural practices of using and perceiving forests (Schraml and Jay, 2014). In social conflict, they become dynamic strategies of actors in the face of the political and discursive structures in which they navigate (e.g. Ångman et al., 2011). Accordingly, any expression of opinion as well as any description of behavior depend heavily on the social situation in which they are elicited. And social practice itself is the most valid indicator of the meanings people attach to forests and forestry. The following section explains in depth the potentials and requirements of such a methodology.

3. Methodology - a pragmatist approach

With our interest in dynamic processes and interaction in view, our research utilizes a mixed-method approach with qualitative methods at the core. It focuses on two types of processes: (1) instances of communication (e.g. public relation activities) and (2) instances of civic engagement (e.g. local initiatives founded in resistance against forest harvesting or clear-cutting). In each field, the exploration starts with one case, and while analyzing it, more cases are subsequently added so as to outweigh the limits entailed by the first one (theoretical sampling, see Glaser and Strauss, 2006/1967).

Our main interest being the nexus of interaction and meaning in conflict dynamics leads us to draw on American pragmatism in the

tradition of John Dewey and George Herbert Mead. Its basic assumptions are that meanings are not separate from actions and that any human action is a form of interaction – an adaptive process oriented towards one's environment (Dewey, 2012/1922, 1938). Any action begins with understanding the meaning of one's surroundings. In the subsequent course of action, experiences are formed that again become the source of new evolving meanings. The function of meaning-making is to establish ordered perceptions of a world one can act in. The same is true for natural or social environments: In social life, actions are oriented in their course by the acknowledgement or anticipation of other actors' reactions to it (Mead, 2015/1934). In this microscopic exchange of information, actors constantly change their own environment and readjust their intentions to the information they gather. In line with this dynamic, any perception of the world is subjectively more stable and reliable when it is coherent with shared group experiences. The resulting interpretive frames of social groups usually operate as incorporated, routine knowledge. They remain pre-reflexive. Only when routines fail to successfully guide action, new experiences alter or shatter unserviceable frames. It is through this interlocking of action, meaning-making and communication that a sense of a shared world and coordinated interaction are achieved – the foundations of social structures and institutions. In consequence, understanding communication, verbal or non-verbal, is the starting point to understanding social structure.

American pragmatism is one major theoretical influence in what has become known as the “practice turn” in social research. Behagel and Turnhout (2017) distinguish between a sociological, a posthumanist, and a pragmatist approach, the latter focusing on “situated agency” (ibid. 3) within local contexts. In the last years, practice-based approaches have been applied in the field of forest policy research (c.f. Behagel and Turnhout, 2017; Nicolini, 2016, 2017; Arts et al., 2014, 2016), analyzing policy not as a “set of external objectives” imposed on actors, but as a dynamic process that unfolds locally within actions (Behagel and Turnhout, 2017, p. 4). They are related to the study we present here in epistemological terms, but cover different topics (e.g. governance, and policy effects in community managed forests). With few exceptions (Ångman et al., 2011), this theoretical stance has not been used in the studies on public opinion or a public's interactions with forestry that inform our research (see chapter 2). The epistemological commonground that we share with practice-based forest policy studies is the focus on practices through which people engage with forest policy in the broadest term. Summarizing some main characteristics common to the different practice-based approaches, we draw on Behagel and Turnhout (2017): Practices tell us how people relate not only to other people, but also to ‘things’ such as their natural environment, technologies, or institutions (ibid.), clearly all important properties of a forest conflict. Accordingly, practice-based research highlights practices as the “basic unit of analysis” (ibid.), rather than chosing individuals, institutions, or structures as analytical starting points. To put it more accurate, the latter are localized in the practical doings of people, in their interactions, which bring institutions and structures to life. Within the field of practice research our study can be categorized as the conflict-sensitive approach, following a distinction made by Nicolini (2017): it “interrogate[s] practices and their associations in terms of the effects that they produce, thus addressing the issue of power” (ibid., p. 31).

Nicolini (2017, p. 32) states that doing practice research is more a matter of methodology than one of theory: the methodological choices we make determine our unit of analysis, and what we are able to conclude from it. For example, meanings or interpretive frames in the pragmatist sense seldom become objects of reflection or explicit discourse and can therefore hardly be found out through straightforward asking (ibid., p. 29). And in conflict situations, the course of action cannot be predicted by predetermined differences either in interest or in values of the opponents – the resolution or intensification of conflict is mediated by mutual interpretations of actions and negotiations of shared meaning (Ångman et al., 2011). Therefore, the methods we use are designed to observe instances of social interaction and hermeneutically reconstruct dynamic meanings implied in the action. While qualitative methods are generally more sensitive for capturing process, there are great differences within qualitative methodologies regarding theoretical stance and handling of data. As Siegner et al. (2018) have shown with respect to qualitative document analysis, most qualitative studies in forestry research restrict their scope of analysis to textual ‘content’ and pay little attention to the performative aspects implied in their data. What kind of social action is ‘publishing a document’ or ‘telling your version of the story’? Whom does it address? To what end? Following Siegner in the assessment that it is an unfortunate limitation to overlook the actions implied in texts and speech, we use the following section not only to describe our methods but also to define a number of practical principles that guide the conceptualization and analysis of our data – as instances of social action – in line with the pragmatist framework.

3.1. Participant observation

The most straightforward way to study the doings of people is to be there, observe and document how actions unfold and entangle, and learn how to participate in them – in short: to do participant observation (Dewalt and Dewalt, 2002; Spradley, 1980; Sedlačko, 2017; Nicolini, 2017, p. 27). One of its basic assumptions is that “what people say is often a poor predictor of what they do “(Jerolmack and Khan, 2014). Also, a lot of relevant aspects of the organization of social life are ‘mute’ (Hirschauer, 2001): practices that do not consist of language and are poorly represented when put into words, e.g. routines and commonsense practices, or guilt and shame-laden behavior, e.g. implicit norms that contradict formal ones (c.f. Schraml, 1998). Observing instances of forest conflicts gives the researchers the advantage of a) witnessing processes of forest-related interaction as “real time activity” (Nicolini, 2016, p. 3) – and not merely relying on accounts from hindsight; b) having access to contextual information that might explain conflict dynamics; c) accessing ‘unspeakable’ aspects of the relationship that both foresters and lay citizens have towards forests, especially taken-for-granted meanings that would not be explicitly uttered in interviews.

3.2. Group discussions

Group discussions are an ideal method to paint a more complex picture of opinions and how they evolve. This method is not identical with the more common focus group, but some versions of focus groups have the same objective of analyzing group interaction (Hollander, 2004, p. 606; Flick, 2009, p. 195–209). The main difference is that the principles of conducting and analyzing group discussions are grounded in a theory of collective action and meaning-making and strictly regard the whole group as the object of study, not the individuals it consists of (Bohnsack, 2010; Bohnsack, 2010). Group discussions are conducted with natural groups, in our case members of the same initiative or colleagues at a forestry commission office. The basic assumption is: equivalent to everyday life, participants of group discussions do not express their views in a social void; they speak with an audience in view and negotiate their views with others (Bohnsack, 2010; Bohnsack, 2010; Morgan, 1988). The researcher looks at the interplay of mutual reaction and how participants construct and express meaning through their interaction. The goal of this method is to identify processes of argumentation and opinion formation as well as to understand the underlying structures that inform them. On a practical level in analysis, such an understanding can best be reached by sequential analysis (Maiwald, 2005; Deppermann, 2013), relating every utterance to the conversational context it is situated in. In this sense, we conceptualize talk not as a mere medium to deliver information, but as a form of social practice. In the case of citizens' initiatives for example, collective meaning-making is a crucial element of the collective and individual

actions undertaken by the protesters.

3.3. Narrative, episodic and go along interviews

In many cases, interviews only give indirect access to the practices of interest in a study (Nicolini, 2017, 29). But when studying conflicts, verbal practices such as speaking, narrating and arguing can be prompted in interviews and add to a fuller picture of the situation, when analyzed accordingly. We conducted narrative and episdoc interviews (Schütze, 1977; Flick, 1997; Bauer, 1996; Bamberg, 1997; De Fina and Georgakopoulou, 2015) in order to understand all perspectives involved in an interactional instance, and also to gain insight into interactional episodes that we could not witness ourselves. The interviewees were asked to deliver rich and context-laden narratives of the evolving conflict from their point of view, and to reproduce memories of relevant interactional episodes. Interviews with key actors were, whenever possible, conducted in the forest, at sites that were relevant to the conflict. These were based on the methodology of the 'go-along method' (Kusenbach, 2003).[3] The 'go along' stimulates the interviewees to audibly express perceptions, interpretations and recollections attached to places and practices. By 'going along' with representatives of forestry administrations and citizens' initiatives, the arguments and experiences revealed in group discussions and interviews can be interpreted in connection with corresponding patterns of using and perceiving forests, thus gaining a more wholesome understanding of the viewpoints of all conflict parties.

3.4. Basic principles of data analysis

The analysis of the data is guided by a number of principles that are implicated by the theoretical framework detailed above:

1) *Speech is action*: What people say and how they say it documents a social action performed with regard to their counterparts' assumed perceptions and reactions. Interview studies that only focus on the 'content' of what is being said ignore the social functions of speech as a form of interaction. By applying the procedure of sequential analysis, speech can be interpreted context-sensitive, as a situated verbal gesture (Maiwald, 2005; Deppermann, 2013). In order to uncover patterns of communication, special attention in the analysis is given to moments in which meanings shift, thus documenting processes of negotiation.
1. *Example: Explaining the ecological value of leaving tree tops in the forest after a thinning operation to an upset citizen, a forester says that they are "without value" – referring to the economic dimension of value only and provoking an aggressive reply by the citizen: "Then they are worth as much as you." For the forester and bystanders, this remark is a document of the disposition of protesters to become personal and insulting, but it is also evidence of the emotional reactions economizing language triggers in protesting citizens.*
2) *Interaction reflects structure*: While looking at singular instances of interaction, we use comparative analysis as a means to identify patterns and from there work backwards to the underlying social structures.
2. *Example: One citizens' initiative recurrently experiences ridicule from foresters and from members of environmental groups when they express quasi-professional assessments of the forest's condition. In contrast, another initiative makes a great effort not to give any occasion for ridicule. Both groups act in a similar situation, being lay critics of professional action, but can be observed to draw on different social and cultural resources that impact the effectiveness of their communication. The comparison draws attention to structures in preconditions and in outcomes of initiatives strategies.*
3) *The researchers are an integral part of the situation they study*: Assuming that communicative gestures are aimed at other actors, the analysis turns up a multitude of actions that are performed with regard to the researchers. Reflecting one's own positionality in the research is an indispensible element of the analysis (Bethmann and Niemann, 2012).
3. *Example: In many instances, members of citizens' initiatives greet the researchers with ostentatious familiarity and hospitality. These incidents are exemplary for what is a crucial part of the interactional repertoire of such initiatives: the performance of group identity and alliance. It serves to create a sense of togetherness despite often immense differences within groups, and also to objectify and add weight to one's claims as stemming from collective interest.The inclusion of the researchers in in-group practices shapes the research process and, even if to a lesser degree, the conflict. At the same time it is a source of insight for the researchers who experience interactions first-hand.*

4. Clash of mindsets – the interplay of practice, perception and meaning in citizens' and foresters' conflict behavior

4.1. Case portray and data corpus

After explaining the basic logic of the methods, we present results from one of our case studies so as to demonstrate how exactly our method design grasps complexities of meaning and process and to show what can be gained from this perspective. The case consists of several incidents related to a conflict on a thinning procedure in a protected landscape. While foresters and the majority of nature conservationists who comment on this conflict assess the thinning as an unproblematic, common procedure, local citizens who have discovered marks on tree trunks (signifying the scheduled cutting of these trees) react with shock and concern. They collect a significant amount of signatures in the neighborhood, try to make allies with NGOs, politicians and the press, and found a citizens' initiative in order to organize their protest more effectively. Several attempts on the part of local politicians and forestry representatives to resolve the conflict through public discussion of the matter fail, and eventually, the forest administration implement the contested measure. After a while, resonance from the press recedes, and with it the initiative's activities.

This case is illustrative of the challenges that outbursts of critical public opinion bring to forestry practitioners. The properties of the conflict dynamic we identify in the analysis bear resemblance to other cases we have explored. They point to differences in perception and interpretive frames of the parties involved, to dialogue obstacles and to patterns in the dynamics of mutual resistance and conflict escalation.

In order to capture the case in its entirety, it was important for the researchers to directly observe encounters and interaction between the opponents and also to allow each group to narrate their own version of events. The data corpus of the case contains of:

- 1 group discussion with representatives of the citizens' initiative (gd/ci);
- 3 narrative interviews with representatives of the forestry administration who were responsible in this particular case (i/f1–3);
- 2 'go-along interviews' on-site, one with the forester responsible for the operation (audio-recorded (ga/f)) and the other one with members of the citizens' initiative (fieldnotes, ga/ci);
- 9 episodic interviews conducted on the phone with representatives of environmental organizations (4), local politics (3), municipal administration (1), and with a local resident who was involved but did not join the initiative (1) (i/4–13);
- extensive fieldnotes from two meetings between the quarreling parties, one on-site (f/os), the other one having been a town-hall meeting (f/th), based on simultaneous observations by two different researchers; and.

[3] See also connoisseur approach (Mellqvist et al., 2013) and walking interviews (Skår, 2010; Creighton et al., 2008).

- a documentation of email communication (ec/f).

4.2. Case analysis

4.2.1. Seeing is knowing

Analyzing the semantics of citizens' speech from the interviews, group discussions and observations, we found a frequent use of words which indicate a sensory and particularly a visual relationship to the forest, with terms such as: looking, seeing, insight, prospect, peeking, appearance (plus terms that are difficult to translate from German, e.g. "offensichtlich", a word meaning "obviously", but rooted in the word "sight"). It appears that for citizens, the act of looking is an important way of gaining information on the forest site, as well as a strategy of validating their experience. Accordingly, they often define fault in forestry practice along the lines of visible iniquities:

"you can still see the tracks, yes, where the vehicles were driving through back then, this means the soil is ruined, and in this way, they are destroying the forest step by step".[4]*(gd/ci).*

In the opposite direction, a romanticized narrative of the ideal forester's work ethos is also defined by visuality, for example in this quote by a careful and caring gaze:

"he goes purposefully, looks at the trees, and he says he actually only takes the old and large ones". (gd/ci).

For the citzens, visuality serves as a subjectively reliable source of information, as well as as a symbol of a considerate relationship to forests.

How strongly visual lines of arguments permeate the interpretation of forestry practices can be exemplified with their discourse on sustainability (gd/ci). Forestry's self-perception is based on future-oriented planning, sustainability being a concept foresters are proud to have originally invented. However, in our conflict case (and in other comparative cases), citizens especially question the sustainability of forestry operations. Some claim that forestry "exploits ruthlessly", only seeks to "maximize profit", and ignores the future stability of the respective forest; or they argue that forestry has become "plantation forestry". The data shows that this is at least in part connected to the immediacy of visual perception: In the past, afforestation was a visible sign of sustainability – the current trend towards natural regeneration is a less obvious management activity and often imperceptible to the lay person. In the group discussion, the initiative members collectively complained about the tendency towards neglecting afforestation, and one person portrayed clear-cutting in a nearby private-owned forest as examplary in comparison to the irresponsible management of the state forest:

"Over there […], there they are clear-cutting, nuking down whole hectares, but they are planting conifers. […] THEY are at least afforesting. "(gd/ci).

Although natural regeneration is arguably more in line with ecological processes, in the interviewees' eyes, it seems the less responsible choice. Visual evidence of sustainable action has disappeared. Among the members of the initiative, we found a general tendency towards acknowledging as evidence only what is directly visible to them. What they see is often the most trustworthy evidence they can get hold of within the complicated realities of forest management and of the conflict at hand.

Accordingly, when the citizens engage politicians, environmentalist or foresters, they urge them to go to the forest in the hope to establish a shared visual experience. When the group talks about meeting a politician who had actually prepared the meeting with a visit at the site, one person concludes:

"at that moment, I felt taken seriously, […]at least he makes the effort to go out and see if he might get an insight, to know what this is really all about". (gd/ci).

Even the question how *deeply* someone has walked into the forest with them and whether the person actually *looked* becomes a crucial issue in debate (gd/ci). They complain about a forest official who meets them only at the forest edge. Moreover, they are upset about posters he brings to the site that explain procedures with prefixed arguments. Thus despite a huge effort made on his side, he is not perceived as open to witnessing in person what the citizens claim to have seen. The researchers have made a simliar experience with several protest groups: What the participants want to relate to us is best demonstrated through the act of showing, not with words. They propose to combine interviewing with a walk at the site or enthusiastically welcome a 'go along' suggested by the researchers. Visiting the forest personally is read as a gesture of respect for the forest *and* for the struggle of the citizens.

4.2.2. The powers of expert reasoning

In contrast, forestry's arguments rely heavily on theorizing the invisible: Elaborating operations to interested and concerned citizens, foresters present technical background information, numbers and management principles, abstract considerations and arguments which all arise from sources of knowledge not easily accessible to citizens. In this context, the strategy of trusting one's own eyes can be understood as a form of resistance against an overwhelmingly powerful and knowledgable opponent.

Abstract reasoning can even have counterproductive effects on the audience. It seems cynical for citizens when their perceived sensual evidence in the local forest so obviously appears to contradict the explanations given by administrative experts. The following quote exemplifies how the group reenacts professional justifications in order to demonstrate their absurdity and apparent falsehood:

Discussant A: When we were at the site with Mr. XY, the best thing was his argument, (quotes Mr. XY in condescending tone)"the safety of the citizens, when they walk through the forest that no branch falls on their head".

Discussant C: (laughs).

Discussant A: and then I look up and there hung, in a tree, a HUGE part of another tree that was felled, hung half- (laughs) made me think, if THAT falls on my head, THEN I sure am dead. Does the little twig fall an my head, that's no harm, at all.

Discussant C: That is not- That is just justification. (gd/ci).

Safety concerns are routinely mentioned as a reason for the cutting of individual trees, although the danger they pose may outwardly be invisible. On the other hand, the cutting itself leaves their favorite hiking path in a condition that poses an immediate danger of tripping and hurting themselves. The latter is a course of events that feels much more real than the vague possibility of being hit by a falling branch – and actually did occur while members of the initative showed the researchers around on-site (f/ci). When discussing the descrepancies between 'administrative storytelling' and immediate experience in the group context, citizens can get into a rage of agitated and bitter remarks (f/ci; gd/ci).

The domination of theoretical perspectives in forestry discourse does not exclude citizens completely, but it assigns them a subordinate position: the inexperienced interpretation of visual evidence against the power of figures and science. What is at stake for the citizens is not only the trees they want to rescue – it is also the legitimacy of their experiences as valid knowledge. Rather, in order to be able to participate in the discourse at all, they have to deny their own interpretive frames. They try to objectify their immediate and sensory relationship to the forest and translate it into factual discourse. This can be exhausting for both sides:

"It took me years to gain enough professional competence to be able to talk with the foresters about the problems. You have to bring evidence to find a leverage point – and this is only possible through expert knowledge." (gd/ci2 – comparative case).

Citizens must make a great effort to acquire expertise and to derive arguments from it – but necessarily fail to establish a level playing field

[4] Quotes from transcribed recordings and fieldnotes are translated from German into English, sticking as closely as possible to the original semantics and syntax.

on the practitioners' terrain. Both foresters and environmentalists tend to hold the people who enter the terrain of professional discourse at a standard too high to match. At one occasion, an environmentalist publicly ridicules a citizen who assumes deer to be better adapted to a dense forest (f/th). Another environmentalist present at the discussion also shows limited empathy for the standpoint of citizens in a subsequent interview:

"The citizens did not really go into the arguments. They said, we just want trees, arguing without facts so to say, just emotional. (…) The citizen who feels threatened or believes the forest to be threatened, maybe he- I don't know- should maybe just walk through the forest and count trees and just see how many big trees there are. He should just inform himself better." (i5).

The environmentalist demands from citizens to inform themselves better in terms of "facts" – over which they as laymen have no power of definition, subsequently likely to end up getting the short end of the stick in every discussion. For foresters on the other hand, the efforts of citizens to 'talk fact' produce the impression of unauthentic and erratic arguing. In their eyes, the citizens are trying to instrumentalize random knowledge without contextualizing it adequately.

Turning the gaze to analyzing the expressions of foresters in more detail, we found that even when making an effort to relate to citizens' perspectives, they have immense difficulties to address the conflict in a language other than expert jargon (i/f1; ec/f; f/th). Indeed, forest representatives tend to internalize their expert perspective up to naturalization:

"I'm a metropolitain originally; […] back then, I had no natural relation to forests myself. Because I had no previous experience like relatives who were in forestry or anything like that". (ga/f).

In the forester's eye, the *natural* relation to forests would be *professional*. It follows implicitly that other relations to forests are, so-to-say, unnatural. Even when acknowledging a heartfelt general respect for the relationship citizens form towards forests, empathy is very difficult to achieve.

The professional relation to forests that foresters incorporate in the course of their occupational socialization rests chiefly on the primacy of economic thought and reasoning. Even if foresters care for the ecological and social functions of forests equally, their practice is dominated by economic procedures and all forest functions are rationalized as management goals in economic terms. Dichotomies like fact-based vs. emotional and realistic vs. romanticized characterize their idea of what distinguishes them from citizens.

Lay persons, even those who participate in initiatives, may theoretically approve of using timber, but their *practical* relationship to the forest is structured in extreme contrast to this professional practice. Indeed, it is especially the representation of *all* values in economic terms which concerned citizens often resent (see also: analysis in section 3). It contradicts their view of trees as individualized and majestic life-forms ("tree giants", ec/f) that ought to be granted respect even when cut down. The very language foresters apply when explaining their actions reinforces citizens' impression that they act entirely profit-oriented.

„only for THIS REAson, those trees remain in the forest, because they can't earn anything from them. Everything valuable has been taken from the forest. THIS is really sad. "(gd/ci).

Why trust your enemy?

Only in very few cases, the rationale and benefit of forestry practice is immediately tangible in a sensory way. This increases the intricacy of conflict solution: The probability that citizens believe in experts' theoretical arguments rests entirely on their confidence in foresters. In conflict situations when this confidence is already weak, trust in expertise is correspondingly low.

As a result, citizens persistently reinterprete information presented to them within already established interpretive frames. In order to give one more example of this dynamic, we come back to the brief episode analyzed in section 3 where the value of tree tops is debated. The broader context of this episode is that after the thinning has taken place, citizens complain particularly about the untidy state the forest is left in, of damaged trees, branches and tree tops being left "regardlessly" at the site (gd/ci; f/os). For them, this is visual evidence of an uncaring attitude: Forestry takes from the forest only what is economically efficient and neglects the rest. This behavior is read as a sign of disrespect for the dignity of the trees they took. During an on-site inspection of the place, the exchange quoted above takes place in which one initative member insults the attending forester as being just as worthless as he claims the tree tops are (f/os). This exemplifies a common misunderstanding: The expression "worthless" (or "without value")[5] is a technical term for the forester, but it triggers an emotional reaction in the citizen whose intention in the first place was to bring up values that go beyond the economic. The following interaction exemplifies how actors alter the course of their dialogue and reinterprete their behavior mediated by even subtle communicative gestures and group dynamics: After several bystanders shake their head and cast grim looks at her, the speaker tones down the aggressive implications of her speech immediatley, adding: *"then they are worth as much as myself and everyone here, since they are much older than us"* (f/os). Later that day, she gives an account of the incident to her friends, blaming the forester to have reacted oversensitively, her intention never having been to insult him in the first place (f/os). By reframing her actions explicitly, she secures the support and solidarity of her group.

Following this incident, the forester highlights the ecological value of leaving tree tops and damaged trees in the forest, pointing to the obligations tied to Forest Stewardship Council certification (FSC). After a few more questions, the people's critique of this particular problem wanes – for the moment. Much later that day, when the group comes together in a more private setting, they reassure themselves of their original interpretive frame. Once they are set free of the superior arguments of an expert, the new information on FSC is again assimilated into the notion of profit-maximizing. As a voluntary label, they suspect, FSC must be implemented in management just for one reason: the selling of trees at higher values – at the cost of citizens' access to an undisturbed nature (f/os). The effect such reinterpretations have on foresters is just as frustrating as the citizens' experience of 'not being heard'. It gives forest experts the impression of sometimes inapprehensible stubbornness and irrational demands, and it induces them to seek relieve in occasional ridicule about (in their view) absurd and false accusations. Unsurprisingly, the data shows that citizens regularly do not feel taken seriously when communicating with forest experts.

4.2.3. Dialogue on a level playing field

In comparison, successful instances of dialogue show what adapting the opponent's viewpoint – quite literally – can do for conflict resolution: to physically take the standpoint of the citizens by meeting them on-site, looking at the stock together, listening to their concerns, and understanding what it is that they see. Only after that – if at all – can relating new information stimulate a new perspective and change what can be seen.

This may be illustrated by portraying the most successful on-site dialogue in the almost deadlocked conflict of this particular case (f/os). Even though the parties were already estranged beyond the possibilities of spontaneous reconciliation, the event led to a surprising appreciation of the forester as a person and to a recognition of his expertise, considering that circumstances were dramatically unfavorable: The citizens had invited politicians and the press to the site without informing the forest administration. One forestry official found out and attended the meeting unexpectedly. Despite the fact that the gathering on state forest ground was unlawful in the strict sense, the forester did not intervene and gave everyone the time to express themselves and to voice their

[5] In German: "wertlos", which can mean both "worthless" and "without value".

concerns at length, responding *only* to those concerns brought up without going too far afield with further explanations. This behavior gave almost no occasion to aggressive verbal attacks, which ceased to occur throughout the event, and it also ensured that the expertise given actually matched the worries and interpretive frames of the citizens present. When distrust in expertise and the incapability to empathize with the experiences of ordinary citizens are crucial tripping hazards of conflict communication, the strategies observed in this situation were not a universal cure but a fruitful starting point.

5. Concluding discussion

Epistemologically, the research presented here can be seen as part of the turn to practice theories in forest policy research (Arts et al., 2014, 2016; Behagel and Turnhout, 2017; Nicolini, 2016, 2017), with American pragmatism being a theory that draws attention to what people *do*, much more than what they say – or to *how* they say it, when one looks at talk as a social practice. It is less concerned with formal analysis, but with analyzing social structure and meaning implicated in actions. Accordingly, the methodology of the study was designed to grasp the whole specter of practices that define the actions of the people involved: verbal practices like narrating, arguing, falling silent, and perceptual practices like looking, measuring, taking in a scene, etc. The analysis explores how opinions of forestry are formed within the general public and how interpretive frames and perceptual practices inform, reinforce and change these opinions. From the observations portrayed in an exemplary case analysis, first conclusions can be drawn that will be further detailed and validated by comparing them with more cases in our ongoing research. To conclude the paper, they are discussed briefly in the light of literature on conflicts and civic participation:

While foresters often hope to convince with factual information and expertise, they overlook that all conceptions of forests (their own as well as citizens') are predominantly characterized by *practical* relationships to the forest. From their practice, foresters bring along a strong management perspective and have to make an immense effort to empathize with citizens' viewpoints. Taking citizens' stances – by looking and listening – is a prerequisite to that.

One common misunderstanding of public's attitudes is that their insistence on visuality is a sign of mere aesthetic values (cf. Tindall, 2003). However, visuality is much more than aesthetics; it reflects a social position within the relationship to forestry, a struggle for autonomy against the defining power of 'invisible' professional truths and for the recognition of one's own experiences as valid knowledge.

Citizens who engage in matters of forest policy or management enter the interaction without fixed meanings (Halvorsen, 2003; Ford et al., 2014). They learn and acquire their knowledge and opinion during the process of engagement and develop new frames of interpretation. This can lead to a more positive view of forest management (Halvorsen, 2003, p. 539). But the public does not receive and interprete forestry's assertions as neutral, disinterested information, nor should they (cf. Idrissou et al., 2013). Protesting groups also develop their own group expertise, often grounded in shared experience and accessible (visual) evidence. They develop shared narratives that help reaffirm experiences they have already established (e.g., the suspicion of profit-oriented action). These interpretive frames can integrate new and contradictive information without being fundamentally reorganized, especially once trust in experts is lost. But when citizens are granted room for their own interpretations of the situation, professional knowledge is more likely to be recognized as one valuable source of information (among others). In line with this, research on participation has shown the importance to grant concerned citizens "ample time to talk about their hopes and fears" (Halvorsen, 2003, p. 537). On the other hand, information overload in expert jargon has been observed to work *against* the establishment of a common understanding between the parties (cf. Tabbush, 2004, p.151).

The values citizens attach to trees and forests are multiple, contradictory and dynamic (O'Brien, 2003, p. 3). But in conflicts, citizens are forced to disambiguate complex feelings and almost necessarily appear to be inconsistent in their arguments. On professional terrain, laymen automatically tend to take a subordinate position (cf. Aasetre, 2006, p. 91) and try to adapt to professional language. In this atmosphere, it is difficult for foresters to begin to understand what citizens' concerns really are – even more so because foresters generally struggle to take responses of citizens seriously as their own professional socialization and everyday practice as "managers" of ecosystem functions detaches them from emotional language (O'Brien, 2003, p. 7; Buijs and Lawrence, 2013).

To do justice to the complexities and dynamics of public opinion, not only forestry is called out to make an effort. Furthermore, forestry research ought to "harness the best of social science research capacity" (Robson and Parkins, 2010, p. 695). Praxeological methodologies that shift focus to the meanings and structures implied in social action are well-suited to the task. They are a particularily fitting instrument for the requirements of practice-based research, and generally help to overcome the limitations of mere 'content' analysis in qualitative research (c.f. Siegner et al., 2018). The analysis presented here was meant to exemplify the direction such research can take from one case study, and more comparative work is needed to determine the general structures underlying public opinion formation and related forest conflicts.

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