

FULL PAPER

Ontology of opposition online

Representing antagonistic structures on the Internet

Die Ontologie der Opposition online

Wie antagonistische Strukturen im Internet repräsentiert werden

Benjamin Krämer & Nina Springer

Benjamin Krämer (Dr.), Department of Media and Communication, LMU Munich, Oettingenstr. 67, 80538 München, Germany. Contact: [benjamin.kraemer\(at\)ifkw.lmu.de](mailto:benjamin.kraemer(at)ifkw.lmu.de). ORCID: <https://orcid.org/0000-0002-1351-2414>

Nina Springer (Dr.), Department of Journalism, Södertörn University, Stockholm, Alfred Nobels Allé 7, Flemingsberg, 14189 Huddinge, Sweden. Contact: [nina.springer\(at\)sh.se](mailto:nina.springer(at)sh.se). ORCID: <https://orcid.org/0000-0003-0186-0582>

FULL PAPER

Ontology of opposition online

Representing antagonistic structures on the Internet

Die Ontologie der Opposition online

Wie antagonistische Strukturen im Internet repräsentiert werden

Benjamin Krämer & Nina Springer

Abstract: Research on cooperative social structures and particular types of conflict behavior online is readily available. However, the field lacks a framework to analyze how antagonistic structures are represented on online platforms. Social structures can be represented formally (manifestly) or informally (in open verbal or visual forms) or remain latent—a distinction that has received little scholarly attention in the analysis of computer-mediated communication. Based on an interpretative analysis of relational structures and types of acts, we distinguish structural elements that lead us to empirical typologies of antagonistic structures and an analysis of whether and how they are represented online. We develop theses about why some structures are formally represented more often than others and theorize the consequences of this selective representation.

Keywords: Ontology, antagonistic social structures, interpretative analysis, typology.

Zusammenfassung: Empirische Forschung und theoretische Betrachtungen zu kooperativen sozialen Strukturen und bestimmten Typen von Konfliktverhalten im Internet sind umfangreich verfügbar. Wir meinen jedoch, dass derzeit noch ein geeigneter Rahmen fehlt, um die Repräsentation antagonistischer Strukturen auf Online-Plattformen zu analysieren. Soziale Strukturen können formal (manifest) oder informell (als Verbalisierung oder in visueller Form) repräsentiert sein oder latent bleiben—dieser Unterscheidung kam bisher kaum Aufmerksamkeit in der Analyse computer-vermittelter Kommunikation zu. Basierend auf einer interpretativen Analyse relationaler Strukturen und Handlungstypen unterscheiden wir strukturelle Elemente, die uns zu empirischen Typologien antagonistischer Strukturen führen und eine Analyse ermöglichen, ob und wie diese online repräsentiert sind. Im Anschluss entwickeln wir Thesen darüber, warum manche Strukturen formal eher repräsentiert sind als andere, und welche Konsequenzen diese selektive Repräsentation hat.

Schlagwörter: Ontologie, antagonistische soziale Strukturen, interpretative Analyse, Typologie.

1. Introduction

In popular discourse and scholarly literature, the Internet is often understood either as egalitarian, democratic, and cooperative or as a place of anonymous attacks. Hence, empirical Internet research usually focuses either on the positive

pole—the potential for cooperation—or on the negative pole: deviant or threatening behavior. There are many studies on individual types of action such as flaming, trolling, cyberbullying, harassment and negative word-of-mouth dynamics (e.g., Alonzo & Aiken, 2004; Buckels, Trapnell, & Paulus, 2014; Davidson et al., 2019; Kayany, 1998; Pfeffer, Zorbach, & Carley, 2013; Vandebosch & Cleemput, 2009) and collective actions such as collaborative knowledge production, social protest and their offline effects, etc. (e.g., Dahlberg, 2007; Enjolras, Steen-Johansen, & Wollebaek, 2013; Harlow, 2012; Pentzold, 2016). Explanations of deviant behavior such as the online disinhibition effect (Suler, 2004) are complemented by descriptions of a sense of community, friendships, and a culture of caring and sharing on the Internet (e.g., Barnes, 2015; Ellison, Steinfeld, & Lampe, 2007; Meyer & Carey, 2014). In addition to these characterizations of online structures and interactions as prosocial and productive or pathological and destructive, critical visions (of either the politico-economical or panoptic type) emphasize that behind the surface of friendly and unfriendly interactions, corporations and governmental bodies appropriate and accumulate data based on audience labor and behavioral traces (e.g., Fuchs, 2014; Gehl, 2011).

However, there are also non-cooperative, conflictive (inter-)actions that are somehow positioned between the extremes of prosocial or cooperative and violent behavior, complementing the range of what we would call “antagonistic structures” on the Internet. We are not mainly concerned with the extreme forms (which we consider part of more encompassing types) but with how the overall spectrum of antagonistic structures is represented online, i.e., to which degree it finds expression in the functionalities of relevant platforms.

We define antagonistic social structures as any form of relationship or pattern of action that implies a perceived incompatibility of beliefs, evaluations or goals among interdependent parties. This paper provides a typology of antagonistic structures to demonstrate that they cannot be reduced to the most prominent forms of offense (but include them). To reliably identify these forms online, a theoretical framework is needed that describes how social structures can exist on the Internet. We will draw on the approach of the “social ontology of the Internet” (Krämer & Conrad, 2017; Krämer, 2018) that describes how social structures are symbolically represented online and present a theoretical framework that will analyze *what types of antagonistic structures are represented online*.

We will search for relevant examples to illustrate representations of certain types of structures on Internet platforms, and develop theses concerning the reasons certain types of antagonistic structures are represented more often than others and the consequences of such a selective representation. While our examples often refer to widely used Internet platforms, our approach covers a wider range of websites and applications that in some way represent social structures.

It may be argued that we do not lack typologies describing social structures on the Internet because existing classifications already characterize whole platforms in terms of the dominant patterns of interaction, distinguish different structural features of platforms, or focus on different subtypes of (mainly non-antagonistic) structures (such as networks and communities.). However, a typology of antagonistic structures is relevant for several reasons. While platforms are often charac-

terized in terms of their main cooperative structures, we suppose that antagonisms can be productive as well. Dissent and the breakup and renewal of existing structures may foster critical discourses and desirable forms of social reorganization. While competition can be motivating and stimulate innovation, it can also lead to frustration and reproduce or increase inequalities. By introducing a distinction between latent, formal manifest and informal manifest structures, structural analysis may also become more rigorous and fruitful than in previous studies. We will define the concept of formal representation below but, it can be understood as follows: A type of structure is formally represented on an online platform if a functionality on a platform stands for that type of structure (e.g., the social structure that is usually called a “group” is formally represented if there is a functionality for forming groups).

Readers may be surprised that our main focus is what may seem the most superficial structural features and their conventional meaning: manifest representations of social structures. Our analysis may even be considered naïve and trivial as we analyze what we already know (but only practically, as we will argue). However, no single level of structures can be considered “more real” than others, closer to the true character of the Internet, be it the surface structures of friendships, groups, discussion threads, liking, etc. represented in platforms’ basic functionalities, the deliberative or violent features of informal interactions, or the capitalist and panoptic organizational and power structures. They are all relevant for a structural analysis of the Internet, because they have inspired highly contrasting characterizations of the Internet as a “good” or “bad place”. We argue that an important part of the critical potential of a structural analysis does not lie in the search for the basic, somewhat hidden but “most real” social-structural features of the Internet, but in the confrontation between the different levels of structures. Therefore, a detailed analysis of formally represented and, among them, antagonistic structures will contribute to the whole picture.

Our analysis thus complements previous research on antagonistic structures online by focusing on what we call formally represented structures. The difference between our analysis and other studies of antagonistic behavior can be illustrated by comparing the following two sets of questions. The first set deals with what we classify as informal or latent antagonisms. How can we define and understand “trolling” or harassment? What are their causes and consequences, etc.? Such questions refer to informal structures, as there are no functionalities on online platforms whose explicit and main purpose would be to troll or bully people.

The second set of questions, dealing with formally represented structures, includes the following problems pertaining to the formal representation of antagonistic structures: Why are those in charge of disciplining Twitter users not visible on the platform itself? Why is their role not represented? Why is there no button on Facebook to “disagree” or “dislike” something? While some authors have observed and discussed the absence or rarity of functionalities that express antagonistic actions (e.g., Baym, 2013; Gerlitz & Helmond, 2013), to our knowledge, the question of whether antagonistic structures are formally represented online has not been discussed as systematically as possible because we lack a comprehensive

framework for this type of analysis. We hope to provide such a framework that specifies the more general approach of the social ontology of the Internet.

2. The representation of social structures on the Internet

This analysis of structures on the Internet is based on the “social ontology of the Internet” approach (Krämer & Conrad, 2017). It departs from an understanding of ontology as, simply put, the analysis of “what there is” (Quine, 1948). In our case, we ask “what there is” on the Internet (in terms of social structures). By acting, communicating, and, more specifically, using the Internet, people commit themselves to the existence of certain entities, e.g., other people who may have accounts on social networks, friendships, certain acts of judgments such as “liking” something and the possibility for these entities “to be” on the Internet.

Analyzing the commitments of others, we are open to identifying any kind of structures in their social ontology, a structure being defined very broadly as any combination of elements and relations among them, where the type of relations is restricted and expectable even if elements vary (Luhmann, 1984, p. 383-384, Krämer & Conrad, 2017). In our understanding, social structures include social relationships among people, roles and organizational forms, forms of unequal distribution of resources, socially shared conceptions of acts (where elements of acts are combined in a typical way to form the overall act), and other events or entities as well as socially shared evaluations or other types of attitudes and feelings towards entities and events (e.g., this includes Bourdieu’s (1979) conception of capital or other dimensions of inequality, Giddens’ (1984) structures of domination, signification and legitimation, or Schimank’s (2002) structures of expectation, interpretation and constellation, the social construction of emotions and “feeling rules” (Hochschild, 1979) or the social definition of speech acts (Austin, 1962; Searle, 1969) or other types of acts).

However, our aim is to reconstruct others’ perspective on the social world. Therefore, existing scholarly typologies can help us identify the meaning others give to social phenomena, in particular as it is expressed online, and ultimately understand their social ontology, but we have to analyze which types of structures this ontology actually encompasses.

Furthermore, we focus on antagonistic social structures that manifest themselves in actual practices or an observable relationship that may be registered or enacted online. We leave aside individual dispositions that do not lead to behavior that is, at least on one side, directed towards another party whose dispositions or actions are perceived as incompatible with one’s own. Therefore, conflicting structures of knowledge and feeling, etc. are only taken into account if they are being expressed.

Technical structures of Internet platforms then have the meaning (ascribed by providers and users) to refer to such social structures. We define “platforms” as websites that are treated as separable structures of functionalities in the form of interconnected web pages or features of other online applications. (Unlike other approaches, we do not focus on the programmability of platforms cf. Helmond,

2015, but simply on their perception as relatively self-contained units despite the interconnections and their expansion into the rest of the web).

We analyze the representation of social structures on the Internet by following Wirth's (1976) equation that software consists of algorithms plus data structures. Algorithms and data structures *symbolically represent* social structures, first, by reflecting social structures that exist independently of the Internet: one's name is registered, a marital status indicated, an activity is reported, etc. However, structures of software can also "represent" social structures in a more encompassing, second way by serving as a proxy or constitutive element (Krämer & Conrad, 2017; Fuller, 2013, p. 13). A data structure that is instantiated or an algorithmic function that is performed qualifies as the existence of a social fact: some social relation exists, or a type of social action is performed if the technical structure is used in a certain way. For example, if some information in a technical system is changed by user input, the user thereby enters a group that does not have any other offline basis (that does not, e.g., represent a class, a department of an organization, but only exists because its members have joined it online). One is a member of the group on an Internet platform if and only if some instantiation of a data structure exists that has the meaning of representing group membership, and that group then exists in this technical structure (see also Searle, 1995, p. 115, and Couldry & Hepp, 2017, p. 22–23, who refer to this type of constitution in their discussion of datafication). We may call this second type constitutive representation (a social structure is only brought about by using the features of a platform), whereas we may characterize the first type as descriptive representation (the existence of a preexisting structure is being indicated). Formally represented social structures are then enacted differently online, ranging from a static description that does not imply further actions to specific ongoing practices (e.g., personal messages between two Facebook friends) or automated functionalities (e.g., posts being displayed to followers).

This approach and the concept of symbolical representation is basically an answer to the question of how social order is possible online. Some types of social structures simply evolve from ongoing practices. Within a single interaction or over a larger number of occasions, we can observe how expectations, routines, social relations, etc. emerge—in a thread, a forum, on a whole platform and sometimes ultimately across platforms. Other types of structures, such as general norms or social inequalities, precede all kinds of online activities but are enacted in their course. These types are complemented by the symbolically represented structures on each platform. Certainly, their meaning neither exists independently of preexisting social structures nor can a technical infrastructure or implementation determine their meaning. However, due to conventions of meaning, these representations can structure what we do online. We usually know which social structures are normally described or constituted by which functionalities, and interpret our own and others' practices accordingly. Again, these conventions cannot determine any definitive, "true" meaning of the functionalities, of the acts that make use of them, or of the social relationships they constitute. However, the more complex specific meaning of what is happening online has to take into account the conventional meaning of the represented structures involved. Even sub-

versive, playful, ironic practices are parasitic upon the institutionalized meaning and can enter into conflict with it. If it were not generally acknowledged that, under normal circumstances, to like something on social media means one likes it, then other meanings of likes would be hard to grasp. “Normal circumstances” are hard, even impossible to define, but there must be a normal meaning, something one can fall back on when in doubt. The person who likes something probably likes it. There has to be a meaning in relation to which something else can count as subversive, ironic etc., which is subverted, played with etc. If likes are sometimes used pragmatically and in a more neutral way, for example, when liking the page of some organization on Facebook, then many would probably avoid liking the pages of, for example, extremist parties they do not support just to be informed about their activities because this could be seen as an endorsement. However, we should not focus too narrowly on likes in particular, as they have acquired complex connotations due to their centrality and the abstractness of the act being represented. Our aim is to take into account a broad range of structures that, however, mostly have a clearly conflictive or non-conflictive institutionalized meaning.

When using the “social ontology of the Internet” approach to analyze representations of social structures on the Internet, we focus on *formal manifest representations* (see Krämer & Conrad, 2017, for the underlying distinctions). In this case, specific technical structures exist that have an exclusive function—they stand for one type of social structure on the right level of abstraction. Users can then draw on these technical structures to represent instances of the type of structure. For example, a platform may offer two functionalities: to find and enter groups when admitted by members or administrators (“closed groups”) and groups by self-classification or free joining (“open groups”). The platforms then formally represent the type(s) of structure usually called “(closed/open) groups,” and users turn to the corresponding technical structures to represent instances of certain types (e.g., a specific group). However, in our analysis, we are not concerned with users’ choices to create or not create structures or how to deal with them, but with providers’ decision to offer technical structures referring to a type of structure.

In sum, the concept of formal representation refers to the fact that online platforms provide technical structures whose institutionalized meaning is to refer to types of social structures (in a descriptive or constitutive mode). These abstract representations are then interpreted and appropriated by users in their practices to reflect or create more specific social structures. Thus, the use of the functionalities that create and modify formally represented structures and the more specific practices mutually structure each other.

Beyond this formal representation, structures can be represented *informally* but manifestly by free verbalizations or visualizations. In this case, there are no specific technical structures to represent these social structures as such. Rather, a more general feature of a system is used, such as functions to enter free text or to upload images or videos. Two users may call each other friends in a conversation on an online platform without using a function that would allow them to formally initiate this relationship or disclose it. Finally, *latent structures* are left un-

represented in either formal or informal ways. They may be open to observation under certain conditions, but no formal structures or informal references on the platforms themselves would point to them. For example, users may have contributed unequally to a discussion, or differ in their sense of community (e.g., Barnes, 2015), but this relationship of inequality is not represented anywhere on the platform or the Internet in general. Furthermore, the structures of ownership, regulation, surveillance, etc. that govern online platforms have to be classified mostly as latent because they are not themselves represented on the platforms.

The distinction between the manifest and the latent is always relative to a specific perspective (Luhmann, 1993). In the present case, the distinction only applies to whether something is represented on Internet platforms in a sufficiently specific way.

“Latent” therefore does not mean psychologically latent, unconscious, something that can only be observed by the more knowledgeable scholar. Certainly, some latent structures, for example, the overall density of large networks formed by users of a platform, can only be identified by specialized researchers (or anyone with the necessary skills and access to data). Similarly, one cannot talk about class structure without some conception of class (at least a basic and not necessarily scholarly one), although class as a structure is continuously performed, consequential and reproduced, including on Internet platforms and involving even those who hardly ever think about social class. “Latent” in the present sense only means “not represented,” something that can only be *inferred* from what is represented on a platform or learned about from other sources. For example, it is widely known that social media platforms are often operated by large companies, but their organizational structure is not represented on the platforms themselves. There are no functionalities whose institutionalized meaning is to describe or modify these structures, and they are usually not described informally in much detail. Moreover, social media platforms usually do not provide functionalities to formally disclose which social class one belongs to, and it is not very common to identify as a member of a social class on such platforms, although people may occasionally and informally write about their social background.

It may be argued that latent structures are more relevant or even reflect the Internet’s true character as, for example, a space dominated by large corporations, commercialism and advertising, and a logic of surveillance, exploitation and expropriation of audience labor, and finally the accumulation of data and capital (at least if we consider large social media platforms). However, we would insist that by focusing on formally represented structures, we investigate relevant types. For example, it is true that by liking something on Facebook, we provide information about our preferences and social relations that can be used to place advertising, optimize the platform and its algorithms, spy on citizens, etc. However, it would be hard to argue that this is the primary “meaning” of liking which is, *ceterus paribus*, to express that we like something. This example shows that a critical analysis may just relate these two levels of meaning (and others such as structures of social inequality) and ask, regarding the relationship between manifest representations or the lack thereof, and latent structures: Why are some structures represented more often than others? A thorough reconstruction of the prac-

tical meaning of manifest structures therefore sheds light on one side of the equation. Our analysis specifically asks whether antagonistic structures are represented, and whether dissent and conflict can be easily expressed using the technical structures the platforms themselves provide. If not, we may ask for explanation that could refer to the abovementioned or other latent structures.

3. Method

Typologies are helpful tools to generate theories or models of social reality (Weber, 1988 [1904]). By displaying commonalities (within types) and identifying differences (between types), typologies serve heuristic functions (cf. Kelle & Kluge, 2010, pp. 83, 90). We started by compiling a list of existing antagonistic structures, departing from the elements of the above definition of antagonistic structures. Based on these elements, commonalities and differences between types of structure can be identified. Comparing the list with types mentioned in sociological literature and with terms for antagonistic relationships and actions in everyday language, we ensured that the list systematically covers all relevant types.

The resulting typology covers not only actually represented types of structures but also allows for counterfactual reasoning. We can counterfactually identify antagonistic structures that could have been represented but are not yet represented (or at least not frequently or prominently). Finally, we can theorize relationships between the types (existing and inexistent or rare) and possible factors explaining their (non-) representation as well as the consequences of their (non-) representation. For example, given certain properties of rarely represented structures, we can speculate on reasons these structures are not represented and some consequences of this non-representation that refer to these properties or, more generally, to their antagonistic character.

To identify which types of structures are being formally represented on a platform, an interpretive approach is necessary. We attempt to articulate the practical meaning of data structures and algorithmic functions ideal-typically. We could also use more specific empirical methods such as qualitative interviews or participant observations to study users' varying interpretations. However, as a first approach, a typical meaning that is presumably shared to different degrees by many users will be inferred from an interpretation of Internet platforms with their interfaces and functions. We therefore analyze what kinds of data are overtly collected, stored, and processed, and what meaning they convey, i.e., which entities and properties the data structures refer to. Because our analysis focuses on structures that are manifestly represented to users, we can draw on information that is publicly available, i.e., the platforms' interfaces and self-descriptions, but have to keep in mind that these descriptions may not be sufficiently precise. For the purpose of our analysis, we ignore algorithms and data structures used on platforms to covertly process user data and other information (cf. Gehl, 2011), as they are to be counted among the structures that, from the perspective of the users, are not represented.

A typology requires the classification of entities by means of differentiating criteria so each type stands for phenomena that share certain characteristics (Gr-

bich, 2013, pp. 43, 46). We differentiate between structures by means of constitutive rules for the existence of a type of structure (Searle, 1995; note that this does not only apply to the structure of speech acts, as neither the types of acts represented online nor this particular theory of Searle's are restricted to speech acts). Such rules take the form of "X counts as Y in context C." In our case, X is an algorithm or data structure that counts as Y, a symbol for social structure, in context C, e.g., among average users, in certain cultures. However, we have to determine what counts as that social structure in the first place, irrespective of the online representation. Therefore, another constitutive rule must be determined: X, a relation between some persons, a form of behavior, a set of shared dispositions, etc. (all defined regarding specific properties) counts as Y, a social structure, in a context C. For example, in academia, a series of talks and discussions organized in a certain way count as a conference.

Isn't this approach highly formalistic and doesn't it neglect the diversity of meanings and contexts, the subversive practices, and the power structures behind everything that happens online? We would argue that formalization is inherent in the phenomenon we are analyzing. We are reconstructing the institutionalized, "standard" meaning of features of platforms; they provide reusable templates for social action and relations. To be useful across contexts and situations, these functionalities have to abstract from the individual case and from the wealth of meaning usually associated with the respective types of social structures. People can then use these functionalities to easily describe or create instances of these types (e.g., form a group, follow someone, indicate that they are in a relationship).

We also find comparable examples of formalization offline. An application form or the role of a salesperson in a shop also formalize social reality in a way that is both burdening and unburdening. The concept of a form, its fields with their labels, or the institutionalized conception of a salesperson's role provide guidance on what to do in a given situation: fill in one's name, ask this person and not another about the price of a product, etc. However, they can only fulfill that function if they mostly abstract from the individual case and personal interpretations and intentions that go beyond the institutionalized meaning. This does not prevent people from giving their own or others' practices an additional, very specific sense. For example, if someone fills in a form, this might remind them of many autobiographical details that, fortunately or unfortunately, are not covered by the form. Or someone interacts with a salesperson in a very foreseeable way, but tacitly makes all kinds of judgments about the person's look or character. In both cases, one need not disclose the intention with which one files the application or buys a product. The formalization of communication by means of the form or through the formalization of interactions by social roles can facilitate practices and reduce complexity but also lead to the feeling that they remain impersonal and the social expectations do not fit one's individual needs. Of course, the formalization of communication and interactions is not only driven by the wish to facilitate them but by organizations' interest in efficiency and control.

Similarly, acts, with their underlying feelings and ambiguous meanings, are de-contextualized and turned into data online (Baym, 2013). Formalization provides standardized information to providers and facilitates practices by reducing com-

plexity and abstracting from individual interpretations and intentions, but can also be problematic if formalized representations do not conform to what one intends to achieve or if one is unsure about those aspects that are not part of the institutionalized meaning.

For example, swiping left on Tinder means one is not interested in a person. Of course, such an act can have many different and more specific meanings and can be performed with a number of different attitudes. However, someone who is unaware of this institutionalized, “standard” meaning of the functionality will probably not use Tinder to its full potential. Furthermore, imagine someone saying, “I will not swipe right because I do not want to let Tinder, that greedy corporation, know I am in fact interested in that person.” People may indeed reflect on the latent structures behind the app, use of their data, etc. However, this is not part of the institutionalized meaning proper of the functionality and the acts that make use of it. The standard meaning of a left swipe is that one is not interested. The (additional or even primary) meaning of specific acts may be different, but using Tinder would not make much sense if there were no normal meanings of its functionalities or if it were only about which data one provides to a commercial organization. And that avoiding a match is as simple as swiping left can be both burdening and unburdening. This formalized act, as it is represented in the system, abstracts from the details of the decision and its individual meaning. One is not obliged to justify it, but one may also be baffled as to why that person did not swipe right.

The focus of our analysis is on whether certain types of structures are formally represented at all. We therefore concentrate on the institutionalized meaning of technical structures, neglecting the overall sense of practices that use them. A complementary approach would investigate the mutually enabling or conflicting relationship between relatively context-independent formalization and individual practices in specific contexts.

At this level of analysis, we can safely assume that there is sufficient agreement between providers and different users on the basic meaning of a functionality (in particular if explanations on the platform point in the same direction) and on the (mostly implicit, practical) definition of a type of structure. In contrast, the equally relevant analysis of latent structures or of the interdependence and conflicts of formalized structures and concrete practices would require completely different methodologies, for example, to examine how the structure of tastes and preferences is affected by recommender systems, what their function for the cultural industry is as a whole or how people interpret Tinder matches differently.

4. Typology of antagonistic structures

Table 1 displays our typology of antagonistic structures that could be represented online, and empirical illustrations for each type of structure we found. As our main concern is presently with the typology and not the systematic content analysis of websites, we only mention some of the most important and typical examples, not the whole range of cases we have encountered.

We introduce our typology by discussing some of the main dimensions of antagonistic structures that are elements of constitutive rules and usually combined into typical patterns. It should be noted that some types of behavior included in our typology, such as ending a friendship, can be non-consensual but may also be based on mutual agreement.

Table 1. Typology of antagonistic structures that are potentially formally represented online

Types of relationships (distinctive elements of constitutive rules)	Types of acts	Examples and observations on online representations
A. [latent opposition]	/	[as per definition unrepresented; subject to latent structural analysis]
B. dissent	contradict disagree	[usually not represented at this specific level, but as more general negative evaluations, e.g. “dislike”]
C. competition (shared but irreconcilable goals—not necessarily in a zero-sum game, strategies mainly aimed to foster one’s own interests rather than to counter others’ interests)	compete	online markets (including auctions such as eBay), competitions with formal votes, rankings, etc., online games
D. fight (opposing, irreconcilable goals, willingness to harm)	aggress/harm (offend, disturb, destroy, take away, withhold)	represented mainly in algorithms for detection
E. (attitude/relationship of) dislike	evaluate negatively criticize defame	functionalities such as “unlike,” “dislike,” “report,” e.g. as responses to comments on online news sites
F. dominance, power relation	subdue compel command blackmail constrain forbid resist	constrain: functionalities to grant and deny rights
G. non-membership	leave, quit exclude and ban refuse admittance	functionalities such as “deactivate account” or “leave group” or refusing people admission to groups or “removing” or “blocking” people from groups
H. non-relationship	ignore refuse relationship end relationship	functionalities to “block” or “unfollow” people or types of messages (“I don’t want to see this”), “unfriend” a person
I. [no equivalent]	refuse	refusal of offers on online markets, non-acceptance of friendship requests (not represented to others), non-acceptance of requests to enter group

Five aspects of antagonistic structures contribute to the construction of our typology: 1. the temporal aspect of the antagonism, 2. the parties' relational character, 3. the character of conflictive acts (if any), 4. the structure of the incompatible aims of the parties involved, 5. the substantial object of the antagonism.

1. Some antagonisms are event-like, such as a single act of disapproving verbal or non-verbal expression. They would vanish as soon as they appear if it were not for the traces they leave on Internet platforms. Others last and result in a social relationship (compare the first and second column in Table 1) that may be upheld by continuing interaction or by a constitutive act such as formally entering a position of power (see line G). This requires representations that allow identifying the parties. They have to be formally represented as personae or groups so those performing an act can be recognized as identical or non-identical to the personae or groups behind another act.
2. Event-like antagonisms can occur as a reaction to an attempt to initiate a positive relationship, as an act of ending a positive relationship, and within an antagonistic social relationship proper (see lines H and I) (and in a rather isolated form). One can, for example, decline or end friendships or constantly attack one's opponent.
3. Acts can be communicative in a narrow sense (i.e., intended to be recognized as conveying *dissent*, *dislike*, etc., see B, E), or they may be directed against others' interests without the intent to attack them verbally or symbolically (what we might call a *competition*, see D).
4. If an actor's goal interferes with others' interests, it may be because they share the same goal that only one party can attain. In other cases, actors entertain different but incompatible goals: they are dichotomous alternatives, or attaining one goal impedes fulfilling the other. There are two analytically distinct ways of winning in conflicts: improving one's absolute position or worsening the others' to improve one's relative position. On the one hand, parties can restrict themselves to pursuing their own goals (C). On the other, they actively and intentionally interfere with others' goals by withdrawing or destroying others' resources or otherwise hindering the actions of others instead of concentrating on their own advancement (E) (for another terminology and typology distinguishing between competition and conflict in the context of public online communication, see Neuberger, 2014).
5. Objects of antagonisms can be personal or social, such as conviction, persuasion, positive relationships or memberships, approval (sometimes represented as votes, "likes," etc.), leading to antagonisms such as *dissent* (C) or *non-relationship* (H), etc., where such resources are withheld or withdrawn. In other cases, objects of conflicts are impersonal, like the acquisition of points or sums of money (those can be the object of fights and competitions).

Our table should cover all important types of acts and relationships that can be derived from these dimensions. However, there is no basic level of categorization at which one could enumerate all types of social structures in a given category, such as antagonistic ones, because further differentiations may always emerge in natural language and in socially shared schemata. Still, if one tries to enumerate

as many terms for antagonistic structure as possible (as we did—although we did not include every synonym, subcategory or very specific term in the table), the likelihood increases that a given categorization that covers them all is relatively exhaustive.

4.1 Types of antagonistic structures

We will now discuss different types of structures we have identified and present observations on where, when, and how often they are represented.

Latent oppositions (A) are by definition unrepresented. Actors have irreconcilable interests that are observable by others, but they do not (yet) recognize such a constellation and do not act in a way to willingly interfere with others' goals (e.g., Wikipedia users who hold different opinions on the subject of an article but do not include these opinions in the article or mention them in discussions. Furthermore, there is no standardized functionality on Wikipedia to formally express one's evaluation of the subjects). As they remain "invisible," they are not in the scope of our analysis and require latent structural analysis for investigation.

In the realm of *dominance/power relations* (F) and *non-memberships* (G), certain acts such as orders or interdictions depend on the recognition by, and the submission of a human counterpart (at least according to traditional ontology). These types of acts must not lead to the intended consequences on the other side. If they were formally represented, they would usually be *valid* (conform to the constitutive rules), but their formal representation would not be a guarantee that they are *successful*. The constitutive rules of some structures require them to be based on speech acts (Austin, 1962; Searle, 1969) that can be declined, so they cannot be represented in a technical functionality that also guarantees their success without being transformed into another type of structure. For example, an "order" that was automatically fulfilled would not be an order but a command to a technical system and an act that may constrain someone. For example, a typical platform would not implement a functionality that moderators can use to formally tell users to leave a group while letting them decide if they follow this order, but a functionality that would directly exclude those users from the group. However, other structures in these categories can be enforced technically if they are formally represented. This is achieved by changing others' environment, which then hinders them from achieving their goals (e.g., acts such as constraining others by formally representing their rights in a technical system, for example, the right to read or post messages on other users' timelines). If, in turn, certain communicative acts can or must be represented formally on a given platform to achieve some aims, one may also technically restrict access to the successful performance of these acts (e.g., disabling the function to apply for admission to an online group in the first place).

We find a difference between formal and informal representations in the realm of *non-relationships* (H). Taking notice of others' existence or acts can be seen as a kind of relationship, even if one does not react to them. However, by using formally represented acts (often called "blocking," "muting," or "unfollowing"), one can avoid being confronted with further information from people. Although this would not count as "ignoring" the person in a strict sense (which could be de-

defined as noticing them without reacting), this level of non-relationship cannot be achieved by means of informal verbal communication. Ignoring someone is not a communicative act if it is not intended to be noticed by those being ignored. However, an even stricter non-relationship can be technically enforced, thus avoiding all direct communication—and even meta-communication if, on certain platforms, the other person is not informed about the blocking.

Certain forms of antagonistic structures are more specific than the usual formal representations. For example, many platforms provide functionalities to express positive and sometimes negative reactions towards content by formally “liking” or “disliking” it. However, the meaning of these functionalities is diffuse, ranging from agreement or disagreement to judgments of taste or expressions of warm or hostile feelings toward others. Therefore, we were unable to locate important examples of representations of more *specific* forms of opposition, e.g., *disagreement* and *contradiction* (in the sense of formally endorsing the logical opposite of some statements) (B).

It is apparent that the formal representation of ongoing antagonistic interactions wherein one pursues goals other than defending or changing attitudes and forming or ending social relationships is confined to particular platforms. To *compete* (C) for resources other than acclaim and social relationships is mainly the function of online markets and games.

Fights (D) are formally enacted in a playful form only in other online games. They are not central to, for example, popular social networking sites or the platforms that readily come to mind when thinking about the social web, although some offer—mostly non-violent and often even non-competitive—games.

In the introduction, we referred to discourse on the Internet’s general nature, including the assumption that it is egalitarian and/or democratic. Looking for *hierarchical social structures* on a wide range of platforms (F), we can partly confirm this thesis or at least explain why many would support it. On many platforms, power relations appear as something exceptional. Providers are prepared to intervene if the interactions of regular users become too offensive. Providers that regulate interactions or, as a possible technical equivalent, algorithms detecting and repressing offenses and the general regulatory power of technical structures (“code is law”, Lessig, 2006, p. 1) are not perceived as a part of the same overall social structure encompassing regular users (e.g., their friendships, discussions, groups). On other platforms, power structures exist in the form of the more active roles of moderators or administrators (e.g., Dutton, 1996). However, the antagonism inherent in the structures mentioned above resides in the ability to constrain, repress, and expel against the will of an actor (see the definition of power according to Weber, 1976 [1921], p. 28) who is defined as an offender, and in allocative and classifying functions (to deny or grant access, to decide on memberships, etc.). However, another aspect of power is largely absent from the most common types of websites: the ability to command and compel. As this might be perceived as the prototypical form of power, it may seem that structures of dominance do not play an important role among the formal representations on Internet platforms but remain latent.

Many platforms avoid communicating *acts of refusal* (I) or socially disruptive events in general (such as ending a relationship) to those who are directly concerned or to a more general public. For example, if someone deletes a person from his or her friends list or refuses a person's friendship request on Facebook, the offering person is not notified. However, the act of ending a friendship or refusing it is formally represented in a certain way. There is a particular software implementation for these acts, but the constitutive rule for the same act in the offline world is not exactly matched by the meaning of the online technical structure. In the offline world or in informally represented interactions, we may end and refuse friendships implicitly (as we can become friends without a clear-cut act of declaration) by simply avoiding amicable behavior or any further contact. However, if friendship is offered explicitly in an offline interaction, a refusal is noticed immediately, and there is no way to instantly break a friendship without communicating it. Online structures combine and vary the two types of constitutive rules for (non-)friendship. On various typical Internet platforms, "friendships" or similar relationships start by an act of declaration (persons count as friends if they agreed to be friends and are listed as friends). They end with the personal, unilateral decision that leads to a lack of enacting the relationship (one no longer automatically receives certain information from the other person). The end of the relationship is somehow declared to oneself and to the technical system and is indirectly disclosed to those who actively look for information on the relationship.

4.2 Complementary conflict-related structures

Our typology can be complemented by other structures related to conflicts that do not themselves constitute antagonistic relationships, non-cooperative and non-consensual action, or the subject of a conflict. These complementary structures are based on third parties' knowledge of, and reactions to, the particular conflict. These structures, however, can become relevant to the conflict on a meta-level. First, an audience's size and structure can be represented (who has access to certain contributions, how many persons have seen it, etc.) or inferred without formal information. We can then classify such a setting as one-on-one or small-group interactions without an audience, larger closed arenas with a restricted public, and an unrestricted public sphere, each with its different organizational or technical prerequisites, openness for participation, and range of societal consequences (Gerhards & Schäfer, 2010, p. 146). If public acclaim is at stake in a conflict, or if members of an audience decide to side with one party, observers become part of the conflict, and the meta-level is reduced to participation.

Other structures also refer to first-level antagonisms but create another antagonistic structure on the meta-level. For example, algorithms being used to detect offensive content and automatically enforce behavioral rules would not strictly be a part of the antagonism on the first level involving the offender, the offense, and those offended. However, their use potentially shifts the balance between the parties by restricting or sanctioning actions and creates a new antagonistic relationship of repression. The same holds true for human referees, moderators, or ad-

ministrators who hold any power to restrain users’ behavior by censoring representations or excluding them, either from the whole platform or from the use of certain parts (e.g., forever or only for a certain amount of time). Negotiations or appeals to resolve a conflict are by definition directed towards cooperation and sometimes finally towards an end of all interactions between the parties. However, to different degrees, they also imply symbolic power and threats with sanctions and non-cooperation to achieve a compromise that serves one’s interest.

Having identified different types of structures that are themselves antagonistic or related to conflicts, we may ask for overall patterns in the way platforms represent these structures. These patterns can be used to create another simple typology grouping whole platforms.

5. Typology of platforms

We have already come to the preliminary conclusion that representations of some antagonistic structures are commonly avoided. If we look at platforms in their entirety, we can still differentiate between websites with a stronger euphemistic bias (i.e., those that almost exclusively focus on cooperative and positively valued structures such as friendship, collaboration, or expressions of positive judgments) and websites where some formal representations of dislike, competition, etc. are possible. If we look at informal representations of conflict, we find that some platforms allow for almost unrestricted expression of dissent, dislike, power, etc. by free textual or visual representation. Other websites have stronger rules against offensive communication. This leads us to the general typology based on valence and freedom of representation and formal versus informal representation outlined in Table 2.

Table 2. Classification of Internet platforms by formal and informal representation of antagonistic structures

	euphemistic/positively biased formal representations (no/rare formal representation of antagonistic structures)	two-sided formal representation	no formal representations
relatively free verbalization or visualization of conflicts (and positive interactions)	Facebook	YouTube, Reddit, competitive games	non-moderated forums without formalized features of evaluation
restricted verbalization or visualization of conflicts	strongly moderated forums with formalized recommendation by users (e.g., on news websites)	strongly moderated forums with two-sided ratings	strongly moderated forums without formal evaluations

For example, Facebook is known for its absence of a “dislike” button, and potentially non-consensual and disruptive actions such as ending a friendship are not formally reported to the persons concerned by these acts. On the other hand, there is no (pre-) moderation of discussions on Facebook (by the platform providers) as practiced by some news websites so users can express conflicts rather freely on many Facebook pages. However, unlike some Internet forums where there is no form of formal censorship, users can report offensive posts on Facebook. Forums then also differ as to their implementation of formal mechanisms to express evaluations or agreement and disagreement. Some forums and websites only use functions to positively highlight contributions, while others allow for both positive and negative reactions in standardized forms (e.g., “thumbs up” and “thumbs down”).

The overall euphemistic bias towards friendliness, consensus, and cooperation as well as the remaining differences between platforms calls for explanations, and we assume they are also consequential. Therefore, we develop theses on causes and effects of selective representation.

6. Explanations of selective representation

Commercial platform providers will most probably avoid the representation of antagonistic structures for economic reasons. According to Gerlitz and Helmond (2013), platforms like Facebook are based on a “Like economy” that continues to spread to other websites and generates valuable data by “facilitating a web of positive sentiment in which users are constantly prompted to like, enjoy, recommend and buy as opposed to discuss or critique” (Gerlitz & Helmond, 2013, p. 1382). While dislikes can also be informative, they might create negative dynamics among users. Therefore, platforms that allow for dislikes could be less attractive to brands and advertisers (Gerlitz & Helmond, 2013). Similarly, concepts such as “community” or “sharing” have been stretched in a way to denote a positive, even idealized and mystified yet relatively unspecific, sociality compatible with the commercial aims of providers, their marketing strategies and use of free labor (Fernback, 2007; John, 2013).

The platforms’ emphasis on what people like and share (distribute, communicate, have in common, etc.) seems self-evident, but whence the focus on positivity? To the above explanations which focus on attractiveness to advertisers, stimulation of audience labor and more general ideologies (platforms claiming to make the world a better place by creating positive links among everyone), we may add a more detailed analysis of ontologies of politeness. From a perspective of social norms and the interpersonal relations enacted on platforms, antagonisms can violate rules of politeness. Classical approaches in the field (Brown & Levinson, 1987; cf. also Fraser, 1990) suggest that face-threatening acts take one of two forms, echoing some of the aforementioned forms of antagonistic structures. In the first case, freedom of action is restricted—a speaker’s action pressures an addressee to either perform or not perform an act, or an actor submits to someone’s power from the outset. In the second case, a speaker offends the addressee or does something that degrades herself or himself. At this level of generality, antagonisms must have features of impoliteness and are avoided or moderated by using

different substantial strategies of politeness. *Ceterus paribus*, “interaction under conditions of hostility and distrust is costly, because it requires continuous alertness and second-guessing on the part of both interlocutors” (Terkourafi, 2005, p. 248) and impoliteness is considered immoral in many situations.

Yet, critical reviews of both the classical and more recent approaches have found ontological problems with politeness. First, there is the problem of definition. Who defines politeness—the participants in an interaction or an observer (Haugh, 2007)? Is it a universal feature of a given type of speech act (i.e., a part of its definition) or a property of the performance of an act (whether the act is performed politely or not according to a rule)? Is politeness the result of negotiations and perceptions in situations and processes of interaction as suggested by the constructionist (or even postmodern, deconstructionist) or discursive approach (Haugh, 2007; Terkourafi, 2005)?

In our explanation of why platform providers avoid the representation, we do not have to commit ourselves to the assumptions of classical politeness theory (e.g., Brown & Levinson, 1987)—or even to its criticism, for example, for its assumption of universality (and we are not concerned with the specific strategies of face maintenance, as we are only interested in one potential strategy of avoiding impoliteness: not representing certain acts). As our approach calls for analysis of others’ ontological commitment, we do not have to settle that or any other dispute on the nature of politeness, and imposing our view on users and providers should be avoided. Depending on the context, some acts (not limited to speech acts) are perceived as socially unacceptable. Platform providers will, mainly for commercial reasons, tend to follow certain conceptions of politeness they assume their (often international) clientele or a larger public will share, at least as a least common denominator (and even non-commercial platforms will be designed in a way to avoid structures and interactions that providers assume their users will be uncomfortable with). Then we do not need a theory of politeness ourselves; we only need to understand others’ conceptions of politeness and can use them as one possible explanation of why certain acts are not being formally represented to remain attractive to users.

We should, therefore, analyze representations and the ontological commitments being implied in them:

- If providers categorically exclude or automatically repress certain things, based on a general evaluation of a type of act or way of performing it (e.g., breaking up friendship by declaration is typically impolite), politeness resides in the definition of the act, and the main strategy to avoid impoliteness is to avoid the act.
- If users can formally report offensive behavior, acts that are otherwise allowed and considered polite have been performed in impolite ways, or impolite acts have been performed without using formal representations.
- If users refrain from expressing certain things, politeness is a latent structure, a rule of interaction, or something negotiated in ongoing exchanges and not directly represented, neither formally nor informally (some structures, such as real names, may be formally represented with the aim to indirectly contribute to politeness by reinforcing social control). In informal representations, users

can apply the whole range of strategies of politeness with all the complexity of second-order observations and relational work (i.e., negotiation of norms and struggles over politeness, cf. Locher & Watts, 2005).

Thus, the explanation of selective presentation that refers to politeness takes the form of the following general hypothesis: If acts are not (typically) considered inherently impolite, and if relationships of a type do not imply frequent impolite acts, they are formally represented more often, and the politeness of informal representations has to be judged individually by users or providers. In the next step, different types of antagonisms could be analyzed for their potential of impoliteness and the rules that account for it. As this would require extensive empirical analysis, we will only point to other general explanatory principles that can account for differences between platforms instead of analyzing single types of structures.

Not only may acts be classified as polite or impolite by users and providers, but situations are perceived according to typifications regarding the extent and forms of politeness that are expected normatively and factually (Terkourafi, 2005, refers to these typifications as “frames”). There might be a general difference between online and offline interactions and particular rules and negotiations in specific communities (Graham, 2007). However, the discussion on politeness in online contexts has focused on informal (verbal) forms (e.g., Park, 2008), neglecting formal representations.

We can then advance cultural or subcultural, evaluative or normative, functional, and economic explanations for differences between platforms. Cultures and subcultures can demand varying degrees of politeness (for an example, see Ambady, Koo, Lee, & Rosenthal, 1996). Some emphasize individual or group competition and struggle, hierarchy and authority, emotional expressivity, or open criticism more than others (e.g., Asai & Lucca, 1988; Hall, 1976). From an evaluative or normative perspective, politeness is often but not always preferred. It may not always be considered moral to be as polite as possible. For example, behavior can be interpreted as “over-polite” (Locher & Watts, 2005) and, more importantly, politeness can run counter to other desirable purposes of communication. For example, politeness is not necessarily conducive to democratic discourse (see Papacharissi, 2004, for an application to online discussion), so providers and users may prefer robust discussions. Cultures and legal systems either emphasize free speech or social responsibility of platform providers. More generally, different purposes of platforms such as dating, gaming, satire, economic competition, etc. may also lead to different balances between emotional neutrality, openness, or robustness on the one hand and politeness on the other.

Finally, an economic explanation would also assume that providers anticipate stakeholder demands in terms of the purposes of platforms and their expectations of politeness. Leaving any form of antagonism unrepresented could be some kind of least common denominator. Providers could speculate that if social reality is represented euphemistically, antagonisms could be attributed to users instead of the platform. Those aiming at more specific niches or functions could allow for more formal and informal antagonisms, depending on their aims and target audience.

7. Consequences of selective representation

The *social ontology of the Internet* approach emphasizes that formal representations can be enabling and restricting, burdening and unburdening. If formal representations serve communicative functions, including the constitution or transformation of social structures by declaration, formal structures provide templates and thus reduce the need to produce one's own verbalizations or visualizations. Formal representations reduce the need to provide reasons and disclose interests, intentions, and motivations or to question the grounds of others' actions. In general, they are liberating if tiresome meta-communication can be avoided. However, they may also cut off meta-communication about conflicts in a more problematic way. They may reduce the social contingency of perspectives, the reflection of interests, subjective meanings, etc. (these reflections have to take place in free verbal utterances).

Formal representations are restrictive because they limit the range of what can be expressed prominently and easily or processed automatically and the range of fuzzy descriptions and categorizations. Formal representations often require shared, clear criteria (e.g., friendship by consensus). Constitutive rules for many types of acts require that they are performed with the intention that their main intention is recognized by others and recognized as intended to be recognized (Grice, 1957; Strawson, 1964). If clear-cut formal categories of antagonisms are used instead of vague, polite verbalizations, then this can be seen as more offensive because it is harder to deny the intention to perform certain acts or to refer to certain types of relationships.

However, this formality also leaves room for more positive interpretations. Users can take into consideration that representations can have different shades of meaning. If they assume good faith, they can suppose that others commit themselves to the least offensive interpretation. Depending on the perception of these consequences by users and the resulting use of formal representation of antagonistic structures, they may cause conflicts on a given platform or inhibit them. This could lead to different evaluations of platforms or of the Internet as a whole as being inherently good or bad. Users may compensate for the lack of formalized mechanisms for negative evaluations by expressing them in free form, or the lack of these features may create a more positive atmosphere. For example, the sentiment of brand-related user-generated content differs across websites (Smith, Fischer, & Yongjian, 2012, p. 102). This could have been caused by a variety of factors, and the effects on the tone of discussions may vary according to the topics of communication and the types of social structures involved. However, we hypothesize that formal representations and free content creation are correlated. Different types of users could be attracted by differing degrees of formalization, positive bias of representation, or controversy. Different structures of platforms could bring users to avoid conflicts or to act them out in different ways.

On a more fundamental level, formal representations probably contribute to the reproduction or transformation of social ontologies of conflict. They exert symbolic power by conveying definitions of antagonistic structures. These definitions include the most relevant forms and how they are defined (by providing

templates) or by whom they can be defined and the differentiation between those that can be freely expressed in explicit acts and those that have to be left implicit.

Selective representation is a question of the self-perception of society (or the Internet) and of the awareness of certain structures when constructing or using platforms that seek to represent some of the most relevant structures in a social realm. Therefore, formal representations exert power by emphasizing only a part of the whole spectrum of possible social structures. There is a risk that friendships, networks and collaboration and trite characterizations of the Internet as a place of cooperative social structures are taken for the whole picture or at least for the Internet's essence. Formally representing this thinking would make it so, were it not for the antagonisms expressed in informal contributions that lead others to accept an apocalyptic view of the Internet. Therefore, the vastly different (pathological, harmonic, panoptic, politico-economic, etc.) characterizations of the Internet may be explained by the different weight given to formal and informal representations as well as latent structures. Observers can cherish illusions or disillusion themselves and others by focusing on one of the forms or ignoring some of the distinctions.

We may go as far as to say that critical analysis is the study of antagonisms, or at least of contradictions, and how they are expressed, concealed, or displaced. On the one hand, one can then point to the opportunities and difficulties to express antagonisms and criticism on Internet platforms. On the other hand, we can analyze the relationship between the selective formal representation of mostly cooperative social structures (and the self-description of platforms in terms of friendship, communities, etc.) and the political economy of such platforms. We cannot simply dismiss their use for positive interactions as inauthentic but, at the same time, our amicable behavior or even critical deliberations produce exploitable data, and the structures of many widely used platforms themselves are not open to collaborative redesign.

8. Conclusion

Using a recently developed approach to Internet research, the *social ontology of the Internet* framework, we investigated types of antagonistic structures represented online and made suggestions as to their prevalence and importance based on prominent examples or the absence thereof. Some structures are obviously represented more often than others (e.g. unspecific, mostly positive, evaluative reactions instead of specific dissent). Probably for strategic reasons—to implement strict norms of politeness and create an image of a given platform as a place for cooperation and positive personal relationships—formal representations of antagonisms are usually avoided. We provided a number of explanations for selective representations, but this question calls for further theory building and empirical research.

We also asked for the possible consequences of the selective representation of structures on the Internet and may ask somewhat ironically: Does it make the Internet a good or bad place? However, we should take existing idyllic and apocalyptic descriptions of the Internet seriously. We can explain these descriptions

with reference to the distinction between formal and informal representations of antagonisms and latent structures.

A similar explanation by selective and undifferentiated perception might be applied to the description of the Internet as egalitarian. We do not expect to find command hierarchies on common and generally accessible platforms; however, administrative roles with the power to ban users from some or all activities complicate the egalitarian model. Usually there are no incentives or sanctions to submit to commands. The general bias against the formal representation of power could partly account for the perception of the Internet as egalitarian. This neglects the widespread, latent power structures such as charismatic leadership in certain communities and the symbolic and other forms of power of providers that transcend what is represented on a platform. Therefore, a critical perspective cannot dismiss either the Internet's egalitarian or hierarchical aspect, but the relationship between manifest and latent structures should be analyzed.

We have also taken the question above seriously by making claims about the effects of representations. However, as there are arguments for both the assumption that formalized antagonisms could fuel or inhibit conflicts, systematic research is needed to compare platforms with different structures in experimental or quasi-experimental designs.

References

- Alonzo, M., & Aiken, M. (2004). Flaming in electronic communication. *Decision Support Systems*, 36(3), 205–213. [https://doi.org/10.1016/S0167-9236\(02\)00190-2](https://doi.org/10.1016/S0167-9236(02)00190-2)
- Ambady N., Koo J., Lee, F., & Rosenthal R. (1996). More than words. Linguistic and non-linguistic politeness in two cultures. *Journal of Personality and Social Psychology*, 70(5), 996–1011. <https://doi.org/10.1037/0022-3514.70.5.996>
- Asai, M., & Lucca N. (1988). Individualism and collectivism. Cross-cultural perspectives on self-ingroup relationships. *Journal of Personality and Social Psychology*, 54(2), 323–338. <https://doi.org/10.1037/0022-3514.54.2.323>
- Austin, J. L. (1962). How to do things with words. Cambridge: Harvard University Press.
- Barnes, R. (2015). Understanding the affective investment produced through commenting on Australian alternative journalism website New Matilda. *New Media & Society*, 17(5), 810–826. <https://doi.org/10.1177/1461444813511039>
- Baym, N. K. (2013). Data not seen: The uses and shortcomings of social media metrics. *First Monday*, 18(10). <https://doi.org/10.5210/fm.v18i10.4873>
- Bourdieu, P. (1979). *La distinction. Critique sociale du jugement* [Distinction. A social critique of the judgement of taste]. Paris, France: Minuit.
- Brown, P., & Levinson, S. (1987). *Politeness. Some universals in language usage*. Cambridge: Cambridge University Press.
- Buckels, E. E., Trapnell, P. D., & Paulhus, D. L. (2014). Trolls just want to have fun. *Personality and Individual Differences*, 67, 97–102. <https://doi.org/10.1016/j.paid.2014.01.016>
- Couldry, N. & Hepp, A. (2017). *The mediated construction of reality*. Cambridge: Polity Press.

- Dahlberg, L. (2007). The Internet, deliberative democracy, and power. Radicalizing the public sphere. *International Journal of Media and Cultural Politics*, 3(1), 47–64. https://doi.org/10.1386/macp.3.1.47_1
- Davidson, J., Livingstone, S., Jenkins, S., Gekoski, A., Choak, C., Ike, T., & Phillips, K. (2019) Adult online hate, harassment and abuse: A rapid evidence assessment. London, UK: UK Council for Internet Safety.
- Dutton, W. H. (1996). Network rules of order: Regulating speech in public electronic fora. *Media, Culture and Society*, 18(2), 269–290.
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook “friends”: Social capital and college students’ use of online social network sites. *Journal of Computer-Mediated Communication*, 12(4), 1143–1168. <https://doi.org/10.1111/j.1083-6101.2007.00367.x>
- Enjolras, B., Steen-Johnsen, K., & Wollebaek, D. (2013). Social media and mobilization to offline demonstrations: Transcending participatory divides? *New Media & Society*, 15(6), 890–908. <https://doi.org/10.1177/1461444812462844>
- Fernback, J. (2007). Beyond the diluted community concept: A symbolic interactionist perspective on online social relations. *New Media & Society*, 9, 49–69.
- Fraser, B. (1990). Perspectives on politeness. *Journal of Pragmatics*, 14(2), 219–236. [https://doi.org/10.1016/0378-2166\(90\)90081-N](https://doi.org/10.1016/0378-2166(90)90081-N)
- Fuchs, C. (2014). *Social media: A critical introduction*. London, UK: Sage.
- Fuller, M. (2003). *Behind the Blip. Essays on the Culture of Software*. Brooklyn: Autonomedia.
- Gehl, R. W. (2011.) The archive and the processor. The internal logic of Web 2.0. *New Media & Society*, 13(8), 1228–1244. <https://doi.org/10.1177/1461444811401735>
- Gerhards, J., & Schäfer, M. S. (2010). Is the internet a better public sphere? Comparing old and new media in the US and Germany. *New Media & Society*, 12(1), 143–160. <https://doi.org/10.1177/1461444809341444>
- Gerlitz C. & Helmond, A. (2013). The Like economy: Social buttons and the data-intensive Web. *New Media & Society*, 15, 1348–1365. <https://doi.org/10.1177/1461444812472322>
- Giddens, A. (1984). *The constitution of society. Outline of the theory of structuration*. Cambridge: Polity Press.
- Graham, S. L. (2007). Disagreeing to agree. Conflict, (im)politeness and identity in a computer-mediated community. *Journal of Pragmatics*, 39(4), 742–759. <https://doi.org/10.1016/j.pragma.2006.11.017>
- Grbich, C. (2013). *Qualitative data analysis. An introduction*. London, UK: Sage.
- Grice, H. (1957). Meaning. *Philosophical Review*, 66, 377–388.
- Hall, E. T. (1976). *Beyond culture*. Garden City, N.Y.: Anchor Books.
- Harlow, S. (2012). Social media and social movements: Facebook and an online Guatemalan justice movement that moved offline. *New Media & Society*, 14(2), 225–243. <https://doi.org/10.1177/1461444811410408>
- Haugh, M. (2007). The discursive challenge to politeness research. An interactional alternative. *Journal of Politeness Research. Language, Behaviour, Culture*, 3(2), 295–317. <https://doi.org/10.1515/PR.2007.013>
- Helmond, A. (2015). The platformization of the Web: Making Web data platform ready. *Social Media + Society*, 1, 1–11. <https://doi.org/10.1177/2056305115603080>

- Hochschild, A. R. (1979). Emotion work, feeling rules, and social structure. *American Journal of Sociology*, 85, 551–575. <https://www.jstor.org/stable/2778583>
- John, N. A. (2013). Sharing and Web 2.0: The emergence of a keyword. *New Media & Society*, 15, 167–182. <https://doi.org/10.1177/1461444812450684>
- Kayany, J. M. (1998). Contexts of uninhibited online behavior. Flaming in social newsgroups on usenet. *Journal of the American Society for Information Science*, 49(12), 1135–1141. [https://doi.org/10.1002/\(SICI\)1097-4571\(1998\)49:12<1135::AID-ASI8>3.0.CO;2-W](https://doi.org/10.1002/(SICI)1097-4571(1998)49:12<1135::AID-ASI8>3.0.CO;2-W)
- Kelle, U., & Kluge, S. (2010). *Vom Einzelfall zum Typus. Fallvergleich und Fallkontrastierung in der qualitativen Sozialforschung* [From single case to type. Case comparison and case contrasting in qualitative social research]. Wiesbaden, Germany: VS Verlag.
- Krämer, B. (2018). Online music recommendation platforms as representations of ontologies of musical taste. *Communications*, 43, 259–281. <https://doi.org/10.1515/commun-2017-0056>
- Krämer, B. & Conrad, J. (2017). Social ontologies online: The representation of social structures on the Internet. *Social Media and Society*, 3, 1–11. <https://doi.org/10.1177/2056305117693648>
- Lessig, L. (2006). *Code version 2.0*. New York: Basic Books.
- Locher, M., & Watts, R. (2005). Politeness theory and relational work. *Journal of Politeness Research. Language, Behaviour, Culture*, 1(1), 9–33. <https://doi.org/10.1515/jplr.2005.1.1.9>
- Luhmann, N. (1984). *Soziale Systeme. Grundriß einer allgemeinen Theorie* [Social systems. Outline of a general theory]. Frankfurt a. M., Germany: Suhrkamp.
- Luhmann, N. (1993). ‘Was ist der Fall?’ und ‘Was steckt dahinter?’ Die zwei Soziologien und die Gesellschaftstheorie [“What ist he case?”, and “What is behind it?” The two sociologies and the theory of society]. *Zeitschrift für Soziologie*, 22, 245–260.
- Meyer, H. K., & Carey, M. C. (2014). In moderation. Examining how journalists’ attitudes toward online comments affect the creation of community. *Journalism Practice*, 8(2), 213–228. <https://doi.org/10.1080/17512786.2013.859838>
- Neuberger, C. (2014). Konflikt, Konkurrenz und Kooperation: Interaktionsmodi in einer Theorie der dynamischen Netzwerköffentlichkeit [Conflict, competition and cooperation. Modes of interaction and a theory of the dynamic networked public sphere]. *Medien & Kommunikationswissenschaft*, 62, 567–587. <https://doi.org/10.5771/1615-634x-2014-4-567>
- Papacharissi, Z. (2004). Democracy online. Civility, politeness, and the democratic potential of online political discussion groups. *New Media & Society*, 6(2), 259–283. <https://doi.org/10.1177/1461444804041444>
- Park, J. R. (2008). Linguistic politeness and face-work in computer-mediated communication, Part 1. A theoretical framework. *Journal of the American Society for Information Science and Technology*, 59(13), 2051–2059. <https://doi.org/10.1002/asi.20916>
- Pentzold, C. (2016). *Zusammenarbeiten im Netz. Praktiken und Institutionen internet-basierter Kooperation* [Collaboration on the Web. Practices and institutions of Internet-based cooperation]. Wiesbaden, Germany: Springer VS.
- Pfeffer, J., Zorbach, T., & Carley, K. M. (2013). Understanding online firestorms. Negative word-of-mouth dynamics in social media networks. *Journal of Marketing Communications*, 20(1–2), 117–128. <https://doi.org/10.1080/13527266.2013.797778>
- Quine, W. V. (1948). On what there is. *Review of Metaphysics*, 2(5), 21–38.

- Schimank, U. (2002). *Handeln und Strukturen. Einführung in die akteurtheoretische Soziologie* [Action and structures. Introduction to actor-theoretical sociology]. Weinheim, Germany: Beltz Juventa.
- Searle, J. R. (1969). *Speech acts: An essay in the philosophy of language*. Cambridge: Cambridge University Press.
- Searle, J. R. (1995). *The construction of social reality*. New York: The Free Press.
- Smith, A. N., Fischer, E., & Yongjian, C. (2012). How does brand-related user-generated content differ across YouTube, Facebook, and Twitter? *Journal of Interactive Marketing*, 26(2), 102–113. <http://dx.doi.org/10.1016/j.intmar.2012.01.002>
- Strawson, P. (1964). Intention and convention in speech acts. *Philosophical Review*, 73(4), 439–460. <https://doi.org/10.2307/2183301>
- Suler, J. (2004). The online disinhibition effect. *CyberPsychology & Behavior*, 7(3), 321–326. <https://doi.org/10.1089/1094931041291295>
- Terkourafi, M. (2005). Beyond the micro-level in politeness research. *Journal of Politeness Research*, 1(2), 237–262. <https://doi.org/10.1515/jplr.2005.1.2.237>
- Vandebosch, H., & Cleemput, K. V. (2009). Cyberbullying among youngsters. Profiles of bullies and victims. *New Media & Society*, 11(8), 1349–1371. <https://doi.org/10.1177/1461444809341263>
- Weber, M. (1988 [1904]). Die „Objektivität“ sozialwissenschaftlicher und sozialpolitischer Erkenntnis [The “objectivity” of social-scientific and social-political knowledge]. In J. Winckelmann (Ed.), *Gesammelte Aufsätze zur Wissenschaftslehre* (pp. 146–214). Tübingen, Germany: Mohr Siebeck.
- Weber, M. (1976 [1921]). *Wirtschaft und Gesellschaft. Grundriß der Verstehenden Soziologie* [Economy and society. An outline of interpretative sociology]. Tübingen, Germany: Mohr Siebeck.
- Wirth, N. (1976). *Algorithms + Data Structures = Programs*. Englewood Cliffs, NJ: Prentice-Hall.