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VIRTUAL COMMUNITIES AND DEMOCRATIC DEBATES:
A CASE STUDY ON INSTITUTIONAL INFLUENCES

Completed Research Paper

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Abstract

An empirical investigation on virtual communities shows how conflictive institutions influence the way members perceive their online interactions as being supportive or not of a more democratic debate. On the one hand community members identify their discussion lists as a space for free speech, emphasizing the relevance of having more access to information and channels for influencing society on issues related to environmental education. On the other hand they recognize obstacles for the free debate of ideas in these collectives, mainly to avoid conflicts with community leaders and members who are linked with powerful institutions. The research points out the relevance of considering the institutional environment to understand the nature of interactions in virtual communities in general, and their potential and limits as spaces for democratic debate in particular. Lessons from these informal online groups inform research on other virtual spaces, highlighting how the institutional environment influences these collectives.

Keywords: Virtual worlds, interpretive methods, Internet, institutional theory, organizational characteristics, social influences
Introduction

The diffusion of information and communication technologies, in particular the Internet, has been associated with many transformations in contemporary societies. One important novelty in this environment is that the Internet enables new forms of connecting people, permitting more interactive communication and sharing of information (Butler 2001; Castells 1997; Croucher 2004; Preece 2001; Webster 2002). This new capacity for interacting and sharing has made possible new forms of organizing collectives, which some authors have called virtual communities (Castells 2001; Graham 1999; Mansell and Steinmueller 2000; Rheingold 2000 [1993]; Steinmueller 2002). In a broad sense, the term (as well as online community and similar concepts) has been used to refer to any group which interacts through the Internet, although some scholars prefer to restrain its use to collectives that have a clear set of characteristics that define the boundaries of such groups (DiMaggio et al. 2001; Graham 1999).

The literature on the domain of virtual communities points out the potential these collectives have to democratize the public debate and foster citizen participation (Castells 2001; Dahlberg 2007; Dahlgren 2001; Delanty 2003; Feenberg 2009; Papacharissi 2002; Rheingold 2000 [1993]; Sassi 2001). Authors argue that these spaces of interaction permit people to assume more active roles in society (Bakardjieva 2009; Delanty 2003; Graham 1999). For instance, Internet-mediated groups have been behind organizations such as Chinese social movements (Tiananmen Square, for democracy, 1989; Falun Gong, religious movement since the 1990s), and the global network which organized protests against the World Trade Organization (Seattle, 1999), and the Group of 8 (G8) (Genoa, 2001) (Castells 2001; Hassan 2004; Kahn and Kellner 2004; Stoecker 2002). The Indymedia (Independent Media Centre) is another example of a global community of volunteers who produce independent news with the mission of voicing alternative perspectives to the mainstream media (Castells 2001; Hassan 2004; Juris 2005).

In addition, the Internet may permit further citizen participation in the definition of public policies, as people more easily may make their opinion known, directly instead of only through their elected representatives (Castells 1997; Garnham 1992). Some even argue that the Internet enables participatory democracy, in which people may make decisions directly, a model that is seen as ideal by many social movements around the world (Castells 1997; Garnham 1992; Pickard 2006; Polletta 2002; Steinmueller 2002).

An Institutional Perspective

Although the Internet has opened space for more democratic participation – through discussion lists, forums, blogs, and social networks –, it is also observed that the way people behave in these spaces is related to their social context, thus the relevance of understanding the institutional environment of these interactions (DiMaggio et al. 2001; Matzat 2004; Nip 2004; Slevin 2000; Wellman 1997). Virtual communities are not necessarily more democratic and egalitarian spaces (Jones 1995; Steinmueller 2002); rather they may impose behavior rules that are related to strong institutions in society adopting, for instance, authoritarian governance structures and mechanisms for enforcing legal accountability (De Cindio et al. 2003; Gattiker 2001; Hauben and Hauben 1997; Souza et al. 2004; Venkatesh 2003).

Indeed, the literature on the domain of institutions is more cautious about the possibility of changing resilient social structures (institutions), understood here as patterned behavior and social systems, such as formal organizations (Berger and Luckmann 1967 [1966]; DiMaggio and Powell 1991; Porpora 1998 [1989]; Scott 2001). More precisely, institutional theory states that social actors always have the possibility of changing social structures, as they remain free to reinterpret and change their behavior and social systems in new contexts and situations (Jepperson 1991; March and Olsen 1989; Scott 2005). However, institutions also have a high degree of resilience and inertia (DiMaggio and Powell 1991; Scott 2001; Stinchcombe 1968).

Thus in spite of the fact that social actors keep their freedom of changing (agency), they often reproduce patterned behavior and social systems. There are many reasons behind such a reproduction that are supported by rules, norms and cultural-cognitive schemas (Berger and Luckmann 1967 [1966]; Scott 2001; Stinchcombe 1968). Culture is an important element in building the contextual environment, as social perceived reality, in which rules, norms and schemas emerge; thus even when culture does not affect social structures directly, it influences the meaning people attribute to these structures (Scott 1991 [1987]). Relational networks also create a strong interdependency between social entities, legitimizing specific ways of organizing, structural forms and procedures, thus reinforcing the inertia of institutions (DiMaggio and Powell 1991; March and Olsen 1989; Meyer 1994; Powell 1991). In fact, legitimacy
is an important pillar for supporting institutionalized social structures: when legitimate, a behavior pattern is considered to be appropriate to a situation that favors its reproduction (Deephouse and Suchman 2008; Scott 2001).

In addition, the way powerful actors control resources through sanction mechanisms of reward and punishment affects how people interpret the value and meaning of traditional social structures (Powell 1991; Scott 2001; Stinchcombe 1968). Thus the very same Internet interactions that could promote democratic behavior may become instrument of surveillance and control of citizens in specific environments in which authoritarian institutions are pervasive (Castells 2001; Dahlgren 2001; Garnham 1992; Sassi 2001). This perspective understands power within social structures which control resources and sanction mechanisms, thus supported by a network of interests that has a level of stability but may change (Foucault 1980, 1984).

This research analyses a particular situation in a group of Brazilian environmental-education virtual communities. These communities present themselves as informal collectives, close to social movements, which have the aim of discussing environmental education mainly through discussion lists, and of mobilizing political efforts to influence the government and private organizations in their policies related to the theme. The idea of democratizing the debate is pervasive in these virtual communities; however, freedom of expression is not necessarily perceived as welcome. There is thus a conflict between two perspectives: on the one hand the communities appear as spaces for the democratization of the discussion on environmental education in which all members have freedom of speech; and on the other hand members constrain their opinions, respecting established structures of authority and fearing the surveillance of more powerful members who are linked with governments and universities.

This research proposes to investigate this empirical case in order to understand how conflictive institutions dispute particular virtual spaces, fostering and constraining the democratic debate. More specifically, this study focuses on the interplay between democratic social structures that foster freedom of speech, and authoritarian social structures that foster the censuring of opinions in public spaces (Fraser 1992; Gurevitch et al. 1991; Habermas 1989, 1996). At least ideally, the studied communities define themselves as social movements which aim promoting democratic social structures. Indeed, many social movements cultivate the objective of having more democratic governance structures (Epstein 1996; Pickard 2006; Polletta 2002). In addition, the principles of democratic participation through regular direct elections of political representatives and free press are present in Brazilian society. Contrasting with the ideals of democratic participation, governments and universities have hierarchical governance structures based on the respect for the legal authority, in which most organizational actors accept the order imposed by one leader or a small group of leaders, who centralize decision making (Simon 1997 [1945]; Weber 1947). Naturally, respecting legal authorities within social systems that are hierarchical is also culturally accepted by the Brazilian society.

This research contrasts the freedom of speech and the lack of free debate in these communities, as being social behaviors which emerge from the conflict of democratic and authoritarian (understood as the respect for legal authority) social structures in the same virtual space. Democratic and authoritarian behaviors are accepted in society in different situations. In democracies, citizens are supposed to have freedom of speech; but the very same citizens respect the legal authority when they are enacting their roles in their jobs within organizations. The studied virtual spaces emerge as public spheres of free debate, but the presence of institutional actors, linked with governments and universities, changes the perception of members about the nature of these virtual spaces. Thus this research does not claim that the communities are purely either democratic or authoritarian; also this investigation focuses only on the freedom and lack of freedom of speech as behaviors which emerge from the conflict, without analyzing other patterned behavior which could be related to both institutions.

In exploring this case, this study contributes to point out the relevance of considering the institutional context to better understand how virtual environments develop through time. Indeed, excluding few exceptions (such as Matzat 2004, and Souza et al. 2004), the research on virtual communities has not focused deeply on the influence of institutions in online interactions, a gap that has been persistent in this domain (DiMaggio et al. 2001). Thus this study also contributes to reduce this gap, studying virtual communities through the lens of institutional theory.

These arguments are detailed below. Firstly, the study introduces its methodology and empirical object. Secondly, it presents the findings. Thirdly, it analyses the ambiguities faced by community members when discussing their online interactions as a channel for democratic debate through the lens of institutional theory. Finally, it concludes with the main contributions of this paper on the relevance of taking into account the institutional context in order to have a better understanding of the potential of virtual communities for fostering democratic debates, of having a deeper understanding of environments in which conflictive institutions dispute space, and the implications of these findings to a broader social spectrum of virtual interactions in any organizational environments.
Methodology

The term virtual community has referred to collectives that interact through computer-mediated communication channels. The concept has been used to describe a very broad range of online collectives. Some authors, however, recommend using the concept only for more specific forms of interaction (Graham 1999; DiMaggio et al. 2001). This research adopts a narrower conceptualization, following Graham (1999): the studied collectives are understood as virtual communities because members adhere to the group voluntarily, they share similar interests (environmental education), and they have rules that guide their interaction (such as not accepting anonymous members).

This study has chosen as its empirical objects Brazilian environmental-education virtual communities, as follow:

- **Rebea:** Brazilian Environmental-Education Network, active since 1992 (national level);
- **Repea:** São Paulo Environmental-Education Network, active since 1992 (State level);
- **Remtea:** Mato Grosso Environmental-Education Network, active since 1996 (State level);
- **Reasul:** Brazilian South-Region Environmental-Education Network, active since 2002 (regional level).

This choice has been oriented strategically (Patton 2002): previous pilot studies with these groups have shown the internal conflict between being channels for democratic debate while members fear to express their opinions openly. This information permitted to see the opportunity of investigating these communities from the perspective of institutional theory, adopting a *theory-driven research*, thus aiming to go further than the more pervasive approaches (descriptive or exploratory) in the study of social phenomenon enabled by the Internet (Wellman 2004). Drawing upon institutional theory, this research adopts an *explanatory theoretical approach*, aiming to explain the observed phenomenon from a specific perspective in order to improve the understanding of social mechanisms, without aiming to define law-like generalizations about the phenomenon (Gregor 2006). The generalizations in this study are thus in the analytical level (Yin 2003).

These communities discuss themes related to environmental education, acting in different levels in Brazil (national, regional or State levels). In 2006, these communities had around 3,500/3,800 members. Their main objectives are sharing information and knowledge through the Internet, and mobilizing members politically to influence the government and private organizations with relation to their policies for environmental education and the environment.

This research draws upon an interpretive tradition, investigating social phenomena from the point of view of involved social actors, i.e. how they perceive and interpret their experience in a situation (Berger and Luckmann 1967 [1966]; Gadamer 1989 [1975]; Habermas 1981 [1968]). Aligned with this perspective, this study chooses a qualitative methodology, based on 58 in-depth interviews with community members (Rebea: 17 members; Repea: 11 members; Remtea: 15 members; and Reasul: 15 members), in an average of two hours each (Esterberg 2002; Mason 2002). Respondents are classified into two groups: some assume the position of leaders in these communities, having more power in decision making, and sharing (segregated) discussion lists that are not open to other participants, who are called here ordinary members.

The first contacts with these communities have been with their spokespersons, who have indicated other potential respondents and then successively other members have been reached (snowball process) (Esterberg 2002). In order to preserve the anonymity of respondents quotations are identified by the name of their communities and an additional number, which preserves the individuality of the respondent without revealing his/her identity.

Interviewees have been questioned about the governance structures of their communities, exploring mainly the description of examples. As the communities inform in their websites that they adopt network forms of organizing, this theme has been explored first. At this stage respondents were inclined to relate stories that emphasized the democratic features of their interactions. In a second moment, respondents were asked to describe cases that could exemplify their governance structures, and through successive interactions with the researcher, who asked more details in order to clarify ambiguities, other forms of interaction have been revealed. In this study, part of this dataset is analyzed, focusing on how community members perceive the elements which foster and constrain the freedom of speech in their virtual environments.

The interviews, done between April and June 2006, were transcribed and the relevant quotations edited and translated from Portuguese into English by this researcher. Sentences have been tidied up to eliminate utterances which did not contribute to the understanding of the conveyed meaning, as it is recommended for qualitative
research in sociological investigations (Flick 2002; Kvale 1996). Occasional change in the subjects of sentences has been made to protect the identity of respondents. Thus if a member says “I have” in a circumstance that others may identify him or her because of the context, the sentence is changed to “A member has”. These changes are marginal in this research and do not affect the meaning of sentences.

The transcriptions have been manually coded through successive rounds. The first code was open, exploring the themes that would be relevant to this investigation considering its research question and theoretical framework (Esterberg 2002). Successive coding rounds have consolidated the findings into specific themes, which are coherent with the whole body of results and with the theoretical framework. Finally, each construct has been checked against the whole dataset, finding examples that corroborate the constructs. In this way this investigation interleaves inductive and deductive reasoning in order to guarantee a better fit between the dataset, the constructs and the theoretical framework (Babbie 1998; Esterberg 2002).

In this research the findings are aggregated as a unique case-study because the objective is to explore the mechanisms behind a phenomenon which is observed in the four communities (Yin 2003). The small differences between cases have not been revealed to be relevant for the purpose of answering the research question on how conflictive institutions dispute particular virtual spaces, fostering and constraining the democratic debate. Indeed, respondents in the four communities have a high degree of agreement about the way they interpret the observed phenomenon. A level of saturation that brings confidence about the quality of this study, which is also reinforced by the coherence between the findings and the adopted theoretical perspective and between the parts (particular statements) and the whole (aggregated interpretation), which is expected in interpretive research (Flick 2002; Klein and Myers 2001; Mason 2002).

**Findings**

This section presents the main research findings, mainly contrasting the argument that the studied virtual communities offer channels for free speech with the one that they also constrain an open discussion of ideas, emphasizing the conflict between the two institutionalized social structures which dispute the same virtual space, i.e. the democratic vis-à-vis the authoritarian social structures. Starting from the perspective that virtual communities offer democratic spaces for debate, respondents are keen to highlight that their collectives improve the volume of information members have access to and articulate debates:

- “The greatest potential of the community is the capacity of sharing information and knowledge about the environmental education among members.” [Rebea 3, ordinary member]
- “The community has the role of diffusing information quickly, of articulating groups and fundamental debates.” [Reasul 11, leader]

Members also emphasize that they have space for democratically discussing divergent perspectives:

- “People have more freedom to give their opinion in this space, because they are not monitored on these discussion lists [as they could be in their work places].” [Repea 1, leader]
- “Any person can be a member of the community, independently of their ideology. We need to accept this otherwise it is not democratic. The community follows the principle of total inclusion [of any member], because the community does not have clear defined ideology. Indeed, there is a group that is dominant in the community, but it is not hegemonic, because we accept differences.” [Remtea 1, leader]

**Building and Reframing Consensus**

Respondents also argue that the communities guide their collective action by the consensus which emerges from the debate among members:

- “The conflict of ideas is good to generate debate, but in the end it is positive to achieve a consensus about what we [the community] think is correct.” [Repea 5, ordinary member]
- “In a company, a person who has power makes decisions. In the community, it is necessary to arrive at a common decision by dialogue.” [Remtea 8, leader]
Two cases are cited by members as examples of formation of consensus in which the communities have been able to influence the government in very specific directions. In the first case, the communities have mobilized themselves in order to change a governmental decision of extinguishing the area devoted to environmental education in the Ministry of Education and Culture:

“During a governmental transition, it has extinguished the area of environmental education. This event generated a reaction in the whole country [within environmental-education virtual communities]. Members organized petitions, and in five days the government inverted the decision.” [Rebea 9, leader]

“In this case one may see the power of the communities. It is a process of mobilizing people quickly through the Internet. We organize many political mobilizations similar to that.” [Remtea 11, leader]

In the second case, the communities organized themselves against the fact that a global corporation involved with the production of genetic modified crops has been responsible for the elaboration, publishing and distribution of material for environmental education in Brazil:

“The corporation distributed didactic material in schools without governmental approval. The communities have mobilized their members against this material. Then the government decided that didactic materials for schools should be approved beforehand by the Ministry.” [Remtea 11, leader]

The perspectives above are grounded in the idea that members are free to express their opinions, that communities have means to define consensus in a democratic way, and that the consensus is accepted by a significant number of members, either because they directly agree or because they do not manifest opposition against what is presented as consensus. Respondents however, have other perspectives on how to interpret their experience in these communities, thus challenging the idea that these collectives are democratic spaces for forming consensus, as leadership groups in this community are guiding the establishment of these consensual ideas:

“We have leaders, who have their opinions more cited. We have a strong identity as a group in the construction of the collective [consensual ideas]. Those that have better argumentation define the consensus. Those who are silent agree [implicitly] with others.” [Remtea 10, leader]

“In these communities, the word consensus is more said than practiced. A discussion among 20 members in a community is not representative to be called consensual in the end.” [Rebea 9, leader]

**Restricting Debate**

Indeed, respondents related two extreme cases in which the freedom of opinion has been strongly constrained. In the first case, a Rebea leader has been excluded from the mainstream group by other leaders after her decision to attack the federal government on discussion lists:

“This leader has been excluded from spaces in which the government may interfere. Now she is marginal to the community, having been substituted by a person who is aligned with the government.” [Rebea 1, leader]

“There was an abrupt change of leaders in the community. I think the previous leader was not adequate for the interests of the government. There was an articulation behind the scenes, and the previous leader was isolated [from the leadership group].” [Rebea 4, ordinary member]

A second case happened in Remtea. Leaders have expelled an ordinary member from the discussion list, without consulting the community as a whole, because he has repeatedly expressed strong opposition to the perspective on environmental education defended by the leaders, mainly academic professionals in the field:

“The community has diversity, but a diversity that is not conflictive. There was this member who was against everything [the mainstream ideas]. He was a virus in our system. He came to disturb and to propose absurd ideas. We were forced to expel him.” [Remtea 7, leader]

“He was irritating. We defend sustainability, and he development. We have a perspective on education that is humanistic and political, which gives a political identity to our collective actions. He has a different perspective [of forest management, which is more technically oriented].” [Remtea 14, leader]
In addition, there are other cases in which the leadership groups tried to frame the debate in the direction of their own perspective, either through subtle processes such as recommending readings and forms of thinking, or through more vigorous means such as strongly criticizing (flaming) members who diverge from the mainstream perspective:

“[Commenting on a case of a member who has offered to help in some activities] We try to change the way this member thinks, indicating readings, in order to keep our perspective in the community. This member has created a zone of discomfort, because he is offering to help, but he has an alternative perspective, not the one defended by the [leadership] group.”  [Reasul 8, leader]

“If a member says stupidities against our [mainstream] ideology, he will beflamed. We do not accept ideas which go against our concepts of [social] empowerment. ‘Read more before saying stupidities’ [exemplifying a sentence that the respondent could use to flame others].”  [Remtea 6, leader]

Some members feel constrained to express their opinions, understanding they are not in a favorable position to oppose the ideas of main leaders, who have strong links with the government and universities. In other words, members perceive the freedom of expression within certain boundaries: opinions are welcome as far as they agree, at least in certain degree, with the mainstream understanding, defined by the main leaders of these communities:

“[Commenting about members who are supervised in their Masters or PhD programs by academics who are leaders in the community] These students are always referring to their supervisors on discussion lists. There is a relationship of authority because not all people have intellectual freedom. The boundaries are blurred [between the community and the university].”  [Remtea 7, leader]

Furthermore the risk of being directly punished, there is a second risk of losing potential benefits for complying. Members argue, for instance, that those who are more aligned with the governmental policies may receive formal support (funding) for publishing their work or even receive invitations to be consultants in government projects:

“[Commenting on another community] This community is too linked with the government. Its executive secretary is a governmental arm. Leaders are called to be consultants in government projects. Things are blurred. One cannot criticize the government. There are also publications. The government is supporting academic publications. Everybody thinks the government is ‘beautiful’.”  [Repea 2, leader]

Preventing conflicts, members avoid criticisms against the government and community leaders in discussion lists:

“If a person makes a criticism [against the rules established by leaders], it is not well accepted. I do not criticize the leadership group openly, only in private conversation with few people.”  [Repea 8, leader]

“If one disagrees, it is necessary to be very respectful and convenient [in relation to mainstream discourse]. There is a certain level of intolerance with divergent opinions in the community. I fear being flamed for my opinions.”  [Rebea 3, ordinary member]

Analysis

Contrasting both situations, on the one hand community members understand their virtual space as an important channel for deepening the democratic debate. The fact that members have more information, and that the communities have experience in mobilizing participants to influence public policy in the field of environmental
education are presented as examples of the relevance of virtual interactions in democratizing the debate. On the other hand, community members feel constrained in these very same virtual spaces as they understand they do not have freedom of opinion, especially in situations in which they would like to criticize the mainstream ideas and oppose the interests of powerful social actors who are linked with the government and universities. The described scenario resembles an arena in which conflictive institutions fight for space (March and Olsen 1989; March and Simon 1993 [1958]; Meyer 1992; Scott 2005).

Certainly members perceive their communities as a channel for improving the quality of the political debate, a value that is strongly related to their roots in social movements, which since the 1960s have emphasized their role in promoting more democratic debate and social structures (Epstein 1996; Goodwin and Jasper 2003; Pickard 2006; Polletta 2002). When focusing on this democratic value, members highlight the relevance of having quality information, freedom of debate and the capacity of forming consensus around common affairs, similarly to ideas related to strengthening the public sphere – understood here in its more generic meaning, as a public arena for democratic free debate among citizens who deliberate about common interests, not restricted to the bourgeois public sphere as originally proposed by Habermas (Fraser 1992; Gurevitch et al. 1991; Habermas 1989, 1996). These elements support the institution of democracy, either the representative model in which groups choose their representatives, or the participatory one in which groups make decisions directly without delegating powers to others (Epstein 1996; Fraser 1992; Goodwin and Jasper 2003; Pickard 2006; Urbinati 2006).

In the studied communities however, the very same virtual space hosts other institutions which challenge the idea of democratic debate. Community members are concerned with their roles as environmental educators within the virtual space vis-à-vis a broader social context. Respondents highlight, for instance, the fact that members who belong to governmental offices and universities actually would not feel comfortable expressing their ideas freely, although ideally they would have freedom of expression. Also respondents that are dependent on these institutions (government and university) for receiving funding and other resources, restrain their opinion in the online environment. In this direction, the studied communities reproduce a patterned behavior which is pervasive in authoritarian social structures, understood here as the respect for legal authorities (Simon 1997 [1945]; Weber 1947).

Indeed, the findings are aligned with the idea that institutionalized roles in society are powerful carriers of patterned behavior through time and settings (Meyer 1994; Scott 2001; Weber 2002 [1930]). Through rules, norms and cultural-cognitive schemas, social actors frame their understanding of appropriate behavior in a situation: i.e. their forms of acting in society (DiMaggio and Powell 1991; Douglas 1987; Scott 2001), an institutional perspective that resembles the interpretation formulated by community members. Although in a different environment, members understand that they should take into account their roles in society when participating in virtual debates, thus framing their participation in ways that are accepted by institutional peers in offline interactions.

**Sanction Mechanisms**

Members perceive their communities as spaces for surveillance and control, as they realize the presence of powerful social actors who have divergent interests and perspectives and who domain sanction mechanisms of reward and punishment within and outside online spheres. Respondents relate cases in which members have been excluded from main debates or from the community, and in which offline interests are damaged as a form of punishment for expression of opinion in the online interaction. In addition, reward mechanisms for compliance - such as invitations to be consultant in projects and publishing with the support of the government - are understood as reasons for limiting the emergence of a more critical perspective in these virtual communities. The perception is shared by diverse members in the community, including leaders. Any member may suffer constraints when opposing the interests of the more powerful social actors, as leaders also may be ostracized and excluded from the leadership group.

These findings are aligned with the institutional perspective that powerful social actors control resources through sanction mechanisms, fostering the reproduction of institutionalized behavior (Meyer and Rowan 1977; Powell 1991; Scott 2001; Stinchcombe 1968). In the studied communities, those recognized as powerful actors control online resources (communication channels) as well as offline ones (access to publishing and jobs). The relational networks are also a channel for controlling these resources, thus members who criticize powerful social actors may close doors to all sorts of resources including information and social networks (DiMaggio and Powell 1991; Powell 1991). Both sanction mechanisms and relational networks are important means for encouraging the reproduction of...
patterned, institutionalized behavior in society: people fear punishment, appreciate rewards, and are empowered for being connected to relevant social networks.

Furthermore coercive and normative mechanisms, there are also mimetic ones which influence actors in their cognitive level (Berger and Luckmann 1967 [1966]; DiMaggio and Powell 1991; Scott 2001). In other words, sanction mechanisms and relational networks influence the way actors understand the world, framing their perspective on the meaning of a defined situation (DiMaggio and Powell 1991; March 1994; Scott 2001). In the studied case, members try to accommodate in their discourse the ambiguities and incoherence of having an arena of debate that is expected to be simultaneously democratic and authoritarian, mirroring the conflict between divergent institutions. On the cognitive level, both forms of patterned behavior are not totally institutionalized in the sense of being taken-for-granted as the appropriate one (Berger and Luckmann 1967 [1966]). Facing ambiguity, each member should decide in the situation, in accordance with the theme under discussion and her or his role in society, whether the freedom of debate is appropriate for the context. This is an environment that permits the emergence of different, even contradictory patterned behaviors (March 1994; March and Olsen 1989; Scott 2005).

**Legitimacy**

Respondents recognize that their communities offer space for both social structures: those that are more democratic (fostering freedom of speech) and those that are authoritarian (restraining freedom of speech). In explaining the reasons why freedom of speech is constrained, respondents justify the situation evoking their roles and interests in society, either because they would like to avoid the risk of punishment or because they would like to have benefits for complying with the mainstream expectation. In both cases they understand their behavior as appropriate to a situation in which sanction mechanisms may be used by powerful actors. The idea that a behavior pattern is legitimate is fundamental to the strength and reproduction of institutionalized social structures (Deephouse and Suchman 2008; Scott 2001). In these environments, there are not clear rules to block freedom of speech, but members recognize that in the normative level a specific behavior of respect for the legal authority is expected from participants that are linked with or dependent on governments and universities. In fact, the recognition that some have authority and status in society works in these communities in the direction of legitimizing behavior avoiding criticisms against leaders and powerful actors (Scott 2001).

Curiously, the situation of actual freedom of expression in the studied communities resembles phenomena observed in mass media channels. Media companies are said to be subjected to the influence of governments and corporations in their interpretation and edition of facts, occasionally assuming roles similar to public relations (Curran 2000; Dahlgren 2001; Habermas 1989). The possibility of having online interaction involving a large number of citizens, who may receive and emit information, appears to challenge the institutionalized, unidirectional truth channeled by media companies (Feenberg 2009). Social movements, especially, are said to be able to support new forms of politics through the Internet, calling attention to the political interests of less powerful groups (Dahlgren 1991, 2001).

However, in becoming channels for reproducing institutionalized perspectives, virtual communities run the risk of not only reproducing the mainstream media but also of legitimizing these institutionalized interpretations as being the consensuses that emerge from democratic debate in social movements, although they are not. Thus the observed situation is of high importance for those concerned with the democratic debate: one should know which interest groups are behind each voice. In legitimizing institutionalized truths unsupported by grassroots members, virtual communities that aim to represent social movements shrink the boundaries of the debate arena, misrepresenting their members, reducing the spectrum of opinions, and biasing the democratic formation of consensus. This contradiction is especially serious as civil society and social movements have been recognized by international organizations and national governments as important stakeholders that may foster a better balance of power between institutions, citizens and peoples (Castells 2001; Dahlgren 1991; Dodds 2002; Stoecker 2002).

**Institutional Hope**

Although the findings question the limits in which virtual communities may contribute to the democratic debate, it is also possible to see hope in the described scenario. From the perspective of institutional theory, whilst institutions favor the inertia of social structures, they also empower and enable actions, fostering incremental and even revolutionary changes (Avgerou 2002; Jepperson 1991; Scott 2001). In the studied communities there is a situation of institutional ambiguity in which community members need to interpret rules, norms and cultural-cognitive
schemata. Furthermore, their roles and identities define their understanding of appropriate behavior in accordance with a context that is very dynamic (DiMaggio and Powell 1991; March 1994; March and Olsen 1989; Scott 2005). To date, their interpretation may be ambiguous, sometimes favoring more democratic institutions of free debate and other times constraining their arguments for fearing authoritarian mechanisms of punishment. Tomorrow, community members could do otherwise.

For instance, a virtual learning community of self-organized London cab drivers-in-training, having recognized the risk of suffering surveillance, control and punishment by formal institutions has opted for anonymous membership as a way of protecting their freedom of speech in discussion lists (Ross 2007). Thus, in this community, members may express their opinion without fearing the offline consequences for being critical of the institutions and professionals that will judge their performance as cabdrivers. For sure, this community is substantially different from the ones studied in this research, as it has been organized without the support of the formal institutions which are related to the process of teaching and evaluating cabdrivers in London. However, one may extract lessons from this example in relation to how agency may circumvent institutions in order to foster new social structures. The fact that the creator of this group has adopted the flexibility of accepting anonymous participation is fundamental to ground the observed social structures. In other words, the way the community has appropriated the discussion list blocks up institutions from applying sanction mechanisms in this environment. Still institutionalized actors may observe the debate, but they cannot punish anonymous members. This capacity of creating strategies to foster democratic debate may inspire other virtual communities.

IT Matters

The interactions in these communities are supported mainly by Internet-mediated discussion lists. Thus it is necessary to understand the role of the technological artifact in the enactment of divergent patterns of behavior. As with any piece of technology, these discussion lists have a set of material features that have been inscribed by their designers. The idea of inscription of features may be understood as the design process which embeds specific characteristics into the tool, in such a way that these characteristics simultaneously enable and constrain how people may appropriate that tool (Bijker et al. 1987). These inscriptions may be understood as programs of action: i.e. rules related to technical functionalities that influence the way users experience the enabling and constraining capacities of these material features (Hanseth and Monteiro 1997; Kling 1996).

The discussion lists adopted by the studied communities have a set of characteristics that empower the creators of groups. It is inscribed in these tools that the creator of a group have permanently more powers than other members, and that the creator configures the characteristics of the lists. For instance, the creator defines whether membership is open to anyone who would like to join the group, or whether membership should be approved. The creator establishes whether the messages would be accepted directly without moderation or be previously approved by a moderator, who is the creator of the group or someone who has been empowered by the creator as a group manager. The creator and the moderators may also expel members from the group and define censorship of specific members, meanwhile other members keep the right of sending their messages straightforwardly without moderation. Members are not informed about the managerial decisions of creators and moderators, thus the expulsion or censuring of a member could pass unnoticed by other group participants.

Although these material features of discussion lists empower creators and chosen moderators, the very same tools allow other forms of configuration which would affect the appropriation of these artifacts. For instance, the creator of the list could define that anyone could be a member without demanding previous approval, and that all members could have managerial powers as moderators. This configuration would be a way of empowering members in general, but in these studied communities the managerial functions have been centralized to a very restricted number of people (in general the creator and a few moderators). Also the tool offers the possibility of expelling a member without the consent from the respective member or the community. However, the creator could choose never to use such a function, or subjecting the use of this function to previous consultation with the whole community and the member affected by the proposal.

Contrasting the results of the presented research with the Ross’s (2007) findings (discussed in the previous section), it is clear that the appropriation of Internet tools matters when discussing the possibilities of organizing collectives through the Internet. Both types of communities – the studied environmental-education ones and the London cab drivers-in-training one – are supported by similar applications: Internet-mediated discussion lists. However, the creators of the discussion lists for the environmental-education communities enforce the rule that participation
cannot be anonymous. This enforcement is not imposed by the tool. The discussion list just allows the creator to establish that membership should be approved, but this feature empowers the creator to decide the criteria for approval.

In the case of the studied communities, the requirement for membership demands that the person should be identified with her or his name. Certainly there are spaces for manipulations, and occasionally a member may be found adopting an identity that does not correspond to his or her real name. However as a formal rule only people that are identified by their real identities may be accepted as a member in these communities. This procedure, enabled but not imposed by the discussion lists, empowers community leaders and institutional actors to exert mechanisms of control and punishment, as members may be effectively identified. However, the community of cab drivers-in-training (Ross 2007) specifically allows anonymous participation in order to permit members to express their opinions freely without fear of being supervised and controlled by other members or organizational actors linked with the institutions that judge their professional performance.

The discussed findings support the argument that, furthermore the material features of the tools, the forms of appropriating technology affect the way social actors enact the emergent social structures (Cadili and Whitley 2005; Doherty et al. 2006; Orlikowski 2000), and that powerful social actors and institutions may influence the forms of appropriating technology in order to favor the reproduction of specific patterned behavior (Avgerou 2002; Swanson and Ramiller 1997). In the studied communities, discussion lists have been appropriated in a way of centralizing control and power with the creators and moderators of the lists, enabling mechanisms of control and surveillance of members participation, which in practice constrain the freedom of speech in particular situations.

In this study two aspects directly related to the way tools are appropriated affect the freedom of speech: the non-anonymity of members, and the fact that leaders retain the control of the tools and may even expel members without consulting the community as a whole. The non-anonymity invites members to comply with their roles and interests in society, but if a member still insists in keeping a behavior pattern that is not accepted by the mainstream group, he or she may be expelled. In both ways, the constraints to freedom of speech are fostered by the way leaders appropriate the communication tools as instruments to support sanction mechanisms. The findings thus show that the choice of Internet tools, as channels of information, and the way they are configured are linked with the institutionalized social structures which are present in the environment. In other words, the way leaders have appropriated the tools are not neutral from the perspective of institutionalized structures of power. At the same time, the material features of the studied tools enable leaders to define such a configuration. Thus both the tools as material artifacts and the forms of configuring the tools are related to the sort of institutionalized social structure which emerges from online interactions.

**Designing collaborative tools**

The findings also offer an opportunity to reflect on the role and design of collaborative technologies. Discussion lists offer a rich channel for collaborative work, enabling group members to express their opinions and to see other’s messages, creating a space for free debate closer to the idea of democratic public spheres. However, the discussion lists also provide the instruments for centralizing managerial rights in the creators of the groups. Interestingly, the tools permit the creators to adopt a more democratic configuration that would empower members; however the creator retains the final decision on the configuration of the tool.

A different design could inscribe other material features into discussion lists, to foster the emergence of more democratic social structures. For instance, discussion lists could: permit all group members to have managerial rights; prohibit the expelling or censorship of members without the approval of substantial number of group participants; and inform all members on managerial decisions in order to increase the accountability of creators and moderators when acting on behalf of the group.

In a more advanced conception in terms of design, drawing upon the logic of social network tools, members could decide on their participation in groups without depending on the decision of group creators and moderators, transferring to group members the right of individually deciding on accessing the contributions of any particular participant. Thus instead of having moderators deciding whether a member should participate in a group, each participant would decide whether it is worthy to observe the participation of a specific member. Twitter follows this logic. Firstly, individuals decide on their participation and contribution to Twitter. Second, Twitter members decide individually which other members they want to be linked to, in order to be informed of their contributions. Thus nobody is in control of the contributions but nobody is forced to follow the contributions of those they do not want.
to. In this direction is a model which permits freedom of speech and freedom not to be disturbed by undesired contributions.

Considering the design of discussion lists adopted by the studied communities, the material features offer flexibility, but the message is clear: the creator of the list decides on the level of flexibility to be adopted. The design thus favors a particular concept on how power should be distributed among group members. Indeed, this feature is not a surprise: computational technology emerges from a long tradition in developing technologies which would permit more control of information and people, empowering managers within the logic of organizing through bureaucracies and hierarchies (Beniger 1986). The emergence of other forms of design would depend on the social and political factors that would be involved in the design of technology; thus other designs may emerge through time if society conceptualizes the governance structures of groups in different ways (Bijker et al. 1987).

The design of discussion lists favors a model of distribution of power that is confirmed by the way the tools have been configured in the studied cases. The creators of the lists understand their behavior as appropriate to that situation, in order to keep the control of the lists, a behavior that in some degree is legitimate as group members do not leave the common online space even when disagreeing about the politics behind such configurations. In addition, the demand for non-anonymous participation is not imposed by the tool, but enabled by the tool when defining that membership should be approved. Thus this extra procedure interplays with the tool in order to generate a new characteristic of the online environment, which is the identification of members. In other words, the emergent social interactions result from the interplay of people with the tool and added procedures.

Finally, the impact of demanding non-anonymous participation in the discussion lists has acquired relevance in the particular situation of the studied virtual communities, in which institutional actors – linked with governments and universities – have a relevant role in these online spaces, and in which members perceive the need of censuring their participation in order not to jeopardize the resources they receive from these institutions. In a context in which the presence of institutional actors does not jeopardize other members, other virtual communities could not suffer the same constraints to free speech just because of the identification of members. Thus the impact of a characteristic such as non-anonymous participation depends on the situation and context of the studied phenomenon being generalized to similar environments (Avgerou 2002; Walsham 1993). Indeed, although the studied communities are voluntary organizations which identify themselves with social movements, the presence of institutional actors make them similar to organizational environments. Thus the lessons from this study in relation to how a virtual space may foster both freedom of speech and censuring of debate also inform researchers and practitioners on organizational virtual communities.

Concluding Remarks

The studied virtual communities are an interesting example of how conflictive institutions dispute online spheres. For sure the democratic debate has won more space in these collectives through the sharing of valuable information and the capacity of mobilizing collective efforts to influence governmental policy on environmental education in Brazil. It does not imply, however, that these communities offer space for pure democratic debates: the presence of participants who are linked with governments and universities constrain the freedom of speech as members fear that authoritarian mechanisms of punishment may be used if they express disagreement with mainstream ideas or oppose the interests of institutional actors. This study is particularly interesting because both contradictory forces are observed in the same interactive settings: the ideal of free speech is constrained in face of the conflict between democratic and authoritarian social structures. In the virtual interaction, individuals face a conflict of roles: on the one hand they identify themselves with the institution of democracy, reflecting their roles as members of social movements and citizens; and on the other hand they identify themselves with other institutional interests and roles, respecting the legal authority of social actors linked with governments and universities.

This study contributes to a better understanding of virtual communities in general as space for democratic debate, showing that institutional forces influence the way these collectives interact. Generalizing the lessons from this research, the study of virtual communities and the attempts at fostering such collectives should ponder how institutionalized social structures affect the interactions and behavior in these online spaces, which necessarily are embedded in social, political, economic and historical contexts. Thus the design of virtual communities for the purpose of fostering the democratic debate faces important institutional challenges that should be taken into account.

From a theoretical perspective, any virtual space may be immersed in situations of ambiguous institutions. Drawing upon these research findings and institutional theory, researchers and professionals may be more critical about the
potential and limits of virtual spaces in general to foster new social structures as patterned behaviors. This research calls attention to the need for interpreting virtual interactions from the perspective of divergent institutions that dispute the same space. A myriad of possibilities emerge from the fact that what is perceived as appropriate behavior changes in accordance with the institutional forces of a situation and context. Thus the understanding of virtual spaces is enriched when one observes not only particular situated behaviors, but also the institutional context which nurtures divergent behaviors. The perspective on institutions makes it easier to understand behavior within the context, to foresee a broad range of potential behaviors, and to investigate the appropriation of Internet tools from the standpoint of divergent institutionalized social structures.

Lastly, this research emphasizes the role of discussion lists as technological artifacts which enable the sorts of patterned behaviors observed in these communities. The inscribed material features of discussion lists and the forms of configuration of these tools (associated with the procedure of demanding non-anonymous participation) are fundamental to support the kind of observed interactions. Although the tools allow configurations and appropriations which could foster more democratic interaction in the analyzed contexts, it is a matter of fact that they offer forms of centralizing power in the creators of groups, assuming that mechanisms of control of membership are appropriate to these environments. Broader discussions may derive from these observations, in relation to designing collaborative tools which aim at fostering the emergence of virtual communities. The design and choice of collaborative tools are to influence the emergence of online social structures. Indeed, the design of technology is based on political and social contexts, thus design should be under close scrutiny in order to uncover the potential influence of specific material features in online environments. For sure, it is not technology that would define the enacted social structures, as humans keep agency to appropriate tools in different ways and may simply reject tools that have material features that are considered inappropriate to a situation. However, the enabling material features of technology are not to be ignored.

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