# 7. FROM DEFINITIONS TO MAPS[[1]](#footnote-1)

## 7.1 Limits of Criteria to Make Sense of Techno-social Assemblages

Cases analyzed so far show considerable differences as far as their goals, source of boundaries, and theories of action are concerned. The features indicated by early sociological literature to identify online communities are not any more helpful.[[2]](#footnote-2) Not all projects, for example, are non-profit initiatives: Akshaya, dotSUB, and Open Clothes are business-oriented projects. Furthermore, many of the projects analysed do not limit themselves to online interaction, but rely also on face-to-face interaction. While the Free Software Foundation and the Electronic Frontier Foundation carry on their activities mainly online, Tonga.Online – smart X tension, The World Starts With Me, and Proyecto Cyberela – Radio Telecentros blend offline interaction with online learning activities. Likewise, as to the focus of interest,[[3]](#footnote-3) while some of the cases analysed (i.e., Open Clothes, dotSUB, The World Starts With Me) address a well-defined issue, in other cases the focus of interest cannot be easily profiled. Telestreet, for example, aims to create the conditions for grassroots universal access to media-making, and Overmundo aims to provide Brazilian culture at large with tools for self-expression. Concerning the type of technology used, while some communities are enabled by peer-to-peer software (e.g., Telestreet and the Free Software Foundation),[[4]](#footnote-4) projects like Overmundo and The World Starts With Me use centralized platforms.

How can we make sense of this heterogeneity? This evidence questions the criteria used to identify online assemblages as ‘communities’ (Table 14) and eventually suggests abandoning the attempt to single out any ecumenical definition of ‘digital communites’.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Profit/Non-profit | Only online/Also offline interaction | Specific focus of interest | Centralized/decentralized technology**[[5]](#footnote-5)** |
| Tonga.Online *–* smart X tension | Non-profit | Also offline | No | Centralized |
| Akshaya | Profit | Also offline | No | Centralized |
| Projecto Cyberela – Radio Telecentros | Non-profit | Also offline | Yes | Centralized |
| The World Starts With Me | Non-profit | Also offline | Yes | Centralized |
| canal\*ACCESSIBLE | Non-profit | Mainly online | No | Centralized |
| Electronic Frontier Foundation | Non-profit | Mainly online | Yes | Centralized |
| Free Software Foundation | Non-profit | Mainly online | Yes | Decentralized |
| Telestreet | Non-profit | Also offline | No | Decentralized |
| Overmundo | Non-profit | Mainly online | No | Centralized |
| Open Clothes | Profit | Mainly online | Yes | Centralized |
| dotSUB | Profit | Mainly online | Yes | Centralized |

Table 14 – Classification of winning projects according to orientation to business, relationship between online and offline interaction, focus of interest, centralized/distributed technology used. No correlation emerges among these variables

It is by now evident that communitarian relationships cannot be conceived in ontological terms, looking for an ideal ‘essence’ of online sociability. Rather, a more profitable direction of analysis proceeds by replacing identification practices with mapping practices, an essentialist approach with a relational one. Instead of looking for what online assemblages *are*, we should try to map their *diversity*.

## 7.2 First Criterion: Open Accounts

As for any mapping exercise, criteria are necessary to map the diversity of online assemblages. However, which criteria might be suitable ones? Those identified by sociological literature are not helpful, as they are ambiguous. They phenomenologically register a state of the world, without considering how that state has crystallized. For instance, the online/offline criterion does not take into consideration the face-to-face interactions taking place among developing teams. With *Overmundo*, face-to-face interactions have been fundamental for the establishment of the community. Likewise, the profit/non-profit nature is not easily distinguishable. Non-profit projects like *Proyecto Cyberela – Radio Telecentros* and *Overmundo* depend upon multinational corporations for their sustainability, and provide them returns in terms of image, while for-profit initiatives like *dotSUB* can only rely on their users. Also the degree of specificity of the focus of interest is difficult to be set.

In chapter 6, a criterion has proved to be relevant in distinguishing two types of communities based on their spokespersons’ accounts. It was related to the length of the chain of actions leading to the materialization[[6]](#footnote-6) of the digital community. The criterion distinguished between accounts in which the chain of action is short, there are more intermediaries than mediators and the boundaries of the community tend to be stable and taken for granted, and accounts in which the chain of action is long, there are more mediators than intermediaries and the boundaries of the community are not traceable because of the ceaseless proliferation of mediators. *Open Clothes*, the *Electronic Frontier Foundation, Akshaya, canal\*ACCESSIBLE*, *Proyecto Cyberela – Radio Telecentros* and are *dotSUB* classified in the first category; *Tonga.Online – smart X tension, The World Starts With Me, the Free Software Foundation, Telestreet, Overmundo* fall in the second category.

In the first category of accounts, information artefacts are conceived of either as mere intermediaries that transport elements without interfering with the output, or as goals to achieve. Paradoxically, to those same technologies that are seen as causes of paradigmatic changes no more interesting role is attributed than that of silently transporting information that has been produced elsewhere. Projects that conceive of ICT as intermediaries are also those where it is possible to distinguish a sender that starts the process of communication and a receiver to which that process is addressed. For instance, the *Electronic Frontier Foundation* acts as an Addresser providing information to a vast audience of people interested in digital freedoms. In similar cases, the inside/outside dichotomy maintains its relevance: even if they are layered into concentric levels of participation (from simple members to the core team), group boundaries tend to be stable and taken for granted.

Differently, in the second type of accounts, community is shown as materializing from a concatenation of mediators, the chain of action is well-deployed and each participant activates other participants. These are projects where the digital community is ‘what is made to act by a large star-shaped web of mediators flowing in and out of it. It is made to exist by its many ties.’[[7]](#footnote-7) Crucially, ties among heterogeneous elements are not made of ‘solidarity’, ‘harmony’ or ‘team spirit’. With the *Free Software Foundation*, for instance, GNU OS, licenses, and the Linux kernel are not assembled together by means of ‘harmony’.[[8]](#footnote-8) Rather, communality can be the a posteriori, transient recognition of their ‘cold’ association.

In other words, these are the cases where community is accounted for as an actor-network. As Michel Callon has pointed out,

the actor network is reducible neither to an actor alone nor to a network. Like networks it is composed of a series of heterogeneous elements, animate and inanimate, that have been linked to one another for a certain period of time… But the actor network should not, on the other hand, be confused with a network linking in some predictable fashion elements that are perfectly well defined and stable, for the entities it is composed of, whether natural or social, could at any moment redefine their identity and mutual relationships in some new way and bring new elements into the network.[[9]](#footnote-9)

This quotation explains why in this type of account the dichotomy Addresser/Addressee loses relevance: the elements that the community is composed of can at any moment redefine their mutual relationship and boundaries have not been black-boxed.

The second type of account corresponds to a ‘good text’. Indeed, texts are not less objective than experiments or statistics. If a textual account is part of what makes an assemblage exist, this does not mean that it is just a ‘fictional narrative’.[[10]](#footnote-10) Its accuracy, objectivity and truthfulness can still be measured. As Latour has pointed out,

textual accounts are the social scientist’s laboratory and if laboratory practice is any guide, it’s because of the artificial nature of the place that objectivity must be achieved on conditions that artifacts be detected by a continuous and obsessive attention. […] If the social is something that circulates in a certain way […], then it may be passed along by many devices adapted to the task – including texts, reports, accounts, and tracers. It may or it may not. Textual accounts can fail like experiments often do’ (Emphasis in the text).[[11]](#footnote-11)

Latour does not only argue for the objectivity of texts, but suggests a criterion for assessing the quality and objectivity of textual accounts. He defines a good account as ‘one that *traces a network*, [that is] a string of actions where each participant is treated as a full-blown mediator’, where the social is passed along.[[12]](#footnote-12) If we stick to this criterion, the projects analysed in the previous chapter can be distinguished between those which ‘pass along the social’ – that is, those that numbered more mediators than intermediaries, and those which do not. This is a relevant distinction for our goal to map online sociability – as a sort of meta-principle measuring the objectivity and accuracy of accounts that bring communities into existence, and thus we propose to use it as a mapping criterion.

## 7.3 Second Criterion: Regimes of Access and Visibility

While applications as texts are performative accounts by which a community and its spokespersons are brought into existence, the social may be passed along by many, also not textual, devices. Textual accounts of how information artefacts aggregate communities are one device through which the social circulates. In the case of online sociability, actual software plays a crucial role, along with texts. As Shirky’s understanding of social software as ‘political science in executable form’ recalls, the social is embedded in specific patterns of communication enabled by software.[[13]](#footnote-13) Software articulates the possibilities and constraints whereby a techno-social assemblage is gathered. How are digital communities brought into existence by actual software?

One way to look at these possibilities and constraints is to consider how they ‘configure’ different types of users.[[14]](#footnote-14) Akrich and Latour introduced the notion of ‘script’ to indicate the instruction, possibilities for action and behaviours suggested by artefacts, and consequently the types of users implicitly ‘inscribed' or presupposed by software.[[15]](#footnote-15) The standard car seat belt, for example, unfolds over the abdomen and thus presupposes either male users, or non-pregnant women. Actual users can then ‘subscribe’ to the script, and thus follow the instructions, or not (i.e., they ‘disinscribe’).

In the case of software architectures, possibilities and constraints are strictly dependable on regimes of access and visibility. Such regimes make some functions accessible and visible to members only, others also to non-members or to different degrees of membership. By focusing on these regimes of access and visibility, I suggest that we can follow how software articulates the processes whereby a digital assembly is gathered and different actors are enacted.

Literature in the sociology of media and media theory sustains me in this effort. Boyd and Ellison, for example, have argued that structural variations around visibility and access constitute one of the primary ways whereby social network sites (SNSs) differentiate themselves, and constitute their own field of the political.[[16]](#footnote-16) The public display of connections is a crucial component of SNSs: ‘what makes social network sites unique is not that they allow individuals to meet strangers, but rather that they enable users to articulate and *make visible* their social networks’.[[17]](#footnote-17) The visibility of users’ profiles varies by site and allows different procedures of inclusion/exclusion: profiles on *Friendster* and *Tribe.net*, for example, used to be visible to anyone, including non-subscribers. Conversely, *LinkedIn* filters what a viewer may see based on whether she has a paid account or not; again differently, *MySpace* allows users to choose whether they want their profile to be public or restricted to friends only.

Masanès offers a similar example of articulation of the regimes of access and visibility when referring to the ‘*fabrique* of the networked environment’.[[18]](#footnote-18) He too argues that web platforms differentiate by the potentiality to access a number of functions as non-members. For instance, while the reading function is open in *Wikipedia* and *Delicious*, it is closed in *Slashdot*. Differently, the submission function is open in *Wikipedia*, but partially closed in *Delicious* (since it requires to log in). Again, while the discussion function is open in *Slashdot*, it is conversely closed in *Wikipedia*. That is, Masanès adds to boyd and Ellison’s insight a distinction among multiple functions. Visibility is thus one function among others, to which access can or cannot be granted to guests.

An attention to the regimes of visibility and access characterizes Lovink and Rossiter’s analysis of weblogs, as well.[[19]](#footnote-19) They argue that the logic of the blog is that of the link. Links enhance visibility through a ranking system and delimit the club of ‘Friends’,[[20]](#footnote-20) the cultural enclave. Such a delimitation does not arise out of technical scarcity: virtually there is no reason why one can not include all the existing links. Rather, limits are motivated by affinity: the blogger creates links to those other bloggers whose culture and taste she shares. This is why blogs are said to be characterized by a politics of enclosure: they are ‘zones of affinity with their own protectionist policies. If you’re high-up in the blog scale of desirable association, the political is articulated by the endless request for linkage. These cannot all be met, however, and resentment if not enemies are born’.[[21]](#footnote-21)

One of the consequences of this articulation is the fact that the non-Friend, the Other, the Outside remains invisible: ‘the fact that I do NOT link to you remains invisible. The unanswered email is the most significant one. So while the blog has some characteristics of the network, it is not open, it cannot change, because it closes itself to the potential for change and intervention’.[[22]](#footnote-22) Blog software rejects the possibility of involving otherness.[[23]](#footnote-23)

This closure places blogs – seen as a kind of social aggregate *and* as a type of software allowing that aggregate – on one hand of a continuum whose other end is occupied by software which shows the potentiality to involve new entities in the course of action. Similar software would enable assemblages in which ‘the entities [they are] composed of, whether natural or social, could at any moment redefine their identity and mutual relationships in some new way *and bring new elements into the network*’.[[24]](#footnote-24)

What would such software look like? As textual accounts can or cannot trace a network where new elements are triggered by mediators, in a similar vein software can or cannot plan in its design the potentiality for the Outside to have access and be visible. As in some textual accounts the dichotomy Addresser/Addressee loses relevance and ‘the definition of the “outside” has been dissolved and replaced by the circulation of plug-ins’ so some software architectures can help to get over the distinction between ‘membership’ vs. ‘otherness’, ‘inside’ vs. ‘outside’, while other architectures cannot.[[25]](#footnote-25) A similar software architecture would establish the potentiality for the Outside, the Guest, the Non-member to ‘speak’, ‘be publicly heard’ and leave a public trace of the interaction. Examples are non-moderated forums and mailing lists, to which everyone can subscribe online and post a message that will be publicly readable. On the contrary, ‘contact us’ forms that generate private flows of communication to the website manager do not leave a publicly visible trace of the interaction, even if non-members can submit a message. Yet between closed web forms and open forums there are many intermediate positions and forms of actorial enactment. This second mapping criterion should thus be seen as a continuous, non-binary variable, rather than as a dichotomic distinction.

In order to operationalize this criterion, I navigated through the projects’ websites.[[26]](#footnote-26) In so doing, I took note of the functionalities accessible online[[27]](#footnote-27) (see second column in Table 15). Among these, I then sorted out those that allow users to interact with the community and to leave visible traces of their interaction (third column in Table 15). To identify this subset of technologies, I myself acted like a guest on the websites: I posted, commented, subscribed to mailing lists, signed petitions, each time exploring the boundaries embedded into the software architecture. Some websites allow only members to interact, others allow also guests, still others allow guests to register online and become members, either without asking for specific requirements or by anchoring the registration to certified personal data (e.g., passport, ID card, health insurance number).

Each peculiar set of interactive tools can be seen as establishing specific regimes of access and visibility. These regimes enact diverse types of users (see column four in Table 15), and allow different degrees of visibility of the contributions submitted by the tester-researcher acting as a guest (see ‘degree of visibility of the Outside’: fifth column in Table 15).

Despite being qualitative, this analysis is not less accountable. On one hand, while being subjective, the experience of the researcher is replicable by any other internet user. The researcher’s website browsing is comparable to that of an abstract ‘Other’: the visibility of the contributions posted by the researcher is comparable to the visibility that contributions by any other non-member could achieve. On the other hand, the analysis of the degree of guest visibility allowed by each regime cannot be quantitatively measured without denying the peculiar regimes set by each project. While I tried to obtain a measurement from the ratio of number of interactive technologies to overall number of technologies used, such a value did not distinguish between the different regimes of access for members and guests, nor did it account for the diverse entrance barriers for guests to register as members. I thus had to stick to descriptions, rather than using measurements. Results are reported in Table 15.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Technologies used | Interactive technologies that allow users to leave publicly visible traces | Inscribed users | Degree of visibility of the Outside |
| Akshaya  www.akshaya.net | **Textual web pages** (read only); **Guestbook form** (does not work); **‘Contact us’ link**: list of phone numbers; **Restricted area**: it is not possible to register online | None | 1. Passive, invisible guest | Invisible, no online registra-tion |
| Proyecto Cyberela – Radio Telecentros  www.cemina.org.br | Textual web pages (read only); Video streaming;  PDF documents’ publishing;  Radio streaming/download;  Contact form | None | 1. Passive, invisible guest | Invisible, no online registra-tion |
| The World Starts With Me  www.theworldstarts.org | **Flash animations** accessible only to students and teachers;  Contact **e-mail** addresses;  Students **forum** | Students **forum** accessible only by registered students. Online registration is not allowed | 1. Members interacting with each other | Invisible, no online registra-tion |
| Tonga.Online *–* smart X tension  www.mulonga.net | Textual web pages (read only); News feed;  Discussion forum;  Contact form;  Newsletter;  A/V streaming and download | **Discussion forum**: read-only for guests, submission-open for members. Online registration is allowed | 1. Members interacting with each other; 2. Passive, invisible guest | Invisible, but low barriers to member-ship |
| dotSUB  dotsub.com | Video **screening** is open;  To **upload** one’s own videos and **subtitle** other people’s videos registration is required | Video **uploading** and **subtitling** is restricted to members. But online registration is allowed | 1. Members as experts; 2. Passive, invisible guest | Invisible, but low barriers to member-ship |
| Canal\*ACCESSIBLE  www.zexe.net/barcelona | Photo, map and video **database** searchable by date, name of submitter, city area, type of obstacle;  Open discussion **forum** | Open discussion **forum**: it does not need registration | 1. Interactivevisible guest | Visible |
| Electronic Frontier Foundation  www.eff.org | Contact **e-mail** addresses.;  Newsletter;  RSS Feeds;  ‘Send a postcard’ **form**;  ‘Send your message to decision makers’ **form**: restricted to U.S. citizens;  **HTML/PDF guides** for Internet users;  ‘Line Noise’ **Podcast**;  ‘Submit prior Art’ **form**;  **EFF software projects**: wikis, mailing lists and Sourceforge’s tracker;  ‘Deeplinks’ **blog**: no comment facilities | EFF software projects make use of **wikis** for coordination, **mailing lists** and Sourceforge’s **tracker** for development | 1. Passive, invisible Other  2. Engaged citizens  3. Developers | Invisible |
| Free Software Foundation  www.fsf.org  www.gnu.org | Newsletter;  **News section** (read only);  **Mailing lists** on specific campaigns;  ‘**Contact us**’ e-mail address;  **Free Software Directory** (db on all existing free sw): users can download and rate sw, submit a level, subscribe to development-focused mailing lists and IRC channels, view VCS repository;  **Campaigns center**: information on campaigns and access to ‘take action’ tools hosted by partner organization like EFF’s action alert;  FSF Groups Wiki;  **FSF Blogs** publishes blog entries by ‘people in the community’, no comments allowed, but it possible to suggest one’s own blog;  **Events** section: RSS feed;  **Code contribution**: open to members | **Mailing lists** on specific campaigns restricted to members, but registration is allowed online;  **Mailing lists** of code development open also to non-members;  **Free Software Directory**: non-members can rate sw, subscribe to development-focused mailing lists and IRC channels;  **FSF Groups Wiki** open to guests too;  **Code contribution**: open to members, but online registration is allowed on Savannah servers | 1. Passive, invisible Other 2. Engaged citizens 3. Guest developers 4. Member develop-pers | Guest develop-pers are visible |
| Telestreet  www.telestreet.it  www.ngvision.org | **News** section run by editorial team, guests’ comments allowed;  Open a posteriori moderated **mailing list** (Telestreet);  Closed **mailing list** (NGV);  Discussion forum;  Video download;  **Peer-to-peer** video distribution;  **Ftp upload** of videos | Open **comments** on news;  Open mailing list;  Discussion **forum** (need registration which is allowed online);  **Peer-to-peer** distribution and **ftp upload** open to guests | 1. Interactivevisible Other 2. Low barriers member-ship | Visible |
| Overmundo  www.overmundo.com.br | **Blog**: open to read, only members can comment, submit, revise, vote articles;  **Contact form** to contact the core team | **Blog**: only members can comment, propose, revise and vote articles to be published. Online registration is allowed BUT requires sensitive data. Members have different voting weights according to the length of their participation in the community | 1. Invisible Other  2. Entry members 3. Established members 4. Senior members | Invisible, barriers to member-ship posed by time, commit-ment and ID |
| Open Clothes  www.open-clothes.com | Read-only **news** section;  Bulletin board;  ‘Recipe’ **download**;  **Database** on members (‘Harbour’);  B2B and B2C selling platform;  Members **showcase** (‘Dejima’);  Newsmagazine;  **Database** of fashion schools;  ‘Production journal’ **showcase** | **Bulletin board:** postingrequires membership;  B2B and B2C **selling platform:** access requires membership;  Members **showcase** requires membership;  **Newsmagazine** open to contributions by members | 1./2./3./4Diverse forms of member-ship | Invisible, barriers to member-ship posed by time, commit-ment and ID |

Table 15 – Analysis of the websites of the winning projects according to the degree of visibility of the Outside

### 7.3.1 Configuring Users through Regimes of Access and Visibility

Results summarized in Table 15 identify various regimes of access and visibility, which inscribe different types of users. In two of the websites analysed, the possibility for either members or guests to interact online is not provided by the software architecture. *Akshaya*’s and *Proyecto Cyberela – Radio Telecentros*’ websites, in fact, make use of broadcast technologies like textual web pages, video and radio streaming or download, textual documents publishing. Even when some kind of interactive toll is provided, either it does not work (the guestbook in *Akshaya*), or its output remains invisible (the contact form in *Proyecto Cyberela – Radio Telecentros*). In these cases, software inscribes an invisibile type of users – be they guests or members – who are not supposed to interact, at least not publicly.

The case of *The World Starts With Me* is slightly different. Here too, most technologies are one-to-many, but contents are restricted to members. Registered members can interact on the students’ discussion forum. Since online registration is not allowed, non-members are not foreseen. Here, software enacts only members, who are allowed minimal interaction.

A similar regime is adopted by *Tonga.Online – smart X tension* and *dotSUB,* with the remarkable difference that here online registration is allowed. *Tonga.Online* adopts some broadcast, non-interactive technologies: read-onlyweb pages, news feed, newsletter, audio-video streaming and download. In addition, the contact form allows a form of interactivity, but it is not accessible from the website. The only interactive tool that enables users to leave visible traces of their passage is the discussion forum. As in the previous case, the forum is accessible only to members. However, here online registration is allowed and the process of registration requires ID and password. In this case, software inscribes an invisibile Other, but the entrance barrier for guests to register and become members is very low: they only need to create an ID with password.

As a decentralized video subtitling platform, *dotSUB* openly publishes videos stored in its database. To upload and subtitle videos, online registration is however required. Such registration allows identifying members and enacts them as translation experts. It is thus noticeable that registration only requires ID and password, and no skill test.

*Canal\*ACCESSIBLE* enacts a different regime of access and visibility. It publishes a database of pictures, city maps and videos reporting cases of *incivismo* at the expenses of disabled people. The databaseis searchable by date, name of submitter, city area and type of obstacle. In addition to the database, a discussion forum is open for comments: posting does not need registration and posts are immediately visible on the website. In this case, software allows visibility of contents produced by both members and guests.

On the contrary, a politics of access that fosters a rather low degree of visibility of the Outside is shown by the *Electronic Frontier Foundation*’s website. The EFF follows communication strategies used by pre-digital activists. The website is first and foremost a one-to-many source of information and documentation: textual guides, a newsletter, RSS feeds, podcasts and a blog (no comments allowed) contribute to the construction of informed internet users, who nonetheless remain invisible. Users are also asked to take action in favour of digital liberties by spreading awareness to friends (e.g., through the ‘Send a postcard’ form), by contributing to the EFF’s knowledge (e.g., through the ‘Submit prior Art’ form) and by lobbying decision makers (e.g., through the ‘Send your message to decision makers’ form, restricted to U.S. citizens). Contacts between users and EFF core team can be established only by means of e-mail addresses provided on the ‘contact us’ page.

In this broadcasting communication model where an editorial staff produces information that users will consume and propagate throughout, only software development allows a visible interaction among (registered) users and between users and the core team. The EFF software projects subsection makes use of wikis in order to coordinate developers and of mailing lists and *Sourceforge*’s tracker in order to collaboratively develop software. In summary, in the EFF case software enacts three types of users: passive readers, engaged (U.S.) citizens, and developers.

The *Free Software Foundation* further develops this regime, with one noticeable difference. Broadcast technologies like a newsletter, a read-only newsreel, a blog (which does not allow comments) and RSS feeds foster a traditional mass-media communication model. On top of that, some interactive tools generate private, invisible flows of communication, mainly through e-mail. Moreover, in the ‘campaigns center’ section, ‘take action’ tools hosted by partner organization like EFF allow members and guests to send appeals to decision makers. Technologies allowing both members and guests to leave publicly visible traces of their communication are implemented to support free software development and distribution. Notably, the ‘Free Software Directory’ – a database indexing all existing free software – allows both members and guests to download and rate software, submit a level, subscribe to technical mailing lists and IRC channels, view the VCS repository. Furthermore, a wiki aimed at facilitating the organization of regional groups concerned on free software issues is open to guests too. Some other mailing lists focused on specific campaigns are restricted to members. Similarly, code contribution on the *Savannah* platform is open to members only. However, online registration requires only ID and password.

Summing up, in the FSF’s website architecture, access to software development and group organization facilities – the core activities of FSF – is open also to non-members. The degree of visibility of the Outside is thus rather high. In this case, software enacts four types of users: passive supporters, engaged citizens, guest developers, and member developers.

The *Telestreet*’s website is rather open to contributions by guest users. In the news section, run by the editorial staff, anonymous guests’ comments are allowed. Subscription to the mailing list is open and moderation is exerted only on outrageous posts. The discussion forum requires only ID and password registration. Peer-to-peer video distribution (supported by *NGVision* and using *Bit Torrent*) and ftp video uploading are accessible to both members and guests. As such, two types of users are inscribed in software: an interactive, visible Other intended as video-maker, and members thanks to online, light registration.A regime apart is implemented by *Overmundo*. The website is made of a blog where video, music and texts are openly published, while commenting on posts, writing articles, revising drafts and voting functions are restricted to members.[[28]](#footnote-28) However, software articulates different forms of membership. Members have different voting weights and can access different functions according to the length of their participation in the community. Commenting is open to all members, while revision is restricted to senior members. It should also be noticed that registration requires not only ID and password, but government ID or passport copy for strangers.

All in all, *Overmundo* includes the Outside by transforming it. Membership is not seen as a status, but as a process, and interactive possibilities depend on length of commitment. Since they cannot access any tool, non-members remain invisible, but they are provided with the potentiality to integrate and be transformed into members. Guests are admitted to undertake a process of accumulation of good reputation by registering to the website, providing official data and proving to be active contributors to the community. As a consequence, four types of users are inscribed in software: the invisible Other, members (with heavy registration) who can only comment and vote (although with low weigths), members who can comment, vote (with higher weight) and write, members who can comment, vote (with highest weight), write and revise.

Finally, *Open Clothes* follows a similar pattern of communication. The website shows a vast array of participatory tools: from a bulletin board to a selling platform, from members’ showcase to a newsmagazine open to contributions. However, these interactive features are restricted to members, who are differently profiled according to their degree of engagement. Like in *Overmundo*, light authentication is not sufficient and registration requires personal data. In summary, in *Open Clothes* software enacts several types of intended members corresponding to different degrees of membership.

## 7.4 Mapping Online Sociability by Meta-Criteria

This last analysis shows how software can articulate the processes whereby a digital assembly is gathered, and different actors are enacted. As text does, software too contributes to upkeep communities that would otherwise fade. This is a basic insight of this book. As a consequence, any essentialist understanding of digital communities becomes unattainable. However, one should not renounce to make sense of techno-social assemblages that self-declare as ‘digital communities’ by mapping them.

Two meta-criteria for a similar mapping exercise have been identified in this chapter, indicating the degree of permeability of the distinction between Addresser and Addressees, Members and Outside entailed by self accounts (section 7.2) and software (section 7.3). Table 16 visualizes the two criteria and maps communities accordingly.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Application/Software | Invisible Other | High barriers to membership | Low barriers to membership | Visible Other |
| More mediators than intermediaries | The World Starts With Me | Overmundo | Tonga.Online-smart X tension | Free Software Foundation  Telestreet |
| More intermediaries than mediators | Akshaya  Proyecto Cyberela-Radio Telecentros  Electronic Frontier Foundation | Open Clothes | dotSUB | Canal\*ACCESSIBLE |

Table 16 – Map of communities according to degree of permeability entailed by applications (rows) and software (columns)

The last cell in the first row includes cases where the number of mediators in the textual account is higher than the number of intermediaries and where guests’ online contributions are visible. The *Free Software Foundation* and *Telestreet* communities are accounted for as concatenations of mediators made to exist by their many ties, and their software architecture enables a high degree of visibility of the Outside. In the *Free Software Foundation*’s application the boundaries of the community blur to the point that it is difficult to distinguish an outside and mediators emerge at the intersection of social and technical concerns. Similarly, the *Telestreet* account deploys its ties rather accurately. Although there are references to a cause-and-effect relationship, in particular when media, taken as ‘channels’, are depicted as intermediaries, yet disassembled or combined media are conceived of as mediators. Furthermore, since every DIY-television client is also a sender, the dichotomy Addresser/Addressee loses relevance. On the other hand, *FSF*’s website leaves access to software development and group organization facilities open to non-members, as well. *Telestreet* allow guests to interact on their websites in multiple ways, almost without control. In summary, in these cases both textual application and software contribute to shape communities whose boundaries are permeable enough to allow new actors to take part in the course of action.

The other cells in the first row include cases where mediators are more numerous than intermediaries, and software provides few or null opportunities of access and visibility for non-members. *Tonga.Online – smart X tension, Overmundo* and *The World Starts With Me* deploy a high number of mediators and no or few intermediaries. In the *Tonga.Online – smart X tension*’s application, elements from both the ICT domain and the cultural tradition of the Tonga people act as mediators that ferry the geographical community across the Zambezi River, as well as across the Information Age. In *The World Starts With Me*’s account, public schools, clinics, NGOs, counselling services are assembled with software, students, artists, peer facilitators, people from the slums in blending formal institutions with informal ties. As to *Overmundo*, by deploying many and variegated mediators, its application describes in details all the actions that brought to the emergence of the digital community.

On the other hand, their software architecture leaves few or null room for guest contributions, albeit different degrees of permeability of the inside Vs. outside distinction can be devised. *The World Starts With Me* does not only impede any visibility to guests, but its contents are restricted to members. Online registration is not allowed, and therefore no possibility is foreseen for the Other to engage in a process of admission, nor to interact with the community. Here, software shapes community as a closed group whose boundaries are black-boxed. In this, the textual application and software enact two different types of community, and it might be expected that such difference reveals further tensions in the development of the community.

Differently, the *Tonga.Online – smart X tension*’s website allows light registration requiring only online ID and password. Here, the boundary between inside and outside is easily bypassable and does not pose other requirements than creating an online identity. Higher entrance requirements are posed by *Overmundo*. In this case, the distinction is not simply between members and guests, but between different degrees of membership. The *Overmundo* community is shaped on an understanding of membership as a process of assimilation. Software architecture admits non-members to undertake a process of accumulation of good reputation by registering to the website, providing personal data certified by administrative authorities and proving to be active and long-term contributors.

The second row in Table 16 includes cases whose applications number more intermediaries than mediators, the chain of action is short, identities are stabilized, and the traditional mass-media distinction between Addresser and Addressee maintains some relevance. In the second cell, those projects whose software architecture does not provide visibility to guests are included: *Akshaya, Proyecto Cyberela – Radio Telecentros* and the *Electronic Frontier Foundation*.

*Akshaya*’s application depicts a very short chain and a deterministic theory of action, mentioning only one mediator (i.e., the e-literacy programmes). Furthermore, its software shapes a closed community, closed not only to external contributions, but also to its members. It indeed resorts mainly to broadcast technologies and the only section likely to allow some degree of interactivity is restricted to members with login credentials acquired offline. Similarly, *Proyecto Cyberela – Radio Telecentros*’s application conceives of communication technologies as intermediaries that transport women into the digital age. Its website displays textual, video and radio information, without any tools allowing some degree of interactivity, neither for members nor for guests. The *EFF*’s application numbers informational resources and in particular the ‘action alert’ system as the only mediator. In this application, blog posts, podcasts, online videos, and the newsletter are seen as intermediaries transporting information from a central editorial staff to a wider audience. Its software regime of access and visibility is similarly articulated. Mainly broadcast technologies are implemented: the website is first of all a one-to-many source of information and documentation. Some visibility of registered users’ contributions is allowed when it comes to software development: the ‘EFF software projects’ subsection makes use of wikis in order to coordinate developers and of mailing lists in order to collaboratively develop software. All in all, in these three projects both text and software contribute to shape black-boxed communities whose boundaries are impermeable to the constitutive potential of the outside.

*Open Clothes* shows a consistent relationship between text and software, as well. Here, the application does not mention the role of artefacts as mediators, nor how the assemblage made of tailors, users, contractors and clothes is made durable. Community is thus textually shaped as a stabilized black box whose inner relationships are explained in terms of cause-and-effect. At the same time, software articulates different forms of membership, requiring personal data certified by other authorities, and activite participation through desing sharing. In other words, entrance barriers for guests are rather high.

Barriers are lower for *dotSUB*, which – while recording a rather deterministic textual application – only requires online registration for guests to acquire membership status. Lastly, *canal\*ACCESSIBLE* is the only case whose account numbers more intermediaries than mediators, and whose website affords a rather high degree of visibility of non-members. On one hand, its application mentions broadcast media, a political institution (the Municipality of Barcelona) and the internet as mediators. However, the account tends to consider technological objects as intermediaries, having the sole function of transporting information. On the other hand, the discussion forum is completely open for guests, and software enacts interactive, visible guest users.

In summary, no strong correlation between the two meta-criteria– length of the chain of action and degree of visibility of the Outside – can be noticed. None of the cells in Table 16 is empty. However, it should be noticed that – while cases whose applications follow deterministic explanations tend to be associated with software regimes of invisibility – projects whose accounts number many mediators can develop either visible or invisible software regimes. In other words, cases in whose textual accounts action proliferates in many directions do not assure for this sole reason a high degree of visibility of the Outside. Therefore, it could be hypothesized that it is more feasible for techno-social assemblages to be enacted as fleeting online communities when it comes to textual accounts, rather than when it comes to software. The field of the political constituted through software architecture seems to exert more resistance than text to new elements that strive to enter the network, to the potential for change and innovation.

To conclude, this map shows three main advantages over essentialist definitions. First, being based on two meta-criteria, it brings some order in a variegated panorama without the need to rely on ambiguous criteria like focus of interest, level of participation or type of technology used. As such, it is applicable to a wider range of cases, and does not require to define the object of study in advance. Second, by analysing different materialities through which ‘communities’ are brought into existence and upkept (i.e., textual, software, but others can be taken into account), it allows tracing the variegated, incoherent, and multi-faceted processes through which online sociability is shaped. Third, as it assesses the degree of permeability of the distinction between Addresser and Addressees, Members, and Outside, this map can turn out useful in evaluating the most innovative and progressive digital assemblages. If we stick to Latour’s definition of a good textual account as one in which community is accounted for as an assemblage ‘made to act by a large star-shaped web of mediators flowing in and out of it’ the first criterion is explicitly normative.[[29]](#footnote-29) The second criterion could similarly suggest a normative approach, in which progressive software architectures would be those that remain open to the potential for change, those that maintain as porous the procedures whereby the community is assembled. Nonetheless, it should be kept in mind that the second criterion focuses on cases in which the Outside is *digitally* visible or invisible. For projects whose websites are closed to guests, there are of course other non-digital ways to include the Other in the course of action, as *The World Starts With Me*’s blended learning model demonstrates.

1. A revised version of this chapter was presented at the 6th Wikisym Conference in Dansk in 2010 and published as Pelizza, ‘Openness as an Asset: A classification system for online communities based on Actor-Network Theory', *Proceedings of WikiSym 2010, 6th International Symposium on Wikis and Open Collaboration*, New York: ACM Press, 2010. DOI:10.1145/1832772.1832784, http://dl.acm.org/citation.cfm?id=1832784&preflayout=tabs. [↑](#footnote-ref-1)
2. Jones Cybersociety; Cybersociety 2.0; Smith, Voices from the WELL; Smith and Kollock, Communities in Cyberspace. [↑](#footnote-ref-2)
3. As discussed in section 3.1, leading internet scholars like Castells and Wellman highlight the switch from territorial community to networks oriented towards specific interests as a major change in the contemporary structure of community. [↑](#footnote-ref-3)
4. As recalled in section 2.3, according to L. Lessig, *The Future of Ideas: The Fate of the Commons in a Connected World*, New York: Random House, 2001; it is the end-to-end architecture of digital networks that assures the openness of the internet and the creation of digital commons. As seen in chapter 1, the focus on the decentralized character of internet networks is inherited from the hacker culture’s attempts to avoid control and, ultimately, from cybernetics. [↑](#footnote-ref-4)
5. With ‘centralized’ I consider those technologies that allow a few-to-many or one-to-many pattern of communication through a unique platform. Examples are web-radios, blogs, html web pages. With ‘decentralized’ technologies I refer to those infrastructures that allow a many-to-many or one-to-one pattern of communication. Examples are peer-to-peer networks, mailing lists, wikis. I certainly acknowledge that this is a very rough distinction: for instance, wikis are a many-to-many technology, but they also rely upon a web platform, so that there is a certain degree of centralization in wikis, too. [↑](#footnote-ref-5)
6. We could not find a better word than ‘materialization’ or ‘emergence’ in order to mean the process whereby community condenses into a shape, starting from the associations of heterogeneous elements. The use of this word does not want to imply a ‘natural’, ‘biologically inevitable’ aspect of the existence of online communities, as Rheingold as the digital libertarians postulated (see section 1.1). Quite the contrary, here the term ‘emergence’ indicates the artificial process whereby certain elements aggregate in a situated, unrepeatable way. [↑](#footnote-ref-6)
7. Latour, *Reassembling the Social*, p. 217. [↑](#footnote-ref-7)
8. Rather the contrary, if one should pay attention to the well-known controversy between Richard Stallman and Eric Raymond. Actually, in origin, the Linux kernel was developed as a sort of provocation towards GNU’s organizing logic. See DiBona *et al*, *Open Sources*. [↑](#footnote-ref-8)
9. Callon, ‘Performativity, Misfires and Politics’, p. 93. [↑](#footnote-ref-9)
10. Haraway, Primate Visions. [↑](#footnote-ref-10)
11. Latour, *Reassembling the Social*, p. 127. [↑](#footnote-ref-11)
12. Latour, *Reassembling the Social*, p. 128 (emphasis in the text). [↑](#footnote-ref-12)
13. Shirky, ‘Social Software and the Politics of Groups’. [↑](#footnote-ref-13)
14. S. Woolgar, ‘Configuring the User: The Case of Usability Trials,’ in J. Law (ed.) *A Sociology of Monsters: Essays on Power, Technology and Domination*, London: Routledge, 1991, pp. 57–99. [↑](#footnote-ref-14)
15. Akrich and Latour, ‘A Summary of a Convenient Vocabulary for the Semiotics of Human and Nonhuman Assemblies’. [↑](#footnote-ref-15)
16. boyd and Ellison, ‘Social network sites’. [↑](#footnote-ref-16)
17. boyd and Ellison, ‘Social network sites’, p. 2. [↑](#footnote-ref-17)
18. J. Masanès, (2007), ‘Context in a Networked Environment. Some considerations before starting thinking about contextualisation of online contents’. Proceedings of the *Online Archives of Media Art* conference. *re:place 2007. On the Histories of Media, Art, Science and Technology* conference, Berlin, 14-18 November 2007. [↑](#footnote-ref-18)
19. Lovink and Rossiter, ‘Dawn of the Organized Networks’. [↑](#footnote-ref-19)
20. We use the term with the capital F in order to distinguish the use that of this mundane world is made on social networking sites and alike. [↑](#footnote-ref-20)
21. Lovink and Rossiter, ‘Dawn of the Organized Networks’, p. 7. [↑](#footnote-ref-21)
22. Lovink and Rossiter, ‘Dawn of the Organized Networks’, p. 8. [↑](#footnote-ref-22)
23. It is true that blogs allow the Outside to participate through comments. However, recall that comments have a very different relevance than posts and may be taken down. Furthermore, I would add, many blogs – run especially by institutional personalities – do not even offer the commenting function. [↑](#footnote-ref-23)
24. Callon, ‘Performativity, Misfires and Politics, p. 93. *Author’s emphasis*. [↑](#footnote-ref-24)
25. Latour, Reassembling the Social, p. 214. [↑](#footnote-ref-25)
26. It should be noted that a temporal gap occurs between the moment when accounts were written for competition purposes (from 2004 to 2007) and the moment when the websites underwent my observation (in 2007-8). It is likely that some variations occurred on the software side since when the accounts were elaborated. Still, since this chapter does not aim to find correlations, but to map online communities, this gap is not going to relevantly affect the results. If some correlation between the two criteria emerge, that could suggest a coherence between the subsequent developments in the projects’ websites and the initial textual accounts. If no correlation emerge, the results won’t be less valid. [↑](#footnote-ref-26)
27. Observation took into account non-web technologies like mailing lists and ftp upload that were accessible through the projects’ websites, but not those that were not accessible through the website, like, for instance, *Tonga.Online*’s *Alpha Smart* mobile devices, about which no reference could be found on the website. [↑](#footnote-ref-27)
28. The peculiar editing process devised by *Overmundo* is described in section 6.4. [↑](#footnote-ref-28)
29. Latour, *Reassembling the Social*, p. 217. [↑](#footnote-ref-29)