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A METHODOLOGY FOR ANALYSING VIRTUAL COMMUNITIES

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During the last few years, virtual communities have become an important social phenomenon, thus an interesting subject for many different disciplines such as Psychology, Sociology and Philosophy.

A review of relevant literature (Stone, 1991; Rheingold, 1993; Fernback, Thompson, 1995; Wilbur 1997; Jones 1998; Ferri, 1999; Bagnasco, 1999; Paccagnella, 2000; Dell'Aquila, 2002; Pravettoni, 2002) showed that there are many definitions of virtual community, but only few tools have been created so far that prove capable at providing an analytic framework to study this phenomenon.

In our study, we created a tool able to analyse every aspect of a virtual community with the final goal of generating relevant data for a psychosocial prospective. The idea of developing such a tool came during a study focused on fake identity in newsgroups. Then, we decided to examine not only the fake identity on line, but also other aspects of a virtual community. We also decided to apply this tool not only to newsgroup but also to other types of virtual communities.

Virtual communities

The concept of virtual community is strongly linked to new communication technology: in fact community and communication are strictly correlated to each other. First of all, they have the same etymology in the Latin word *communis*, derived from *cum* and *munis* or from *cum* and *unus* or from *cum* and *moenia* (Fernback, Thompson, 1995). But communication itself doesn't create a community.

The idea that online communities can exist is linked to the social change of networks from tools for calculation to communication environments and to meeting places or virtual *agorà*, (Paccagnella, 2000), according to the metaphor of cyberspace.

Many different authors attempted to provide definitions for "virtual community". According to the journalist Howard Rheingold (1993), *"Virtual communities are social aggregations that emerge from the Net when enough people carry on those public discussions long enough, with sufficient human feeling, to form webs of personal relationships in cyberspace"* (p. 28).

For Rheingold the most distinctive feature of a virtual community, which unites the whole community, is the presence of inter-personal relationships among members. The aspect of communication is of utmost importance in *online* communities, whilst the aspect of "space" is entirely absent. The author of *The virtual community* maintains that communities in cyberspace have originated in part from a general sentiment of dissatisfaction because of the lack of informal public spaces in real life, and in part from the experimental bent of the first "*Netsurfers*", who were attracted by this new mean of interacting with other people at a completely unprecedented level. The concept of virtual community is not a technological fancy or a *cyberpunk* nightmare, in which people live in what Mills (1959) called "second-hand worlds", enchained to their computers, experiencing life through a dehumanized technology rather than the intimacy of human relationships. In *The virtual community*, Rheingold deals with its own experience as a member of *The WELL*, underlining the friendly relationships developed in this community, the deep sense of solidarity connecting all participants, and the unfailing availability of all members to help each other when in need.

Rheingold's statement gave rise to much debate about the existence of virtual communities, and about the exact meaning of the term. Rheingold's position has been labelled as "culturalist", since it considers a community no more as the result of a shared common physical space, but as the outcome of a set of common interests and social relationships. Weinrich (1997) states that the concept of virtual community is unaccettable, since a community is essentially based on the sharing of a geographical area and a mutual history. This same definition has been accused of being a sort of "technological determinism" (Jones 1998), especially because the extreme optimism expressed by Rheingold when he affirms that communities unavoidably arise in all circumstances in which people can use computer mediated communication. The definition has also been considered too vague and imprecise (Jones 1997; Wilbur 1997), returning it to the journalistic and popular milieu in which it was created.

Pravettoni (2002) considers Rheingold's definition somewhat vague, but states that the author of "*The virtual community*" correctly recognized three elements typical in every virtual community:

1.   The "social capital" of the Net: it is the power of virtual communities to socially colonize new spaces, incorporating new elements within themselves;

2.   The "knowledge capital": it is the set of competencies, abilities, individual experiences available to the community. Maldonado (1997) differentiates between individual and social knowledge, while Lévy (1996) speaks of collective intelligence;

3.   Social communion: the sense of closeness, presence and mutual sharing experienced when participating in a virtual community.

Pravettoni (2002) defines a virtual community as *"a group made up by people who came in contact through the Net (WWW, IRC channels, MUD and so on), perceive themselves as a part of that group, participate in its activities creating communicative relationships and, sometimes, interpersonal relationships with other members"* (p. 173). This definition brings into evidence some objective elements which are always present in a virtual community, as the contact through the Internet, a group of individuals, the consciousness of belonging to a group and the existence of a communication network among members. Common interests and shared ideals are often the basis of virtual communities, while the spatial element is referred to the virtual space shared by participants.

Fernback & Thompson (1995) provide a very similar definition: *"(...) social relationship forged in cyberspace through repeated contact within a specified boundary or place that is symbolically delineated by topic of interest"* (p. 4). In this case, there is a stress on common interests and on the repeated, frequent contacts developed on the Net.

Ferri (1999) states that the founding values of a virtual community is established by interactivity and he proposes the following definition: "*multidirectional and multidimensional places of interaction discussion, training, work, fun made possible by spreading of digital media*" (p. 66).

Even if it is impossible to find in literature a single definition universally agreed upon, there are however some objective elements all authors consider as typical of a virtual community; following Paccagnella (2000), these elements are:

1.   coherent and stable *personae*, with names and nicknames which seldom change;

2.   a shared language;

3.   the development of a system of norms and roles;

4.   the presence of rituals (complex or simple) which fix community boundaries;

5.   interpersonal relationships at different levels: public conferences, private e-mails, contacts via telephone, physical mail, direct meetings.

The requisite of interactivity allows us to exclude from the concept of virtual community all those forms of online communication that do not allow for a direct interaction between members; it is necessary that participants communicate, and experience a sense of "being together with" the other members of the community. Moreover, it is necessary to have a virtual space in which the community can rise and grow, and in which users' messages can appear. The space is a necessary requisite for every community, but the community does not coincide with that space: a community is not defined by a space, but rather by relationships and interactions among different participants.

There is also a system of rules and norms: these norms can possess a general nature (for example, rules about good manners, *netiquette*), a technical nature (i.e., pertaining the kind of interface being used by the community), or a more specific nature typical of the group, then resembling a system of sanction, often a rigid and severe one. This rigidity frequently arises from the heterogeneity of community members: as a matter of fact, while in an *offline* social situation it is often possible to infer the rules of a certain group from the context, in the Net this is much more difficult because of cultural differences in the group of users (Pravettoni, 2002). It becomes then necessary to impose stricter rules, in order to promote a certain amount of "conformity" to existing norms, thus preserving community life.

Within a virtual community there is often a hierarchy: as in *offline* groups, a member's role and status are well defined. There are simple visitors (*lurkers*) who just give a look around, read messages, and do not post anything. The newcomers (*newbies*) are people who only recently joined the community. The "standard" users take regularly part into the life of the community and experience a deep sense of "being together". The leaders are prominent presences within the *forum*. Last not least, the *oldbies* are the users that for a long time have been participating into community life. Role and status within online communities usually are a function of the amount of time already spent inside the community, but one's personal prestige can increase or vanish as a consequence of one's social behaviour, also depending from the contribution brought to the aforementioned "threefold capital quote of the community (Rheingold 1993). Within virtual communities, however, hierarchies are somewhat flexible, and an individual can control its own position and modify its own status: in fact, participating to community life and improving one's social competence it is possible transform one's own role.

Concerning the typology there are quite a few criteria used to classify virtual communities on the Net. We will use a "technical" criterion, based on the technological platform they are based on: thus we can speak of *forums*, MUDs, *mailing lists* and *chat lines*. It is important to remember that *forums*, MUDs, *mailing lists* and *chat lines* are not, by default, virtual communities, but only *potential* virtual communities.

F*orums* are electronic boards, where one can choose to only read messages, without sending anything, or can post a message. Communication here is asynchronous, i.e. messages are not exchanged in "real time" between participants. Their structure is based on archives classified according to the topic being discussed, and function as a bulletin board.

MUDs are virtual environments in which one can work or play, simulating or building something. People participating in these environments can build their own "*persona*", with a role and well defined characteristics, can build architectures and artefacts, can build relationships based

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on conflict and/or cooperation with the other members.

A *mailing list* is not a virtual community, in a strict sense. It basically consists of a list of e-mail addresses to which emails concerning a certain topic are sent. To take a part into a mailing list you need to subscribe, sending your e-mail address.

Chat lines consist in written messages exchanged in a context that results into a sort of "chat" in real time. You have different "rooms" devoted to different themes in which people interact and socialize.

Lastly, a blog is a frequent, chronological publication of personal thoughts and Web links. A blog is often a mixture of what is happening in a person's life and what is happening on the Web, a kind of hybrid diary/guide site, although there are as many unique types of blogs as there are people.

The grid conceive to study all kinds of virtual community in its entirety. Using such a grid presents at least two advantages: first of all it favours a critical reflection on the community and eases the spotting of difficulties. Secondly, a grid makes it possible to compare different virtual communities.

Finally, we want to emphasize that the results obtained from our tool have to be considered and analysed according to an ethno-methodological prospective. This prospective shows the creation of a shared meaning, which makes every action intelligible to others. The creation of the shared meaning is enunciated in specific social situation (Galimberti, Riva, 1997).

ORIGINS AND STRUCTURE	
In this section the main attention is on motivations that gave rise to the community, its origins and structure.	
What is the community name? When did it start? Who did found it? Why has it been started?	The community name, foundation year, who created it, why it has been decided to create it. The community name can give information about the topic of the community. The foundation year allows us to observe the phase of the community life cycle.
Has it changed since its beginnings?	During the time from its foundation to the observation, real changes have happened inside the community. Virtual communities often change. This is usually due to the relationship between different members.
Is it a moderated or non-moderated community? Which kind of moderation is present?	The community is moderated or not. In some communities, a facilitator reads the messages and then he decides if they can be published or not, according to the language, the topic or the tone.
What is its structure? Is there a website or an area where participants can introduce themselves?	How the community is "physically" structured. For instance, a virtual community may have a room for public discussion, a website built by its participants, and one or more rooms for private chats, created and managed by members
Are there differences between *oldbie* and *newbie*? (differences in behaviour, in language, in topics,	After analyzing the main features of the community, we observe its members. We can divide them into 2 main categories: oldbie and newbie. Oldbie has been involved in community life longer than

in the amount of attention received by other participants) Which are the attitudes shown by oldbie towards other oldbie or towards newbie?	newbie. Newbie have just joined the community. We should detect which variables can be useful to understand if a participant is an oldbie or a newbie. Then, it is important to observe how oldbie behave towards other oldbie or newbie.
PARTICIPANTS The second part of the grid is about participants' characteristics: how many and who are they, which kind of *nicknames* are used, and what are the motivations that induce them to take part into the life of the community. This part of the grid records the level of turnover in the community, observing frequency and modes of contact between users, and takes into account the existence of sub-group of participants.	
How many participants? Who are they?	The average number of community participants and the main features of these members. These information allow us to observe how big is the community and to do a sort of "census" of all the members.
The participants are the same from the beginning of the community?	We observe if community members are the same since its foundation or if they changed. The main features of a virtual community depend mostly on its members; so it can be useful to notice changes between participants, in order to better understand its evolution and its life cycle.
Why do they participate into the community?	Why members partecipate in community life.
Which kinds of nicknames are used? (real names, fake names, ambiguous names)	The different kinds of nicknames members use. In a virtual community, nicknames are often strictly linked to the community itself.
Traffic within the community: how many messages are posted in a specific amount of time?	How many messages are posted during a specific amount of time.
Do they communicate only within the community or also through other ways of CMC?	Participants communicate only through messages inside the community or also through other tools, such as chat or istant messaging.
Do they meet also offline? Did they meet each other for the first time online or offline?	If members meet only online or they meet also offline. If they knew each other online or offline.
Are interaction mainly between 2 members, or multiple?	In a virtual community, interaction can be: • between 2 members, when a participant tries to call for the attention of a specific person, clearly showing the need or the purpose to communicate only with this person; • multiple, when participants interact all together (for instance, when a lot of members answer a question).
Are there groups? - Did they divide themselves or the groups have been decided by	If participants divided themselves into different groups and how these groups have been created. If there are groups, we observe their different features.

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others? - Which are the criteria for this division? - Which are the main features of the groups?	
When do they participate in community life? • Hours • Days • Particular events	When participants mostly partecipate in community life: hours and days when the larger number of messages is posted. We also observe if particolar events can increase posts number.
If participants describe themselves, is it a self presentation or a presentation written by others?	If there are participants'descriptions, we observe if it is a selfpresentation or a presentation written by other community members. Then, if it is a self presentation, we observe if they have been created to give a particular self image or if they are interactive.
Presence of operational strategies Presence of iconic strategies Presence of linguistic strategies	We observe the different strategies acted by community members. These strategies can be: • Operational, i.e. mechanisms of action simulation via text • Iconic, i.e., graphical devices like *emoticons* or *smileys* meant to express the mood of the writer • Linguistic, i.e. devices which reproduce verbal and para-verbal elements of communication

TOPICS

In the third part of the grid the focus is on the traffic of messages sent by participants.

Then, the topics dealt within the community are taken into consideration. There is a distinction between *in topics*, i.e. themes which are relevant to the main issues discussed by the community, and *off topic*, i.e. themes which are far from the main topic of the community. The prevalence of *in topic* or *off topic* messages is analysed with the aim of understanding the reasons why of this segmentation, and the ways in which single themes are treated, taking into due account the fact of the presence or absence of a moderator.

Number of messages during a specific time	Number of posted messages during a specific time

IN TOPIC/OFF TOPIC

This section is particularly relevant for those communities which started with the purpose of deepening a specific theme (for instance, newsgroups or thematic communities.

Is there a notion of what is "in topic" and what is not? What is in topic and what is off topic?	If in the community there is a distinction between in topic and off topic. What is it considered in topic and what is it considered off topic?

RULES

The fourth part of the grid is about norms which regulate interaction within the community. Here the focus is on the kind of rules, who create them, whether they are respected or not, and what are the eventual sanctions for who infringes them.

Are there implicit or explicit	If community rules are written and cleraly explained or if they are

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rules?	common rules of good education.
In case there are explicit rules, where are they written?	If the rules are explicit, where they are.
Who makes the rules?	Who has made and makes community rules.
Are they standard Netiquette rules or have they been created ad hoc for the community?	If rules are peculiar of the community or if they are Netiquette rules.
Are rules respected or not? Are they mostly respected by oldbie or by newbie?	If members respect or not community rules. Then a comparison between oldbie and newbie behaviour is made, to see who gives the rules more values.
If rules are violated, how does the group react? Are there sanctions for those who do not follow the rules?	We observe the participants' attitude towards members who violate rules and we also notice if there are any sanctions for people who don't respect rules.

FLAME
In this part of the grid the focus is on the phenomenon of "flame", i.e. quarrels that sometimes arise between members of a virtual community. The aim is to check whether there is flaming or not, which kind of flaming there is, how long it lasts and who takes part in it.

Is there any kind of flaming in the virtual community?	We analyse if in the community there are cases of flame. If the analysed community is moderated, flame is often a minimal part or it doesn't exist at all, since moderators apply a kind of censorship to unkind or vulgar messages.
What kind of flame is it? Why does it start?	The kind of flame: it can be a joking flame, or a flame that aims to offend someone and to destroy the relationship inside the community.
How long does it last? Who takes part in it? Is it a cross-post or it involves only the analysed community?	How long the flame is, who takes part in it and if it involves only the analysed community or other communities, too.

FAKE
In the last part of the grid there is room to analyse the phenomenon of "fake", i.e. simulation of a fake identity online. Firstly, the existence of the phenomenon is assessed within the community. Secondly, frequent perpetrators are identified and community reactions are studied. Lastly, there is a review of the kinds of fake which are present in the community under study.

Are there fake cases in the virtual community? Who acts the fake? (oldbie or newbie)	We verify if there are fake cases and who mostly acts them.
How does the community consider fake? What does it cause inside the virtual community?	How the members consider fake and which reactions it causes.
What kinds of fake are in the community?	The different kinds of fake that happen inside the virtual community.

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