The Cyberians : an empirical study of sociality in a virtual community

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Abstract

This paper presents some field results of a study of an on-line community : the cyberians. Backed up by our empirical findings we discuss the concept of community in order to gain a better understanding of the sense of the still problematic notion of virtual community. We suggest a set of issues defining, in our opinion, virtual communities and allowing their empirical study. We follow two main lines of investigation : the construction of Self and the relationship to the Other in the CMC settings and the social structures of the virtual community of the cyberians.

Introduction

This paper[1] discloses the first results of a research on the practices of an active minority : the " cyberians[2] ", Internet users clients of Cyberia, a French access provider. We selected a population who is active on newsgroups and has its own homepage. Five newsgroups are reserved to Cyberia clients, and namely one dedicated to technical help.

This newsgroup is quite active : an average of around 200 messages are posted every day, to be compared with the average of 24 messages a day calculated on 500 newsgroups by Whittaker & al. (1998).

We started with an ethnographic account and analysis of productions of cyberians on the net : their homepages and their messages on the newsgroups. Those provide new communication spaces, which are opportunities for relations in public in Goffman's sense (presentation of self, meeting and interacting). Three issues are of concern to us here : the presentation of self, the building of the relations with others, and the construction and social life of Internet communities. We tried to use the classical sociological notions on community, and see to what extent they were useful for the study of " virtual " groups. We hope to contribute to clarify the term " virtual community " and facilitate its empirical description.

We use the notion of sociality in Alfred Schutz's (1976, p. 230) sense as " the common intersubjective world of communication and social action ". This definition highlights the founding value of common-sense shared knowledge for the constitution of social groups. The notion of sociality refers here to the social constructs which enable communication and interaction. When studying cyberian everyday life, we tried to see whether there was a specific form of sociality in the situation of CMC[3] (forms of relationship to the Other, shared system of references, etc.).

We shall first briefly review the notions of community, classical and virtual, and we shall retain what seems relevant for our problem (section 1). Methodology (section 2) is followed by the analysis of the presentation of self and of relation to other in Internet setting (section 3). Finally, we consider community level, and describe the role structure, the social network, and some components of common knowledge (section 4).

Defining " virtual communities "

The concept of community is a long-debated issue in social science. Of course we shall not here settle that issue ; our aim is simply to gather some relevant traits to study Internet communities, and highlight in what they may be differentiated from other CMC-groups.

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[1] We would like to thank Saadi Lahlou for his suggestions and his translation of this paper.

2 Cyberians are all the clients of Cyberia, but for us in this study, this term will designate only the ones who are active on the newsgroups.

[3] Computer Mediated Communication.

In the traditional sociological view community is usually defined by the nature of bonds that unite individual members. The concept refers to all kinds of relationships characterised altogether by close, deep and long-lasting affective links, by an involvement of moral nature, and a common belonging to a social group (Nisbet, 1984, p. 70). Community is traditionally opposed to society, which is a more formally ruled system. We shall keep here as community specificity the existence of durable and emotional personal links, and of individual involvement into the group.

Schutz suggests a different stand point for the analysis of social groups in terms of common knowledge and shared system of references (typifications) :

> ... the subjective meaning the group has for its members consists in their knowledge of a common situation, and with it of a common system of typifications and relevances. (Schutz, A. 1976, p.251)[4].

The notion of situation refers here to a common history in which the individual members' biographies participate. In this theoretical perspective, the constituents of the community (role and status distribution, feeling of belonging etc.) are derived from the group typification system :

> The system of typifications and relevances shared with the other members of a group defines the social roles, positions, and statutes of each. This acceptance of a common system of relevances leads the members of the group to a homogeneous self-typification. (Schutz, A. 1976, p. 252).

Rules, norms and values are also considered as part of the group knowledge, as typical way to act, to which newcomers must get initiated. The boundaries of the group therefore refer to the domains of shared knowledge.

This approach suggests the following questions concerning Internet communities. How does a common knowledge system emerge in a computer mediated setting ? What are the specific elements of such a system ? How do the participants of a newsgroup or a chat come to a common definition of a situation ? What are the modalities of initiation of newcomers to the group's crystallised common knowledge ?

Schutz provides an heuristic track for approaching community life in terms of shared knowledge and common references systems but does not specify the nature of the links between members, which is essential in the classical definition of community. Therefore, for studying cyberians, we use elements from both perspectives, and focus both on the nature of relationships and on the common reference systems of this community. More concretely, the latter includes the clues used for typification of the other, like misspellings in the message, computer expertise, quality of homepage..., the role and position structure in the group, the etiquette, etc.

Two main stands can be sketched in recent research on virtual communities : optimistic and pessimistic. On the optimistic side, Rheingold (1995) considers that virtual communities are a real phenomenon, contributing to reconstituting solidarity links. On the pessimistic side, opinions range from mere refusal of the existence of such communities (Fernback, J. & Thompson, B., 1995 ; Weinreich, F., 1997) to a discourse on the dangers of destroying authentic human relationships (Turkle, S., 1996 ; Fernback, J. & Thompson, B., 1995). Such conclusions are out of the range of the present study. We are only interested in the emergence and habits of virtual communities, without any nostalgic or enthusiastic bias concerning the nature of CMC-relationships

Our only aim is to find an operative description of on-line communities, which would lead to a better understanding of the phenomenon. In the current approaches of the phenomenon, there are two key concepts : interaction and area :

> on-line community : social relationships forged in cyberspace through repeated contact within a specified boundary or place (e.g., a conference or chat line) that is symbolically delineated by topic of interest. (Fernback, J. , & Thompson, B. 1995, p.8)

Generally, the available definitions of virtual community do not allow any distinction between different kinds of CMC groups. From our point of view the existence of personal, direct and long-lasting relationships and emotional bonds between members defines the specific character of community. In this sense the transmission of information on a mailing list for example is not sufficient to build a community.

Finally, we will define a virtual[5] community by the following traits :
- the existence of personal (vs. anonymous) relationships between members ;
- feeling of belonging ;
- co-operation (exchanging links and sharing information) and production of collective goods (public information, social network, political movement) ;

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[4] For a detailed discussion on the relevance of Schutz's approach for the CMC research and IRC - interactions in particular see Velkovska, J. (1997).
[5] *Virtual* means here " mediated by computers and networks ", not " imaging ", " potential ", " immaterial "...

- shared common place where encounters take place (e.g. : the Cyberia newsgroup) ;
- shared reference system, with knowledge about :
  - the roles/status structure in the community ;
  - rituals of initiation and group membership celebration rituals ;
  - etiquette (e.g. : appropriate topics to be discussed, how to ask a question or advertise for one's own homepage)
  - values

It is this set of traits, obtained from the literature, which we shall now confront with empirical data, cropped on our field.

Methodology

What stand do the " observers " take on a field like the Internet ? At first, it seems that this is a dream place for " non-action research " : an observer may remain invisible, and still have access to all discussions. But, this " invisibility fantasy " is limited to the public spaces of newsgroups and homepages. The private spaces of e-mail, IRC, ICQ remain unseen to the anonymous observer. Still, as we shall see (and just like in physical society as different from virtual), the public space is often the starting point of private exchanges.

Still, in the first part of this research, we remained " silent observers " in the public space.

We downloaded all the messages which had been sent during a month on the Cyberia newsgroup dedicated to homepages, as anybody who connects can do. We then extracted 180 different http addresses which were quoted in these messages. Most of the time, it was the message's sender's homepage. In this way we collected a list of Cyberia homepages, whose owners were active in the newsgroup. About 100 of those homepages were explored. This led us to build hypothesis about presentation of self, visitor's welcoming, contents. More formally this enabled us to build a temporary typology of the sites.

In the meanwhile, we monitored for four months the exchanges in the main newsgroup, dedicated to technical help. In this (silent) sharing of the everyday life of the cyberians, we came to know the various actors, their roles and statuses, and the main subjects of their discussions. Then in order to assess the hypothesis coming from our non-participating observation (we never posted a message), we analysed 5635 messages with a statistical text mining technique[6], which produces a segmentation of messages by content.

But this passive observation is not enough. Only active surveys among cyberians could yield their motivations and their subjective perceptions of their community. Therefore, we selected some cyberians, by random on draught on the homepages list, for semi-directive telephone interviews. From the first interview, we got caught in a snowball effect, for the interviewees would volunteer names of other members and suggest that we call them too. We kept to a total eight interviews. The interview guideline included : motivation for creating a homepage, social network made from the page, self presentation and visitor's greeting, use of newsgroups, IRC..., community feeling... Then we also set up an on-line survey, of which http address was sent, with presentation mail, to the list of 180 cyberians previously obtained. We collected 42 answers, which is a much better ratio than land-mail self administered surveys, but still too few to allow for reliable statistical processing.

Briefly, we studied the practices and the perceptions of active cyberians through their homepages, their exchanges in a newsgroup, and through interview and on-line survey data.

The next section describes the construction of Self and one-to-one relations on Internet; in the last section we shall analyse the group processes.

Constructing self and relation to the other on the net

Internet offers spaces for new forms of expression, encounters, and interaction, with unprecedented temporal and spatial dimensions. Therefore, to analyse communicative behaviour on the Internet, we need to study this new participation frame. What are the modalities of self presentation and orientation towards others in the communication space mediated by computers and networks ? How do the communication processes use the resources of the Internet media (electronic writing, sound, image, hypertext) ?

Unlike what mere observation of the newsgroups suggests, group life is not limited to the " official setting " of the newsgroup, although it remains the privileged place of gathering and community sight. Its reality builds on the set of links which community members construe through other channels (e-mail, ICQ, homepages' guest books). We must study all dimensions of this multichannel communication, because each has its specific temporal and spatial constraints, which are of social significance. In this section, we will

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[6] We used the software Alceste, developped by Max Reinert (1993).

describe the mutichannel communication space, where the newsgroup stand as a connector between networks. There we shall investigate self presentation and the construction of relation to other.

Existing on the net : the construction of self

Being visible in the cyberspace is a prerequisite to participation in a virtual community. Construction of identity is done through visibility strategies which make use of several communication channels. The self-building actor creates his homepage, visits others and leaves his mark in their guest book or emails his comments, writes in newsgroups, keeps correspondences by e-mail or ICQ[7].

Building an identity on the net is problematic because of the transient nature of the media. We studied in particular two components of this process of self-construction on Internet, the homepage and the electronic signature[8].

We think that the personal homepage plays the role, among other things, of the stable place where electronic identity resides, and this may account for the fact that signatures of e-mails refer to this homepage. Unlike other Internet spaces, more transient, the homepage is a stable point, which enables durable inscription in the communication space, and permanent presence :

" the homepage is a way to show that you exist, to leave a trace " (factory worker, 29)

Homepage is therefore a central component of the electronic identity. It matters all the more in Cyberia where expertise in website construction is one of the valued proficiencies, and contribute to build one's position in the community. It is worth noting that personal image is systematically linked to homepage. When referring to a specific character, Cyberians tend to qualify him or her by the topic of his homepage. E. g.:

" I'm speaking of Peter, the site on middle-age literature "

What is self presentation among Cyberians ? The most common way of presenting oneself in a Cyberia site is to describe one's hobby, town or geographic area.

" [a homepage enables] showing I'd say some of your personality, you say what you do... showing yourself a little... The idea was to create a site where I represent myself in fact. And then I had to choose the topics. And my town was one of the first because it matters in fact, and then I wanted to put my collection of bottles... which has been a passion for the last 15 years. (computer teacher, 45)

Although it is a personal space, the Cyberian website is not perceived as intimist. Situated in a larger communication space, the homepage is intended to be a gateway between the author and visitors. The modalities of self presentation respect the logic of sociability thresholds (Simmel, 1981, p. 126) : the objective characteristics of partners, and the " too intimate " topics are excluded from its domain. Self construction is based on the choice of site topics, but also on the use of Internet resources. The homepage is considered as a creation space, where the author projects himself in the form and the content.

" I try by this aspect, I mean all these visual and sound effects, to present my site and project myself in it as a person. (...) It's my personality, if you like, which I am trying to make visible, without saying that I am such and such, that my name is so and so, and that I do this and that " (computer teacher, 45)

The common point between homepage and electronic signature is to enable the connection between individuals. Self presentation aims at building relations with others. On each site, we could observe how the visitor was clearly integrated, as a preoccupation, in the construction of the site. The home visiting metaphor is often used (" Welcome to my place "). Guest books and e-mail buttons are also calls for communication. And indeed it works. For example, one of the social networks which we followed originated in a signature in a news group message by A, followed by a message in the guest book of A's homepage by someone who had read the message and subsequently visited A's site :

" ... then I started going to newsgroups where I found people who wrote and always signed with their homepages' URL... uh... at the end and sometimes .... I fancied going to have a look. And I met several pals this way... I met a pal who signed in newsgroups, he signed once in the newsgroups to give notice of his site, precisely. I went to visit his site and he asked for comments, and I gave mine. We became pals, and eventually we made a site together. We made a ring " (schoolboy, 16)

The phenomenon of signature requires a specific attention. It enables typifying its owner (e.g. by visiting his site), and contacting him outside of the public space, through his e-mail or ICQ address. The traces of a person on the web (interventions in newsgroups, homepage, e-mail messages or ICQ) are signs provided to others, which ground the virtual relationships. In this respect, the homepage is a preferred resource for orientation, further inquiry, and possibly go deeper in a relationship. From the ethnomethodologist standpoint, one can consider that the homepages provides thematic resources easily summoned for conversation by email or ICQ. We discovered in the interviews that most often, between new partners who

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[7] As e-mail and ICQ are not observable by external parties, we had to rely on the interviews to understand their logic and their contribution to relational construction.

[8] The electronic signature appears at the end of messages (or e-mails). It contains stable elements as e-mail address, URL of personal homepage, ICQ number, name or nickname of author, and sometimes geographic address, motto, etc.

met on the net, the first topics of conversation are connected with their respective websites, whether about form or content.

The relation to the other

Our study of cyberians shows the importance of personal relationships between members for the existence of their virtual community. That's why we were particularly interested in the mechanisms of construction of one-to-one relations in virtual settings.

Person to person communication often formally starts by a contact following a visit of a homepage. Such visits are often the consequence of seeing their address in the signature of a message posted in a newsgroup. So, an image of the self is made in public spaces (homepages, newsgroups). Then, person to person communication takes place privately, through e-mail most of the time. ICQ is considered as a better media for relation, because it is in real time and give a better presence feeling :

> " In fact when people don't have ICQ, that will slow relationships. But all my friends have ICQ, because ICQ enables discussing in direct. I also think a way to make friends, it is to be able to discuss. Because through e-mail or newsgroups, it is not so practical, however " (schoolboy, 16).

Here the notion of a multi-channel communication space takes flesh. The affordances of the various channels tend to specialise each into a specific social purpose : community visibility (newsgroups), self construction (homepages), interpersonal relationships (ICQ, e-mail).

The newsgroup is not only a gateway to interpersonal relationships, but also to networks oriented towards a common interest. At closer examination, the global network of users appears as a patchwork of local interest groups. The Cyberians are often members of several ones (for example the mailing list of World War II plane fans, or the " cybergirls " community site, or the motocycle rider's newsgroup).

Due to the specific nature of the media, these gateways are at the same time knowledge depots, where newcomers or members can visualise the state of discussion within the community. Common knowledge and discussion is therefore broadcasted.

In this patchwork of communities, just as in physical life, individuals may interact in several different settings, in each setting playing a specific role, and indeed so they do.

As the next section will show, the Cyberia newsgroup is not only a gateway to other communication spaces, but also an area occupied by a stable kernel with specific community structures. This coexistence of opening and closure may be a privileged access to the specific logic of the Internet as social place.

The Cyberians : a virtual community ?

In the newsgroups, community is visible by the speech acts of active contributors, the ones who emit messages and answers. This active population is a minority among a much major " silent audience ", who reads but doesn't write. This minority is actively involved in the creation, development and maintenance of the community and its artefacts. One of our hypothesis is that they do so because they get a social benefit out of it (status, role, achievement...). Sociality is a need in itself, and Cyberia, as other Internet communities provides it to its active members.

Obviously, Cyberia is a social setting, made of communicative behaviour. Let us now examine some of its community aspects as suggested in our definition : the role and status structure of the group, the existence of personal relationships between members, the rituals, rules and values.

Group existence

Group structure, roles and statutes

R. Bales (1958) classical works in social psychology show that in experiments started with groups where all participants are equal, individuals tend to gradually take specific roles and statuses. Those fit with evaluations made on one another on several dimensions : sympathy (effort to maintain nice and hearty relations), activity (effort to present oneself well), proficiency (effort to help the group attaining its goals). Bales states that these evaluations depend on the number of emitted and received messages by each and of their contents.

Newsgroup offers a " natural ", non-experimental setting for the observation of creation, development and evolution of a group (e.g. : emergence of role and statuses) ; and also an opportunity to observe how social setting can influence group dynamics.

Experiments on group dynamics show the systematic tendency for emergence of a leader, who concentrates the proficiency valued by the group. And indeed, we can attest that such is the case in our newsgroup. The leader actively participates, and sends many messages. He is recognised as an expert in the newsgroup domain, and his peers often answer questions by referring to his website. For example :

[question] Would someone of good will tell me how to do it ? But, mind you, with all details from a to Z. I hope one of you guys will help me and thank you in advance.
[answer] Why don't you go and have a look at :
http ://perso.cyberia.net/topic.place/Internet

Finally, in most interviews, spontaneously the interviewees present this person as a paragon :

" He, he's got a site where he wonderfully explains the way to do it " (unemployed, 38)
" A who is our... well who was at the start my leader too, because he made an interesting website on (our subject) " (computer teacher, 45)

Studying the leader's characteristics, as described by others, enlightens the factors which cause the setting up and stabilising of roles : the capacity to help (and therefore to bring the group as a whole to reach its goals) ; relational proficiency ; language proficiency and humour.

The leader has all those capacities, and this gives him a stable status, which is eventually defended by the participants against aggressive or critical outsiders.

Another element of group cohesion is the scapegoat who polarises the tensions in the group and focuses the aggressivity. In this newsgroup, the access provider's representative often plays the scapegoat in exceptionally long discussion threads and in frequent allusions. He is the preferred target of attacks and focuses all the complaints against the provider[9]. Other scapegoats appear locally, for subgroups. The young ones often play this role for the seniors.

But group structure is not limited to a leader and a scapegoat. Other characters occupy important and visible social roles. The number of messages sent is a good indicator of social position. Those who write most are the most listened to, those who obtain most answers to their questions, those who are most cited... But they have other proficiencies than the leader. In Cyberia, if we look at the most active participants, one is specialised in criticism (the critique), one in relation management (the grandpa), one in technical matters (the youngster), and one in humour (the joker).

	Number of posted messages in November 98	% of total posted messages	Daily number of posted messages
the critique	295	5.3	10 a day
the joker	158	2.9	5
the youngster	131	2.4	4
the leader	129	2.3	4
the grandpa	90	1.6	3

Unlike experimental groups, the newsgroup population varies over time ; and has also the characteristic of having a large (but unknown) audience. In this respect, the newsgroup setting looks very much like a small Agora surrounded by a large crowd. But not anybody is allowed to play in the Agora. There is no physical barrier, but strong symbolic barriers bound the group limits. The exclusion process is non-answering. And if we now turn to statistics, we can see that 41 % of messages posted are left unanswered. 60 % of the intervening individuals did actually intervene only once in the month. This means that some topics, and some individuals, are excluded.

Those unanswered show that virtual world is not free from symbolic violence. As existence on the net is possible only through communication, this communication refusal is a way of refusing existence to the other, exclusion in its strongest form.

Roles and status in newsgroups can be quite different from positions in physical life. Many participants declare having given up trying to picture the authors of homepages or messages, because the difference between what they pictured and physical reality was too big. In other words, the net enables acquiring a status that physical life may not have offered. The proportion of students, unemployed, or retired active in the newsgroup is striking. Besides the fact they have fewer time constraints, we can hypothesise that the net offers them the possibility of building a more gratifying status than physical life.

Network of personal relationships between members

As stated earlier, personal, direct and affective links are what makes the difference between a community and a mere group. We therefore investigated those links among Cyberians.

Is the newsgroup an utilitarian anonymous passage, or a " third place " (Oldenbourg, 1989), a place invested with sociability ? Members describe it as a convivial, inhabited place, often humorous :

" It's convivial, now we all know each other more or less " (unemployed, 38).

The relations can be compared to those between the regular customers of the same café, who lost their anonymity :

" one can say that some relations are rather personalised. I've been on the Internet for a year, and I've really been following the news regularly for the last 6-8 months " (computer teacher, 45)

The feeling of belonging to a group is perceptible when regulars talk about newcomers who cannot really catch their jokes, or about other French newsgroups.

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[9] As a matter of fact, this role is so psychologically hard to bear that the first provider's representative (called " the groom " by others) was replaced.

The relational network is reified in the messages in the newsgroups, but also through the links between homepages. We hypothesised that those links display the friendship connections on the Internet. And indeed, interviews seem to confirm this hypothesis, and provide us with a set of norms which rules the exchange of hyperlinks. When, on a homepage A, a link points towards another homepage, there is a high probability that this other site also point to A. This means that, most often, the two authors correspond and agree on these reciprocal links. These links may exist even if there are few strings in common in the topics of the sites ; they are more a clue of personal relation than technical relevance.

> " The links [on my site] are people with whom I am in permanent contact, by e-mail or newsgroups. And all the people in my links, are people from the newsgroup " (unemployed, 38)
> " Either those people have put a link towards my site, and then I put one in my site to be polite, when they are private persons. Either it's the reverse. And that is... that's friendly links. " (schoolboy, 16)

Intersites links therefore are a means of exploring social networks on Internet.

The existence of personal relationships, role structure, set of rules and values as elements of shared system of references defines the boundaries of Cyberians' community.

Components of community

We will focus our attention now on discussion topics, rituals, values as components of cyberians' common knowledge.

What is said in the newsgroup

The total 5635 messages posted in November 1998 on the Cyberian newsgroup were analysed with a powerful text-mining software (Reinert, 1993). Messages with a common content have been clustered by descending hierarchical classification. The number of classes was not a parameter : it is the result of a cross-classification, with the aim of obtaining maximal stability of the final classes. Three classes were obtained. The first (78 % of the messages) gathers the technical messages : technical question/answer. This is by the way the official aim of the newsgroup, made to provide help on technical matters (more precisely, about Internet techniques). Further analysis shows different kinds of answers. If the question is poorly formulated, or shows a low technical level, or far from the local legitimate domain, it has little chance of being answered. On the other hand, if it is a " cutting edge " question, answers may come pouring in very shortly.

The second class of messages (17 %) are " community " messages, which maintain social relation within the newsgroup. In these messages, the official goal of the newsgroup is obliterated. The messages form long threads of discussion involving a great number of participants. Humour is highly valued, and those discussions are more like oratory contests or debating. Often, they start from something serious and soon derive, such as the following example, which gave rise to 48 contributions, relevant to group life only :

> (message 1) Is the higher cost of an ultra wide SCSI hard disk worth it compared to standard hard disk ultra DMA ? Thank you for your relevant and fascinating answers...
> (message 2) Well, you are well placed to know that the wide deserves an Oscar
> (message 3) Grade A for this one.
> You could have added that nature hates it[10]...

Finally, the last category of messages (9 %) gathers the messages of militant members mobilising against the provider and against France Télécom, the French historical utility. As in many countries, users association flourish in the Internet. The newsgroups are an ideal place for the birth and rise of political movements (which, even born in virtual space, may have hard consequences, like Intel's experience with its defective Pentium chip). Some of those militant messages can also be turned toward community life (e.g. birthday greetings) but then they come from different contributors.

This political virtual life can be an opportunity here too, for people who experienced unsatisfactory status in physical life. Of this we could gather several examples, but this is not a general rule.

Nevertheless, it seems, from the (partial) data which we gathered in the interviews and questionnaires that the economic and cultural assets of authors of type 2 messages (community) are higher than those of type 3 messages (militant). Clues of social status are rare and difficult to gather, for internautes reluctantly disclose those (age, profession) in their homepage or newsgroups ; but there is a clue which therefore acquires a decisive value : language proficiency, as attested through writing. Discuss together those who exhibit a similar degree of language proficiency.

Participants expects three things : technical resource, sociability, and lobby power. Those are three collective goods which are exchanged in the community. It is by fulfilling those expectations that the community produces attachment and fidelity.

Rituals, rules and values

Beyond the exchange of messages, the group formally exists through the performing of rituals. Cyberia has two platforms for rituals : the Trombinoscope (which presents the photos of the faces of 293 active members)

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[10] Untranslatable jokes, based on " Oscar Wilde " and " la nature a horreur du vide ", famous quotation.

and the Z'anniversaires (list of all birthdays of the same group members). At every birthday, a birthday greeting is posted in the newsgroup, and often starts a rather long discussion thread (e. g. : 40 messages for the birthday of " the youngster "). Those sites were created by different active members and they are linked. They play a central role to display the group belonging, and create links between members as stated in the interviews.

To belong to the group, one must undergo the community ritual, and give his picture to the Trombinoscope and his/her[11] birthday.

To enter a newsgroup, one has to undergo a complex ritual of initiation, which starts with a long period of observing and understanding the local customs and ways of doing :

> Well, in my first message there was some flourish, and I was told to respect the Netiquette. So I did. Then I was told to read all the messages before contributing. And it is time that I was arriving at awkward moments. There is an apprenticeship to be made, too (...) You can't pop into a newsgroup just like that. You got to be acquainted (...) Well I'd say in existing group you approach, first you listen, then if you have some interesting, which could be interesting, there you can develop, but not before. (computer scientist, 45)

More generally, observation of the content of discussions evidences a set of values. Those values are concretised by rules enforcing participation, proficiency and reciprocity.

These are the primary conditions of existence (that is : continuous visibility by appearance in public places). Let us summarise those values :

- proficiency (on the community's technical object or/and another one) :

we saw that questions with low technical level are left aside, while everyone answers pinpoint ones : the newsgroup is arena where all participants try to display their expertise. The same is true of websites : the most valued are not the general ones, but those where the author can claim for the mastery of his field. A more general ability for communication is a valued asset, as demonstrated by the oratory contests (cf. supra), and language proficiency level is used for discussion partner selection. Language proficiency as a characteristic of the leader in computer mediated communication was evidenced by other studies (Paccagnella, 1997, p. 10).

Technical excellence in the local domain, legitimate expertise in (another) field, and language proficiency are three resources used by actors to obtain dominant positions in Internet communities.

- mutual aid. The Internet values the logic of donation/contra-donation, together with a refusal of merchant logic. For instance, all messages with commercial content or advertising are banned from the newsgroup, including those which promote homepages with too much insistence. Mutual aid is highly valued : some indicate they built their site " to help ", others contribute in the newsgroups " to help people in trouble ". The sharing spirit often is referred to in the justifications of internautes : " to share my findings, by mere altruism ", etc.

It is indeed mutual help and not donation. Reciprocity is compulsory. We saw this principle at work with reciprocal hyperlinks between homepages. But this applies only to group members, as demonstrated by the high number of unanswered messages. As a Cyberian says " to get my help, one must deserve it ". This means making a personal effort to catch up the level, to seek the information, to know the codes... So there is a strong difference between the open and helping self image which Cyberians try to give, and the practice which remain elitist : the active minority is a rather closed world.

Conclusion

This study showed that the group of Cyberians active in the newsgroups can meet the definition of virtual community suggested in the beginning. At least, there is an active minority which share a common etiquette, common references and writing style, adhere to the same values, keep regular contact. The community has constructed specific shared supports for rituals, some of which are initiation rituals. The community has a leader who exemplifies the main values of the community (technical proficiency, mutual help) and some stable prominent characters assuming social roles.

Participants use the various available communication channels for different purposes : public spaces (homepages, newsgroups) for identity construction, role distribution and community visibility, and private channels (e-mail, ICQ) for person to person relations.

This study raises more questions than it provides answers. There seem to be many commonalties between virtual and physical communities, proceeding from the fact that sociability is a basic human need and will, presumably, always occur through role and status structure, sharing time, space and experience. But a whole range of new problems occur, ensuing from the specific affordances of the Internet : namely the coexistence of different communication channels and their social construction through uses, the need of continuous communication for self existence, the emergence of common knowledge in the situation of CMC, to name only a few. And then connection of virtual and physical social lives also needs to be investigated, since social motivations in the first might come from the latter.

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[11] It is time to say that there is very few women in the newsgroup.

Those are only a few of the research tracks suggested by this quickly expanding new social universe.

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