

THE REALITY OF VIRTUAL COMMUNITIES

The development of computer networks and multimedia are often regarded as the first kinds of virtual reality media. And yet, ever since the invention of writing, numerous media have created to a greater or lesser extent virtual worlds. Of great importance today is the question whether computer virtual communities can compensate for "lost community". Can mediated communication fulfil the same needs as face-to-face-communication? A comparison of virtual with organic communities shows that they have common features, and that human elements such as moderation, leadership and structure are necessary in all communities. Virtual communities will not replace organic communities, but they may be able to strengthen them.

1. Introduction

One of the promises of the Internet and other large-scale computer networks is the creation of new public spaces and communities. These spaces and communities are called *virtual* as they appear to be no longer tied to a particular place or time. In our opinion the best definition of the concept virtual in this context is: 'the ongoing liberation of the restraints of space and time in human communication'. However, a popular connotation of the term virtual is one of not being real or at least apparently real. The positive thing about this connotation is that it directs our attention to the meaning of the substantive it is attached to: (virtual) reality, world, organization, community etc. What is reality as the counterpart of virtual reality? What constitutes an organization or a community? The negative thing is, of course, that the connotation is simply incorrect. The different types of virtuality are indeed real. The important thing is to consider the character and quality of the different kinds of virtual reality. In this article we will consider the reality of virtual community.

Have the pioneers of computer networking already built communities, a claim made by Howard Rheingold (see Box 1)? Are they actually doing everything people do when they get together, only doing it with words on screens, leaving their bodies behind? Are they the forerunners of a larger population decades hence? This is no judgement made purely for the purposes of definition.

'Internet signs'
(photo Garry Gay)

"A virtual community is a group of people who may or may not meet one another face-to-face, and who exchange words and ideas through the mediation of computer bulletin boards and networks. In cyberspace, we chat and argue, engage in intellectual discourse, perform acts of commerce, exchange knowledge, share emotional support, make plans, brainstorm, gossip, feud, fall in love, find friends and lose them, play games and make games, flirt, create a little high art and a lot of idle talk. We do everything people do when people get together, but we do it with words on computer screens, leaving our bodies behind. Millions of us have already built communities where our identities commingle and interact electronically, independent of focal time or location. The way a few of us live now might be the way a large population will live, decades hence."

Howard Rheingold (1993a), *A Slice of Life in My Virtual Community*. In: Harasim, Linda M., *Global Networks, Computers and International Communication*, p.58

Important questions in social and communication science are at stake. For instance, in this article we will examine whether virtual communities can compensate for so-called 'lost community' in modern society. Will they really be the new public spaces that go against the tide of social and cultural 'tribalization' and individualization in this age of fragmentation? Will they actually create (a part of) the communication infrastructure in future society? Will they save the public discussion about the direction and order of society as a whole? Or will they do just the opposite, and strengthen the fragmentation of society with the communicative means of new interactive media? These are important questions for media development. If it could be shown that virtual communities serve the functions mentioned in the questions above, it would be possible to design media policies which serve them better. However, this article is primarily a systematic comparison of virtual communities and known communities, which will be called organic communities. The reality or 'score' of virtual communities with regard to common properties of all communities will be examined. The result will provide some answers to the general questions posed above and given in more detail in section 3. Before this can be done properly, we will have to describe the historical context of the society and the media practice which has led to these questions (section 2). But first we have to deal with some terminology problems. Virtual communities are communities which are not tied to a particular place or time, but which still serve common interests in social, cultural and mental reality ranging from general to special interests or activities. They are created in computer networks and based on computer-mediated communication (CMC) and

human-computer interaction (HCI). As technology develops with the use of higher bandwidth, graphical interfaces and multimedia, allowing the simultaneous transmission of speech, text, data and images, the facilities of CMC and HCI improve. The provisional culmination of this development is the design of virtual reality media creating an artificial environment for human activity and experience. These are the terms used in this article. We will not use the popular term cyberspace. In our opinion this is meaningless as a scientific concept. Even its inventor, the science-fiction author William Gibson, has admitted that it is a neologism, a mixture of shorthand and newspeak (Gibson, 1991: 27). Nobody knows exactly what is meant by it. Terms like these only contribute to the vagueness, idealism and utopianism of present day interpretations of the opportunities of the Internet and other computer networks (Stallabrass, 1995). Computer networks and (stand alone) multimedia are not the first kinds of virtual reality media in history. Since the invention of writing numerous media have created virtual worlds.

CROSSING THE BOUNDARIES OF
SPACE AND TIME

Communication history is a succession of media crossing the boundaries of space and time ever further and ever faster. It goes hand in hand with the social history of time-space distantiation (Giddens, 1984, 1990). Traditional societies were based on direct interaction between people living close to each other. Modern societies expand across time and space. The limits of time are exceeded by the (communicative) transfer of tradition. The boundaries of space are crossed by new means of transport and communication. According to Giddens (1990) the process of time-space distantiation is developing ever faster in the present period he calls 'late or high modernity'. Expansion becomes quite the opposite: time and space collapse (Brunn & Leinbach, 1991) or compress (Harvey, 1989), an idea elaborated earlier by McLuhan (1966) in his global-village concept. The dimensions of time and space seem to lose any importance in modern societies when using media-like computer networks. However, this popular idea is opposed by Ferguson (1990) and Van Dijk (1991, 1993), as it will be in this article (section 4).

The most striking observation in the history of communication and human societies is the correspondence between the social-historical process and media development. The above mentioned combination of time-space distantiation and media crossing the boundaries of

space and time gives a general description of this correspondence. The social structure of each society and its communication infrastructure can be described specifically. We will describe present day society to reveal the historical context and material base of virtual communities. Each (infra)structure can be portrayed with a diagram. This can be done for the structure of traditional and modern societies as well as for the infrastructure of old and new lines of communication. Of course, a functional correspondence does not explain either the structure of society or the infrastructure of communication. Real explanations can only follow from studies of particular cases, in which it can be shown how historical agents generate the need for media in particular circumstances. The functional correspondence just describes a similarity of structures which can not be coincidental and which requires an explanation.

Figure 1
Social and communication structures of traditional communities in mass society

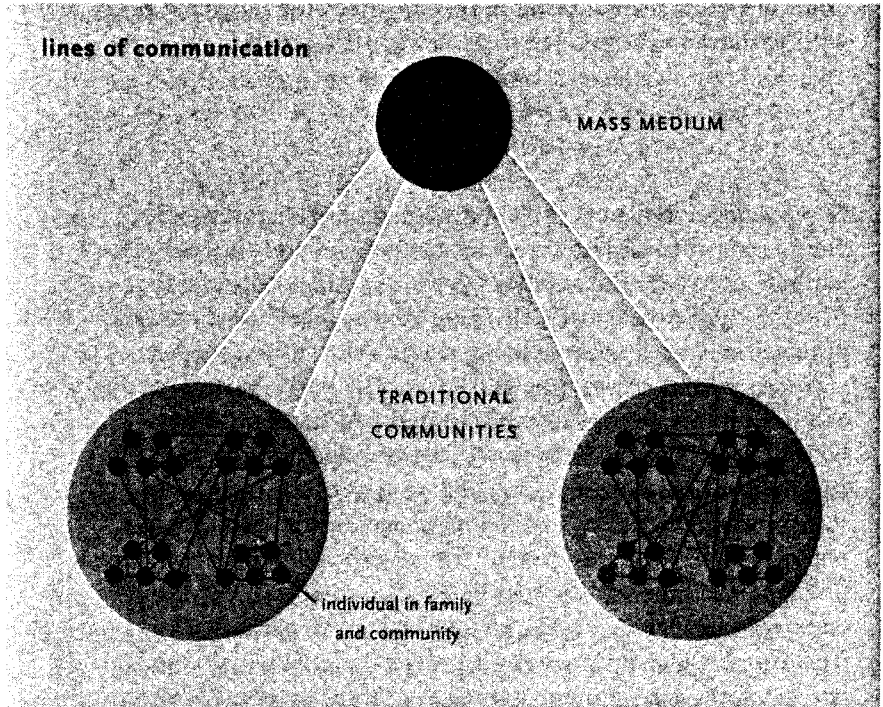


Figure 1 shows the (infra)structure of *traditional communities* in *mass society*. This kind of society originated in the early stages of the industrial revolution. It retained the age-old structures of the traditional communities of villages and neighbourhoods and extended them to a larger, mass scale; initially the scale of a nation. Beniger (1986) has shown that mass media developed in the

aftermath of the industrial revolution due to the emergence of coordination and control problems in the expanding mass society. The central units of this kind of society are large households and families in tight knit communities (primarily villages and neighbourhoods). The vast majority of mankind still lives in this kind of society and it flourishes in third world countries. When work places are separate from the households, manufacturing and trading corporations also appear. These central units are characterized by propinquity. The preliminary means of all communication is the physical means of face-to-face communication. The public means, for the whole of society, is a limited number of mass media, generally only one each of the different kinds of mass medium (newspaper, radio, television, telephone operator).

In the course of the twentieth century a new (infra)structure of society and communication has developed, first of all in the highly industrialized Western countries. We will call it the structure of *modern communities in network society* (Hiltz & Turoff, 1978; Martin, 1978; Van Dijk, 1991), and it is shown in Figure 2. In network society the correspondence between the social structure and the infrastructure of communication approaches completeness. Step by step mediated communication replaces face-to-face communication. Social networks and mediated networks increasingly entwine. That is why it is called network society. The central units of this kind of society are individuals, small households and increasingly smaller

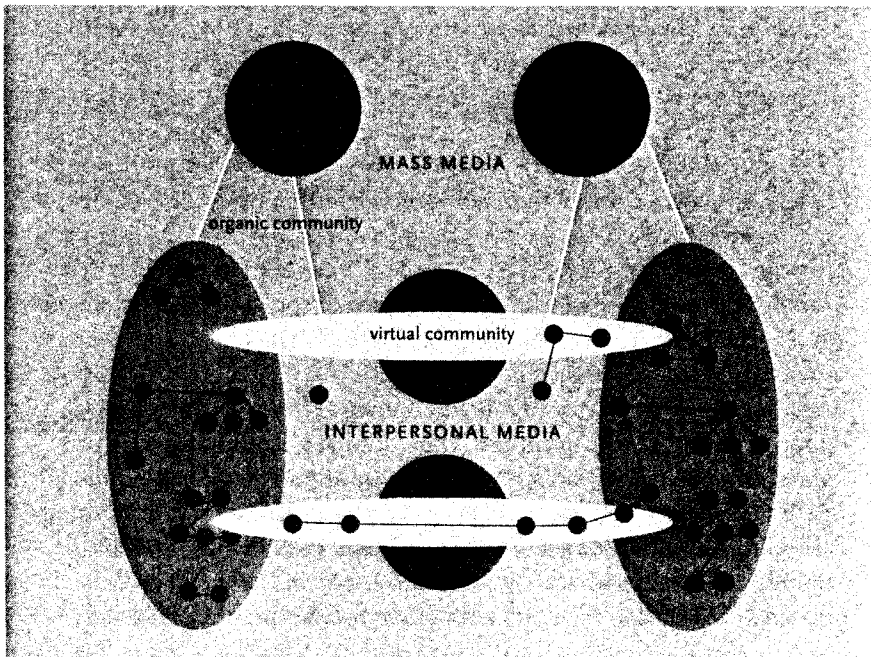


Figure 2
Social and
communication
structures of modern
communities in
network society

business teams or even self-employed individuals who are slowly freeing themselves from the bonds of traditional communities. The lines of communication within, or in the immediate environment of, these units are not tight and dense, but loose and diffuse. They shape the (infra)structure of individualization. These units are not marked by propinquity, but by attainability over a great distance. All these characteristics are aspects of the process of scale differentiation (Giddens, 1991), a special characteristic of modernity, which actually combines scale enlargement and scale reduction, socialization and individualization (Van Dijk, 1991, 1993). In Western countries, at least, these processes have been able to tear traditional communities apart and they have entered into a state of so-called 'lost community'. This loss was mourned by a variety of people ranging from urban planners and social welfare workers to social scientists and religious people. To date all their attempts to revive traditional communities have failed completely. This must surely be one of the reasons why virtual communities are promoted as the next possible solution for 'lost community'. Will this solution, clearly far more oriented to the future than the past, be more successful?

2. Organic and virtual communities

The distinctions between traditional and modern communities and between mass and network society are too broad and superficial to be useful in the investigation of virtual community. We need better analytical categories. Different types of community characterizing mass and network society can be constructed with the analytical categories of the (ideal) types of organic and virtual community. In mass society the organic community prevails, but it is not the only type. It has been claimed that, since the invention of writing, many virtual worlds have been created through the use of print, telegraph, telephone, photograph, film, radio and television. In network society organic communities still form a large part of social life, particularly in the countryside of urbanized developed countries, and in less developed countries generally.

There is a tendency to call the better known communities real as opposed to virtual communities. This, however, would be a case of something one might call a *reality bias*. An implicit supposition in much communication research is that communicative practices using media to cross boundaries of space and time constitute a kind of second-hand reality, as if they somehow 'hang in the air'. Very often this bias is connected to another: a *bias in favour of face-to-face*

communication. This is even more detrimental to the advance of communication research. It prevents an unprejudiced observation of the strengths and weaknesses of both face-to-face and mediated communication, including CMC. This article will demonstrate that virtual communities are real and that their communicative practice, a kind of CMC, possesses not only weaknesses, but also strengths when compared to face-to-face communication.

In our opinion *organic* is the best adjective to compare with the adjective *virtual*. A selection of sociological literature about communities (Lowry & Rankin, 1969; Bell & Newby, 1974; Bender, 1978; Anderson, 1983) reveals that all communities possess:

- a composition of membership with specific activities;
- a social organization containing a social structure, leadership, and a set of rules;
- a language, and patterns of interaction;
- a culture and common identity.

The content of these four general characteristics defines organic and virtual communities, as is summarized in Table 1.

CHARACTERISTIC	TYPE OF COMMUNITY	
	ORGANIC	VIRTUAL
COMPOSITION & ACTIVITY	tight group (age) several activities	loose affiliation special activities
SOCIAL ORGANIZATION	tied to place and time	not tied to place and time
LANGUAGE & INTERACTION	verbal and non-verbal	verbal and paralanguage
CULTURE & IDENTITY	total singular homogeneous	partial plural heterogeneous

Table 1
Ideal types of
organic and
virtual community

Organic communities are tight group(age)s of families, neighbourhoods, villages and other relatively small-scale social units. Virtual communities are loose affiliations of special interest, target and discussion groups and other group(age)s which are mentioned in Table 2 below. The social organization of organic communities is

tied to a particular geographical place and a definite chronological and biological time. The most conspicuous feature of virtual communities is a social organization which appears to work without these ties. The language and patterns of interaction in organic communities are mainly based on verbal as well as non-verbal modes of communication. In virtual communities they are mainly based on text, data and graphics on screens. The clear lack of non-verbal signs is compensated by new forms of language called paralanguage. Finally, the culture and identity of organic communities are characterized by their total or encompassing nature, involving all members to a large degree. Their culture and identities are relatively unitary or singular and homogeneous. Virtual communities, on the other hand, possess partial cultures and identities, i.e. they only partially involve their members. Their cultures and identities are plural and multifarious. Although the members affiliate for a particular common interest, they are otherwise heterogeneous. What kind of group(age)s or affiliations have a chance of becoming virtual communities? To answer this question one could simply enumerate all kinds of groupings featuring in electronic networks like newsgroups, discussion lists and e-mail task-groups. However, it seems better to make an analysis of these group(age)s and locate them in two dimensions: *between mass and interpersonal communication* and *between public and private communication*. The result could be Table 2.

Table 2
Virtual group(age)s
between mass-
and interpersonal
communication

		SENDER	
		PUBLIC	PRIVATE
RECEIVER	PUBLIC		target groups in marketing advertising and interactive broadcasting
	PRIVATE	consultation groups in video- and audio-on- demand	
		INTERPERSONAL COMMUNICATION	

We have witnessed virtual groupings in the past (cf. mail discussion groups in politics, literature and poetry or other cultural activities). However, it is striking to what extent they multiplied in late mass society and that their number has increased even more in network society. Modern mass media such as the press, broadcasting and telephony, create audience and target groups by using many kinds of segmentation, targeting and direct-mail techniques. Beniger (1987) made an appropriate analysis of this personalization of mass media. He invented the term *pseudo-community* for the virtual groupings created in this way. This is an important term in the context of this article. In network society audience and target groups multiply, as do all types of consultation groups using video- and audiotex, pay-per-view and audio- or video-on-demand. For these group(age)s the sender is a public communicator, but the receiver is a private consumer who has to pay for consultation. Besides these, all kinds of group(age)s between public and private communication and for the benefit of private, interpersonal communication are created. These group(age)s are of interest in this article. The term *groupage* is used for a loose collection of individuals who do not communicate with each other. The term *group* is used when there is at least an elementary kind of membership and common activity. Only the latter are able to build communities. This means that only the groups in the lower right cell of Table 2 are able to create virtual communities themselves. The group(age)s in the upper left cell of Table 2 can make a contribution to a (virtual) community which already exists as an organic community. Audience groups in modern mass media can strengthen the coherence, culture and identity of sections of mass and network society. Bulletin boards, mailing lists and newsgroups at least possess a rudimentary form of membership or subscription. They are able to grow into conversation groups (enter the lower right cell of Table 2) and can be the start of virtual community building.

3. Virtual community: a solution for 'lost community'?

There can be no doubt that the prime motivation of Howard Rheingold and other advocates of 'the Web' or 'the Net' is to build new communities to replace the old organic ones, which are considered to be lost. Rheingold (1993b: 6) notes 'the hunger for community as more and more informal public spaces disappear from our real lives'. He feels that the struggle with the big urban

builders and planning departments, who have designed a completely atomized system of homes in suburbs and offices in skyscrapers, has been lost. He also feels that public communication is subjected to the interests of political and media monopolies. Therefore, a related motivation is 'to challenge the existing political hierarchy's monopoly on powerful communications media, and perhaps thus revitalize citizen-based democracy' (Rheingold, id.:14). The question is, of course, whether the virtual communities of computer networks are able to replace organic communities and traditional (mass) modes of communication and fulfil the same needs of connection, interaction, culture, identity and belonging. Or are they more likely to become pseudo-communities, a simulated or substitute type of personalized communication (cf. Beniger)? Worse perhaps, will they create no substantial community at all, but rather a completely fragmented society which only consists of 'electronic tribes' or subcultures, a fear expressed a.o. by Tracey (1994)? It would not be the first time in history that an incorrect prediction was made of the future of communications as a consequence of the creation of new channels. It was expected that the construction of a highway network in the first part of the twentieth century would bring the people of nations and smaller communities closer together (Jones, 1995). In fact, these highways 'rolled through cities, splitting communities into ghetto's, displacing people and crushing the intimacy of old cities' (Patton, 1986). Answers to the questions posed above will also supply an answer to the general question raised in this article: *to what extent can virtual communities replace organic communities and provide forces to countervail the present social processes of fragmentation and individualization?* For answers to all these questions we will have to take a close look at the present characteristics of virtual communities.

4. Present characteristics of virtual communities

A. composition and activity

All communities maintain some kind of boundary as a mark of membership. It has to be clear, more or less, who participates in the community. Secondly, all communities have at least one (kind of) common activity. So, what is the membership and common activity of virtual communities? It is not easy to answer this question as they are very different sorts. Some people consider the millions of Internet users to be a virtual community. However, membership and common activity are not identifiable characteristics for this unknown extended population. Communities could be built by the particular group(age)s

summarized in Table 2. They range from the virtual audience of World-Wide-Web pages to the teleconferencing task groups in a company or school. However, the membership of audience groups, bulletin boards, mailing lists, news groups, discussion lists and game groups like MUD's (Multi User Dungeons or Domains) is unrestricted, whereas in electronic mail and teleconferencing groups within organizations it is restricted. In the first mentioned groupings one can participate anonymously or with pseudonyms (although every contact and message can be traced afterwards by system operators). In the organizational groups real names have to be used. Table 3 illustrates these differences in membership.

	SIZE	CHARACTER	MEMBERSHIP NAME
audience groups	several thousands	open	anonymous
mailing lists	↑	↑	↑
bulletin boards			
discussion lists			
game groups			pseudonym
e-mail groups			
teleconferencing groups	few	closed	real name

Table 3
Kinds of membership
in potential virtual
communities

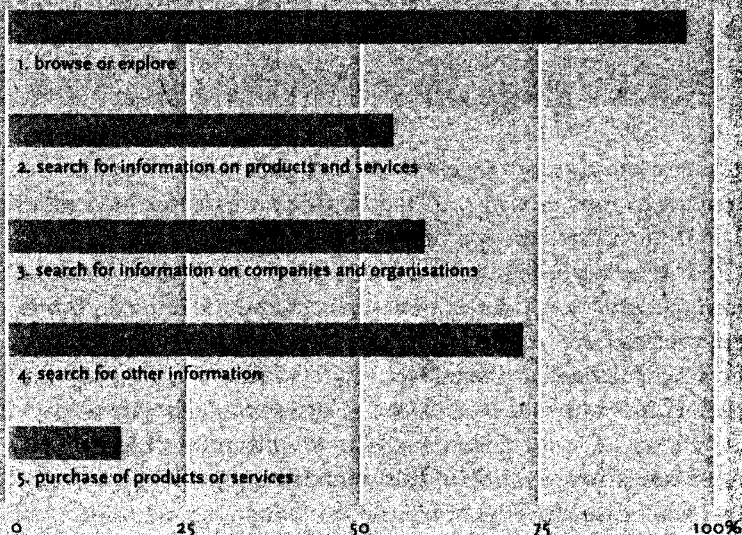
The entry to all group(ages) in Table 3, except e-mail and teleconferencing groups, is easy, much easier than to organic communities. The threshold for today's public and relatively cheap networks like Internet is low. It is made easier by graphical browsers and navigating systems. An exit is even easier to accomplish. It often goes unnoticed. In non-moderated groups one can only read messages like 'please unsubscribe' and 'take me off the mailing list'. This is one of the reasons why we have called virtual communities loose affiliations. This sounds rather negative. A positive interpretation of this phenomenon is the substantial increase of the number of contacts and opportunities of the birth

of new communities, which would not have come into being along organic lines of communication.

Moreover, it is possible to be a member of many virtual communities simultaneously. This is an important characteristic when comparing virtual communities with organic. Most people only participate in a couple or a few organic communities (neighbourhoods, extended families, work organizations, schools and cultural organizations). A likely consequence is that the sense of belonging or being a member is far more diffused in virtual communities.

What are the common activities of these group(age)s? They can be summarized under the headings of the exchange of information, discussion, play, work and education. However, first doubts as to the community character of these group(age)s arise when the communalism of network activities is considered. It is illusory to claim that most of these are common activities. In fact, most network users are so-called *lone riders*, wandering around 'the Net', clicking pages, browsing in endless galleries and gazing at display windows of icons, pictures and texts. Another familiar illusion about network use is its (inter)activity. Most of it is actually relatively passive, such as reading pages and following news or discussions, rather than writing pages or participating in discussions. The above has been confirmed by data of both the Internet Demographics Survey executed by CommerceNet and Nielsen Media Research (1995), and the world-wide WWW-user surveys conducted every six months by the Gvu Center of the Georgia Institute of Technology. The

Table 4
Primary Uses of
the World-Wide Web
in 1995
Source: CommerceNet/
Nielsen Media
Research, (Internet
Demographics Survey)



former revealed the following uses of the WWW in the USA and Canada in 1995:

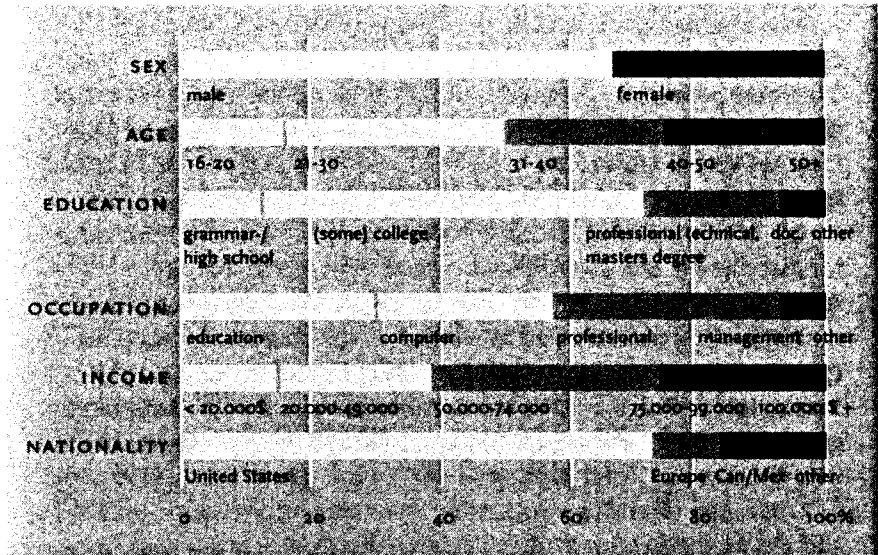
The most popular application is simply browsing, using the WWW as a navigating system to see what 'the Net' has to offer. Accessing all kinds of specific information for work, research and education is the second most important use of the Web. Applications requiring the supply of one's own opinions, facts and specific wishes, for instance for discussions and electronic shopping, are far less popular.

According to the Fourth WWW-survey by the Gvu Center, conducted in October 1995, 26% of the WWW-users visited a newsgroup and 17% went (tele)shopping (Gvu, 1995). The Internet Demographics Survey revealed that 65% of North American users of the Internet (in general) had used it for E-mail in the 24 hours previous to the survey. Only 21% had however participated in an interactive discussion and 36% in a non-interactive discussion by reading only (CommerceNet/Nielsen Media Research, id.). It appears that real common activity is primarily practiced in the work, play and study of electronic-mail, play and teleconferencing task groups, that is to say electronic groups whose members are, with the exception of some play and study groups, also members of organic communities: companies, schools, clubs and associations.

Another property of a community is that anyone who meets certain conditions (a living place, a job etc.) is able to participate. The primary condition for participation in a virtual community is a network connection. Even when it is available, it still has to be actually used. An important characteristic of virtual communities at the moment is the exclusivity of their membership and participation. The vast majority is male and relatively young (average age of 32-33), has a high level of education, high income, and is living in Western countries, principally North America and Europe. See Box 2: the Social Profile of the WWW in 1996, established by the author from the Gvu Center's Fifth WWW Survey data. Participation is slowly evolving to include less exclusive populations, as network use moves from the stage of the pioneers to the early adopters.¹ Nevertheless, it is doubtful whether the use of computer networks, even with the planned 'information super highway', will ever reach the same complete mass diffusion as the radio, television and telephone networks (Rogers & Picot, 1985; Golding & Murdock, 1986; Van Dijk, 1991). According to a study of the Rand Corporation the gap in the access to computers and network services between people with high income and education and people with low income and education increased between 1989 and 1993, while the 'gender gap' decreased in these years (Anderson, Bikson a.o., 1995).

1 Compared to the first surveys of the Gvu-Center in 1994 the number of females and the average age have increased and the average level of education has decreased. The distribution of occupations has developed being from absolutely dominated by computer and academic workers. The portion of American users is still overwhelming, presumably because graphical interfaces and software are required. The rest of the Internet and older networks and programmes only based on text and data have a larger global distribution than the WWW.

Figure 3
A summary of
the GVI-Center's Fifth
WWW-Users data,
April 1996



Network use will remain relatively expensive. It is unlikely that the biggest present problem of computer networking on a mass scale, the insufficient value of networking as compared to older media, will be solved in the short term. In any case, it seems safe to predict that the use of computer networking will remain more exclusive than the present use of television and telephone for several decades to come. The probability of this prediction coming true is growing with the present enlargement of social inequality in most Western and Eastern countries.

At this stage we can draw our first partial conclusions. Most electronic group(age)s, which are candidates for building virtual communities, have few common activities. Those who do, are already organized by organic communities in work and education. Secondly, if virtual communities are built, they are generally loose affiliations whereby entry and exit are too easy to create a sense of membership and belonging, or a stable community. Moreover, their foundation in society is too small, as they are still very exclusive. Nevertheless, as it is possible to participate in a multitude of virtual communities at one time, an accumulation of community experience might arise among people frequently communicating on computer networks, perhaps compensating for the lack of strength and closeness of individual virtual communities.

B. social organization

The most important aspect of the definition of virtual communities is that they are organized without ties to particular times and places.

Hence, many people draw the conclusion that the time and space dimensions are no longer relevant to virtual communities. Some even think that there are no ties at all. Anything seems to go in the free flow of information on 'the Net'. These are serious mistakes, as we aim to demonstrate in this article. It is argued, to the contrary, that the importance of time and space dimensions is radicalized in network communication and that its function is entirely dependant on an underlying material reality. This will lead to the conclusion that the social organization of virtual communities can not exist without the social organization of known organic communities. The importance of time and space dimensions is *radicalized* in network communication as it enables its participants to select the most favourite and fastest times, and the places with the best opportunities (see Ferguson, 1989 and Van Dijk, 1991, 1993). If one visits a contemporary stock market, controlled by electronic networks, one certainly does not get the impression that time is no longer important! If one analyses the selection activity of multinational companies choosing the best building site in particular countries, one can not reach the conclusion that space is of no relevance to the global networked corporation. The same applies to virtual communities. The possibility to communicate at freely chosen times and places does not mean that the context of space and time, or material and social reality generally, can be discarded. First of all, virtual communities are as vulnerable as the technologies upon which they rely. When 'the network is down', all virtuality ends. Secondly, the basic physical and mental constitution of man is relatively unchangeable and locally bounded. In the popular idealist notions of freely flowing network communication it is forgotten that this kind of communication is also embodied. These notions, covering only one or two decades of networking, appear to wipe the millions of years of evolution shaping the communicative capacities of mankind out of existence. Biorhythms continue to work, as every European network user has noticed, when America wakes up in the afternoon. Social time is decisive for the quality of network communication too, as can be deduced from the fundamental difference in the interaction achieved with synchronous and asynchronous communication. It is possible to build communities with both types of communication, but synchronization maintains a community better. With regards to the experience of time and space dimensions among network users, it has been argued that the experience of realities in other times and places somehow remains external and is supplementary to the experience of local time and place, which remains the primary one (Ferguson, 1990). Emotions

aroused in the all-embracing network communication remain within the physical constitution of the body that produces them. Finally, and most importantly in this context, the social organization of virtual communities is built on material derived from the society 'outside'. The social structures and rules of network communication and virtual community are taken from known face-to-face or telecommunication and organic communities. Hence, 'netspeak' is flooded with metaphors and analogies from known realities and concepts, usually preceded by the pronoun digital.

SIMILARITIES IN STRUCTURE,
ORGANIZATION, RULES

Two very important conclusions can be derived from recent social-psychological research on the use of CMC in relatively small groups within organizations (Steinfeld & Fulk 1987; Walther 1992; Fulk a.o. 1992; Spears & Lea 1992). Firstly, electronic groups will resemble their organic counterparts after some time, adopting their structure, rules and identities and adding some new ones. Secondly, members of organic groups take with them, as a kind of baggage, all their rules, identities and mental states as they enter and communicate in electronic groups. Earlier social-psychological research stressed the fundamental differences between small electronic and organic groups. The main distinction was the narrowness of electronic group channels which do not allow the perception of social presence (Short a.o., 1976), social context cues (Kiesler, 1984; Rutter, 1984) or information richness (Daft & Lengel, 1984) to the same degree as organic groups.

If these conclusions are correct, virtual communities will initially be organized along the same structures and rules as the organic communities which still serve as their (re)source, background or context. Indeed, this is the most recent impression about the social functioning of computer networks. Principles of social organization approaching 'normality' can be observed in these networks. Most people think these networks undermine unequal status and relationships of power and do not need as much leadership as face-to-face or organic groups. They should release the individual from the proximal power of others and group influence. Anonymity may indeed reduce inhibition, feelings of accountability and deference to others (Baumeister, 1982; Prentice-Dunn & Rogers, 1989). However, even though one may be less aware of status differences in CMC on some occasions, this does not mean that they do not exist at all or work no longer. The absence of relationships of power is even less likely.

This is demonstrated convincingly by Spears & Lea (1992, 1994). They discovered that, under the conditions of isolation and anonymity of the individual members in CMC, the influence of the group in inducing conformity to the group norm actually increased when a group identity already existed. Under these conditions group members relied on their social 'baggage', as we have called it, more than ever. Spears & Lea (1994) also stressed the fact that CMC can boost surveillance and control as well as democracy and equality. If virtual communities show no leadership, or at least not much of it, this might also be only temporary. Presently only a small minority of messages on the Internet is moderated, censored or otherwise forced to conform (for some figures see McKinnon, 1995). There is a strange assumption among many participants of virtual communities that, most communication or discussion on the Internet does not require leadership or structure, whereas this is accepted as a matter of course in face-to-face groups. However, the 'anarchic' stage of the Internet and other large-scale public networks is very likely to cease. These media will outlive themselves if they are not able to confront the problems of the huge information overload and the overwhelming amount of trivia and junkmail which disturb any useful application. Leadership, moderation and structure are necessary, as they are in every known world or community. Moreover, just as the power of commercial interest and the market governs a large part of society in general, in the end it will also determine virtual communities, at least partially.

In actual fact, virtual communities are organizing themselves already, as is clearly demonstrated by the spontaneous creation of user etiquette, called *netiquette*. This is a set of rules of conduct on 'the Net' (see McLaughlin, Osborne & Smith, 1995). Furthermore, there is an increase in creative new forms of expressive communication, such as smiley's, graphic icons and personalized electronic signatures (see Baym, 1995). The creation of netiquette is the clearest evidence that virtual communities are real communities in the process of development.

We can now summarize our second set of partial conclusions. Although virtual communities are not tied to particular times or places, they are not relieved from time and space constraints or material and social reality in general. On the contrary, virtual communities can not exist without their resources in technology, economy, society and known organic communities. Moreover, after some time these resources will help to organize virtual communities. They will resemble organic communities in principles of social organization and simply add some new principles appropriate to the medium.

C. language and interaction

The first social-psychological research into the language and interaction in CMC emphasized the narrowness of computer network channels. The approaches of social presence, reduced social-context-cues and information richness described above underlined the effects of the lack of non-verbal signs in CMC. As any psychologist or communication scientist knows, these effects are striking indeed. However, by stressing them too much we could make ourselves vulnerable to the face-to-face bias mentioned above and become blind to the new kinds of language and patterns of interaction developing in virtual communities. These languages and patterns offer opportunities for communication not found in face-to-face communication. First of all, a whole new *paralanguage* develops as a substitute for and in addition to traditional language. Smiley's or other 'emoticons' and a host of new forms of expression emerge as witnesses to the enormous creative potential of human communication (see Baym, 1995). Secondly, *new patterns of interaction* arise in the use of asynchronous communication (the principle of the answering machine) and the new opportunities for selection and targeting in communication. All these new features are building stones for virtual communities lacking in organic communities.

On the other hand there are serious defects in communication. The paralanguage and new interaction patterns are created by conscious behaviour, whereas most non-verbal behaviour in face-to-face communication is unconscious. In other words, the former are artificial. One consequence is that, although the social behaviour in CMC is created spontaneously and contains a large part of socio-emotional and informal communication (see f.i. Rice & Love, 1987; Steinfield & Fulk, 1987; Walther, 1992), it is also relatively rational, non-personal and business-like in comparison with face-to-face communication in organic communities. Positive aspects of CMC are the creativity, informality and socio-emotional value, but, at the same time, the conscious selectivity and activity in CMC will contribute to a further rationalization, individualization and commercialization of modern society and communities.

Another defect in communication is the poor quality of discussion in virtual communities. This is a sensitive issue, as the advocates of discussion on 'the Net' praise the possibility of uninhibited discussion among many over large distances as being one of its strongest characteristics. As far as we know, the first content analyses of the discourse in discussion lists and other Internet resources are

in progress, but the results have not yet been reported. Our own impression of these discussions is that they are not very fruitful. The problems are not only a lack of leadership and moderation, and an overwhelming amount of junkmail and trivia. A more fundamental problem is that there is no need or urge either to reach consensus or to draw conclusions in electronic groups. All signs of remoteness are evident in electronic discussions (on this occasion social-presence theory appears to be valid). The overwhelming majority of 'participants' only watches, reads or listens. Some people feel the need to reveal their presence and for that reason alone send a trivial message. Real participants, ususally only a small core of the total population, stick to their positions, rehearse them and comment on others. Their positions are not integrated. In face-to-face discussions conclusions, consensus and disagreement arise continually; they seem to 'hang in the air' and every member is aware of them. One might even say that they arise too easily, as they are often invalid or unwarranted. In CMC-groups the opposite occurs. Conclusions, consensus and conflict only occur with conscious effort as a result of discussion leadership or moderation. Precisely these roles are lacking and most often rejected in CMC-discussions. We can now come to our third partial conclusion. Virtual communities are both liberated and restricted in their communication capacities compared to organic communities. Defects in the language, and interaction of communication from a distance, based on text and data only, are compensated by new forms of language and interaction which are partly superior and partly inferior to the capacities of face-to-face communication in organic communities. It remains to be seen whether sufficient communalism arises from these new capacities. This is a matter of culture and identity, which we will discuss in the following section.

D. culture and identity

Members of organic communities have many common characteristics. Organic communities embrace several spheres of life and activities. Work, leisure and social life can be combined. Activities are both formal and informal. Therefore, the culture of organic communities has a total, singular and homogeneous nature. This culture shares essential aims producing an uniformity which is recognized by the members of the community as their culture or identity. By comparison, members of virtual communities share only one or a few characteristics. These are communities of interest, choice, activity and opinion. It is beyond doubt that this specialized nature is the strongest property of virtual communities. A specialized group(age)

is able to communicate selectively without barriers of space, time and size. Within the particular group a plurality of social interests, opinions and activities can be observed. Virtual communities are homogenous with regard to their main interest and heterogeneous with regard to other interests.

One consequence of this fundamental difference between organic and virtual communities was foreseen some time ago. As early as the seventies Hiltz (1978) and Martin (1978) predicted a 'tribalization' of society and culture, no doubt inspired by McLuhan's global-village concept but transferred to a smaller scale. A multitude of electronic 'tribes' would create many subcultures which only communicate internally. This fragmentation of virtual culture and communication can actually be witnessed in the nineties. Thousands of electronic bulletin boards, news groups, discussion lists and teleconferencing groups are being created. However, fragmentation is only one side of the coin. Homogeneity is the other. First of all, we have seen that within a 'tribe' the membership can be homogeneous on some characteristics. Secondly, membership is overlapping. One can be a member of several electronic 'tribes'. Finally, mass communication media will survive; they will continue to serve as common frames of interpretation and reference, although this will no longer be realized by just one or a few media. (For the time being the television networks have maintained their positions very well, even in the land of pay-per-view, The United States; see Stipp, 1994a and 1994b). In this way common frames of interpretation and common cultures can still emerge out of a growing heterogeneity. Those who mourn the fragmentation of culture and society actually regret the decline of mass society. In network society other forms of communalism develop. Some of them are realized by virtual communities. Others by multicultural melting-pots of organic communities as well as retrograde monocultural ethnic or religious organic communities. A combination of homogeneity and heterogeneity characterizes global modernities (Robertson, 1995).

In the former section attention was drawn to the socio-emotional and informal character of communication content in virtual communities. It certainly is not only formal, businesslike and efficient. Presumably as a reaction to the narrowness of the channels and the remoteness of conversation partners in CMC, new ways of expression and patterns of interaction have arisen. These help to create the virtual cultures and identities emerging out of the material of existing cultures, a.o. organic, and go beyond them offering new opportunities for culture and identity. One obvious possibility virtual communities offer is being able to experiment with identities,

even with multiple identities. Sometimes one can participate anonymously. The use of pseudonyms or nicknames is very common in discussion lists, e-mail groups, and MUD's in particular. Participants are used to changing and playing roles, primarily gender roles. These practices leave plenty of room for fantasy and creativity thereby forging the new virtual culture mentioned above. For many participants 'the Net' is a playground. In MUD's playing is in fact the prime motive. However, these practices do make it difficult to build communities. They require a minimum of mutual trust. If some members can not even rely on the prime identity of others, every common base of understanding is threatened (Stallabrass, 1995). This would explain the outrage of the female members of a discussion list on intimate matters for women, when a certain 'Joan', claiming to be a wise, old and disabled woman, was unmasked as a male psychiatrist (Van Gelder, 1991). The experiments with singular or multiple identities in virtual communities 'give ample room for identity, but not for its fixing and structuring' (Jones, 1995:30). They are disembodied identities. So, our last partial conclusion is that virtual communities are characterized by new cultures and identities partly made of the material of old organic ones and partly emerging out of the old ones in unexpected creative ways. However, the cultures and identities produced are partial, heterogeneous and continually changing. They are perfect examples of so-called postmodern cultures.

5. General conclusions

The general questions posed in section 3 can now be answered. Virtual communities can not make up for 'lost community'. They are not capable of replacing organic communities as they can not exist without them. The virtual communities are primarily built from the social, cultural and personal material of organic communities. In itself a virtual community is unstable and too restricted in some important communication capacities which are desirable in organic community building. The virtual cultures and identities created are too partial, heterogeneous and fluid to create a strong sense of membership and belonging. At the current time virtual communities are unable to make up for a 'lost public debate'. They are still rather exclusive in social composition and the quality of discourse is poor because a real dialogue is missing. Most often, the discourse does not exceed the level of an exchange of separate distant voices on a central board.

However, virtual communities are not pseudo-communities. Nor are they imagined communities (Anderson, 1983). One should not consider them as a substitute or simulation of interpersonal communication. They appear to be an entirely new type of community emerging from network communication. New forms of language, interaction and identity are created. Virtual communities seem to be a perfect compromise between individuality and sociability in modern (network) society. They offer opportunities for information and communication, private and public discussion all at the same time. As they grow in importance they will undoubtedly contribute to the social structures and mechanisms that will maintain societies. They will not *replace* organic communities and ways of sociability, but they will be *in addition to them*, build on them and possibly strengthen them. Virtual communities will be added to the structures and mechanisms, such as money and the market, consumer culture, the sociability of a.o. ethnicity and religion and, as a last resort, the police and the judicial system, which prevent modern society from 'falling apart' – sociologists classic nightmare. Network society will be characterized by a combination of organic and virtual communities.

Comparable conclusions can be made for (the practice of) media development. The present media of virtual communities (public networks like the Internet and private ones such as corporate networks; see Table 2) will not replace the traditional media of mass and interpersonal communication. They will be in addition to them. The future information super highway will incorporate many of the traditional media such as the press, broadcasting and telephony. A cross-fertilization of all these media can be expected. Their specific abilities will be stressed. The solicitors of the Internet and other public computer networks claim that conversation and discussion are their most promising applications. In actual fact, these networks are used primarily as information sources (see Table 4). Much has to be improved to benefit conversation and discussion. This is not sufficiently acknowledged by the producers of the Internet hype. Their idealism and utopianism do not only stimulate the popularity of this 'network of networks', at the same time they hinder its further development (see Stallabrass, id. for a critique of 'cyberutopia'). The producers have to recognize that the Internet and other public networks are not special media, but in fact in the process of becoming normal ones. All the problems of traditional media return in these new media: the relationship between public issues and commercial interests; the problem of reaching a large audience and getting its participation; questions of pricing, freedom and control in

communication, access, privacy, information rights, property rights, etc. These problems can not be solved in a simple way by using new technology or by voluntarism. Even one of the strongest advocates of the Internet and public networking, Howard Rheingold, has expressed the fear that the 'Big Money' of telecommunications networks and entertainment conglomerates will control these public media one day (Rheingold, 1993b: 273-274). The relatively open and cheap ways of information and communication and the diversity of discussion are present properties of these new media and the virtual communities built in them. However, 'fragmentation, hierarchization, rigidifying social boundaries, and single-niche colonies of people who share intolerances could become prevalent in the future' (Rheingold, id.:207). Let us hope that this will not be the future reality of virtual community.

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