Psychology and the Internet: new and old psychological constructs in interpreting psychosocial phenomena

by Ruggero Ruggieri[*] and Stefania Attanasio[**]

Introduction

The use of the new technology is redefining the traditional aspects of social interaction at various levels – in production, the workplace, relationships in general- probably constituting new modalities of relating between people.
What is generally called the new economy is in fact producing such an upheaval in relationships that it is not affecting only the economic sphere but also social relations in the broadest sense of the term. In reality, the modes of relating which are increasingly evident today thanks to the use of the new technology, in particular the internet, are no longer based upon owning goods but on getting access to them (Rifkin, 2000), thus creating exchanges featuring reciprocity.
This is shown by, among others, the scientific community: the various research projects carried out, the creation of specialized journals and the widespread debate of recent years clearly bear witness to the questions and responses concerning the social impact of the new technologies in different spheres.
It is worth pointing out however that studies in this sector, mostly of Anglo-saxon origin, whatever their discipline – legal, economic, sociological etc – have dealt with the issue by recalling the classical constructs typical of the particular scientific sector. This is also true of psychology; it could not be otherwise, considering that each scientific construct is in itself an entity that offers a possible interpretation and classification of reality, so as to establish the criteria for predicting the phenomenon through the knowledge of the laws governing it.
For further detail on this point, see the various lines of study in the psychology field, the constructs referred to, the research approaches adopted and the variables taken into consideration – which for the sake of space we will not deal with since this paper has a different focus (Galimberti & Riva 1997; Bonaiuto, 2002)[1].
Examples of this discourse can be found in any work dealing with the new technology, where, along with the "usual" narration of the creation of the Internet and its development from a means of academic and military communication to a mass communication tool, there is a presentation of the factors underlying this type of activity: the concepts of time and space, place and identity, belonging and power, group and community, verbal and non-verbal communication etc. (Bonaiuto, 2002; Cardaci, 2001; La Barbera, 2001; Mannarini, 2002; Pravettoni, 2002; Palomba & Martinino, 2000; Roversi, 2001; Stone, 1995; Turkle, 1995; Wallace, 1999)[2]. At the same time there is new teminology like *cyberspace, virtual reality, non-places* (Augé, 1992; Rheingold, 1991, 1993), terms which, in our view, at least for a time, acted as real conceptual distortions, "spoiling" the understanding of the object being studied.
Think, for instance of *interactivity*, used in most writings as a categorical imperative which cannot be done without. It is a pity that this technical aspect – developed with interdisciplinary support by various authors who dealt with human-computer interaction (Henkel, 1991; Laurel, 1986, 1990, 1991; Norman, 1988; Scheinderman, 1992; Turkle, 1984), enriched and redefined by

[*] Psychologist and holder of Research Scholarship, University of Lecce.
[*] Holder of Research Scholarship, University of Lecce.

[1] Both authors offer a sound overview of the approaches that have distinguished *Computer Mediated Communication (CMC)*, highlighting the fact that psychological contributions are very often made in interdisciplinary research projects.

[2] For those involved in studies on identity, the stress will therefore be on anonymity, and on the multi-identities that each actor can assume. In these cases, new conceptual categories offer to interpret the mobility to which the construct of identity is subjected, such as 'telematic chameleonism' (Stone, 1995; Turkle, 1995), 'telematic skin' (La Barbera, 2001), etc. What is interesting in our view is to discover how these conceptualizations are affected by the original source, i.e. identity. In contrast, in a world organized by nicknames and the *pseudo-anonymous*, other studies focus on trust in internet interactions (Galimberti Galimberti, Gatti, Cantamesse, & Mauri 2003). Our apologies to the reader for now dropping this topic, since we only intend to discuss the differences in research approaches and the use of the constructs.

communication studies (Rafaeli, 1988) – has seen its social potentiality rather neglected[3]. If one wanted to construct an interactive site, the first thought would be not only for the contents but also for their distribution, their visibility (colours and banners) and for tools that can create different forms of interactivity (chat room, forum, newsletter, etc); one would hardly think, however, of how to support the interactivity not so much on the technical level but from the social point of view. It would be enough to simply distinguish between interactivity and participation, or more generally, it would be enough to place, alongside the technical aspect, the psycho-social dimension, for the new potential of the phenomenon to be understood, and to be used to produce different lines of research[4].

In our opinion, also the expression "virtual reality" moves in this direction: while on the one hand this term clearly refers to the fact that it is possible to perceive-act-feel inside a man-machine-environment system - where the machine, in the broadest sense of the term, is simply a medium (Gallarini, 1994) – on the other hand, the contradiction of terms in the expression has opened a long debate on whether "virtual reality" should be considered equal to the real thing. In this case, too, one finds the epitome of sectorial literature, where different positions confront each other referring to the different disciplines they belong to and using different theoretical models (Carotenuto, 1998; Di Maria & Cannizzaro, 2001; Di Maria, Lavanco, Novara & Cannizzaro, 2003; Jacobelli, 1998; Mantovani, 1998; Maracchia, 1998; Mettieri & Manera, 2000; Parisi, 1998; Peirce, 1998; Rheingold, 1993, to cite just a few).

It is not the purpose of this paper to give an assessment on the issue, but it is useful to say that if one simply refers to the contributions of general psychology and clinical psychology, with their respective applications, the case can be closed with the verdict: real= virtual[5].

What we want to underline are the consequences of this issue in other research fields, like in the studies on the concept of community. Although many authors have widely discussed the "pitfalls" present in the concept of community, revealing that today this is not very useful in interpreting some aspects of the global age (Bagnasco, 1999, 2002; Gelli, 2002; Mannarini, 2002)[6], it is misleading to associate *virtual vs. real* with the term community. Consequently, on the one hand the real community retains all the features typical of the traditional concept (territorial boundaries, sense of belonging, influence etc.), on the other hand, since the virtual community is not specified with the same constructs, it is considered by some to be a non-community. Therefore, the virtual/real contrast repeats that of the virtual/real community.

Now, the aspect we wish to stress is yet again the choice of research constructs and how far they are able to satisfy the criteria of validity and reliability concerning the technological phenomenon of the Internet.

In analysing the literature we have found, though in different ways, a similar idea in the work of the well-known sociologist Castells. Stating clearly that it is necessary to understand "the new models of social interaction that spring from the use of the Internet" (2002, p.118), he criticises the distorted outcome of some studies due to an ideological approach that makes them scientifically obsolete[7]. The proposal made by Castells (1996) is therefore to work towards identifying new constructs - acknowledging that we are faced with something new which at times makes it

---

[3] Galimberti e Riva (1997) warn against the conceptual distortion that many constructs lend themselves to when interdisciplinary exchanges start. On the issue of interactivity, the authors not only state the need to achieve a conceptualization that contains all its disciplinary variability, but they also understand the limits of such a process when they see the flexibility of the concept reduced, ruling out controls on the experimentation of the medium. In this case, then, the book is considered outside the relationship with its user (the reader) and classified as non-interactive.

[4] The same leap of logic seems to characterize the spread of digital TV, where what is offered technically, seems to be divorced from it possible users.

[5] See the studies on perception, the memory, and also those on the construction of reality (Belardinelli, 1986), as well as defence mechanisms already identified by Freud.

[6] It is interesting to see that some authors try to carry out cultural mediation so as to open the way to the new constructs. In particular, Mannarini (2002) centres his paper on the concept of a 'community of relationships'; the relationship therefore becomes the dominant dimension, a bridge between the various conceptualizations of the issue.

[7] On the other hand, in the introduction to his famous book, Khun (1962) clarified in detail that the training process of every single scientist influences his entire scientific output due to his loyalty to his school.

essential to recognise the pointlessness of certain old theorizations that we have used for years – instead of trying to modernise the existing ones[8].

In the same direction is the work of Burman (2002) who, referring to the work of Perez (1983), Tapscott and Caston (1992) and Foster and Kaplan (2001), considers *the Internet a new Leviathon,* capable of generating *new paradigms of thinking and business.* To quote the author, "[…] in terms of business, the Internet has represented a very important discovery. The problem is that the implementation of the tools offered by the Internet still has to generate a precise redefinition of the concept of business, partly because this requires more complex tools and methodologies than those used in traditional business, and ***partly because it reveals both the lack of culture and an inadequate knowledge of the traditional business world as we know it.*** To develop the parallel with the discovery of oxygen: just as there is something wrong with the idea of science assigning such a fundamental role to this discovery, ***in the same way we can say that there is something wrong with the idea of the Internet assigning such great value to technological advances while the real problem is that we need a new vocabulary and new concepts***. Let us suppose for a moment that after the development of the Internet, the business world "discovered" the Net in a scientific sense at an exactly identified moment in time, then there was no time to identify the fact and assimilate the theory. Confusion and misunderstanding were inevitable. In fact, "only when all the conceptual categories related to it are ready in advance, in which case the phenomenon would not be of a new kind, the discovery of the thing and the discovery of what it is can happen together, with no effort and at the same moment" (Burman, 2002, p.9)[9].

Echoing Khun's teaching, Barman therefore makes an attempt to identify the criteria underlying what he calls the "technological paradigm" based on the clear awareness that "the Internet's great success is not technical but in its human impact" (p.16). This idea naturally gives rise to the question: how can we approach the "technological paradigm"?

The answer can be partly found in the works of Taylor (1911), when he defined the scientificness of processes not so much on the basis of epistemological criteria as on the pragmatic orientation of the process, *rationally* inspired. Taylor's approach partially satisfies the question posed, not just because the paradigm of rationality has now been replaced by that of complexity - much discussed nowadays, based on the principles inspiring Chaos Theory[10]- but more because it seems to present a contrast between scientific research paradigms and intervention paradigms.[11]

In contrast, our hypothesis is that it is possible to approach the "technological paradigm" by shifting the attention onto the modes of fruition of the medium. In other words, one must start from the forms of use that define the use of the medium in order to understand what possibilities for development are related to it. In this way the Taylorist dichotomy is overcome and the premises are laid for a methodology of intervention that, starting from the phenomenon, anchors the construction of research paradigms to it. New scenarios for scientific research are thus opened through the development of constructs suited to understanding it.

This is the direction of our work, which is a study of the models of fruition[12] generated by the concept of Community and the scientific constructs associated with them, on the basis of an explorative study which took as its protagonists the users of the biggest Italian virtual community,

---

8 On the concept of community it is possible to find over ninety definitions referring to variants throughout the last century. It is therefore clear how difficult it is to operationalize a concept that seems in certain respects to present itself in a different way, taking different variables into consideration.

9 The italics and inverted commas are in the original text; the bold italics are ours.

10 The failure of linear models of knowledge has led various authors to use the tools of physics, inspired by Chaos Theory. These are mathematical models based on algorithms able to identify a determinism on seemingly random distributions. In this way, what is called casual is actually the result of variations in forces which can be adequately calculated, and therefore predicted.

11 As a matter of fact, the polarity identified by Taylor is a typical expression of that period. Most people will remember in fact that a distinction used to be made between applied and pure research.

12 'Models of fruition' refers to the psychological dynamics underlying the behaviours provoked by the community context. A careful reader will notice that models of fruition are not a psychological construct; in fact, they represent a methodological objective. Therefore, in this discourse, the concept of community is a pretext for constructing criteria that can verify the psycho-sociological impact of the new technologies through the identification of use behaviour.

Digiland[13]

2.Theoretical research models: Social Representations and Collusion

The identification of models of use associated with the concept of community is made possible, firstly by the construct of social representations (Moscovici, 1988), since they are systems of knowledge designed for the performance of actions and are strictly tied to the social collocation of the individuals in the different groups.
What was recognised by the scholars of social cognition was the close link and the interdependence between the individual's own cognitive activity and the social thought of this activity. The continuity between these two poles was recognised as a symbol, and as a model that enriched and structured the social representation (Forgas, 1989; Moscovici, 1988; Tajfel & Turner, 1986)[14].
This symbolic dimension can be explored with the construct of collusion as the tool of genetic and motivational interpretation of the social representation (Carli, 2000), based on the affective categorisation of realty, as shown in the studies of Matte Blanco (1975) and Fornari (1979).
In this sense, the functions of social representation and collusion are of interest in this paper since they enable the models of fruition evoked by the concept of community to be identified, based on the fact that:
a) through the representations of the subjects interviewed one can infer their modalities of relating to the contexts of reference (in our case, therefore, virtual and real communities), helping to co-construct them using a practical, everyday way of acting.
b) through collusion, the symbolic nuclei structuring the social representations in question can be identified, so as to understand the whole variability of meaning expressed by their actions.

3. Methodology

From the methodological point of view, we started from the assumption that social representations and the deriving collusive processes can be traced in the language utterances of the subjects being studied. We therefore proceeded to conduct interviews and to analyse them with an inferential process, based on the clusterization of the *headwords* (lemmas).
This operation was carried out with two criteria in mind: *co-occurrence* and *recursiveness*. In other words, with the help of T-Lab software we took apart the textual corpus, re-organising it into "discourse fragments" devoid of syntactic and thematic connectors and the subjective styles of the person organizing the discourse. This was possible thanks to the statistical procedure of analysis of multiple correspondences between single lexemes and segments of text.
The lexemes (sets of words deriving from the same lexical root) have a high polysemic value inthe sense that they can convey multiple and infinite meanings from the symbolic point of view. In this sense they are authentic key words.
The analysis begins with the researcher attributing a meaning to the *relation* between words belonging to different classes of utterance, keeping in mind the mind's bi-logical functioning; in other words *the relation between words identifies the social representation and the collusive process* underway.
Therefore, to be consistent with the decision not to define *a priori* all the dimensions useful for the research goal, a *data-driven* methodological approach was adopted: consequently the researchers' *theoretical sensitivity* was relied upon in the task of attributing meaning to the data, using *abductive* logic (Ginzburg, 1986).
The epistemological paradigm adopted is that of constructivism, according to which reality is a mental construction deriving from social processes and personal experiences. In this sense,

[13] We wish to thank Wind, and in particular Donatella Lauro for making the research possible.

[14] Moscovici (1988) wrote: «The rationale operating in this process makes neutrality impossible, requires that every individual and every thing is assigned a positive or negative value and is given a position in the hierarchy. When you classify someone as neurotic, Jewish or poor, you are not simply making an observation, you are expressing a judgement, you are stigmatizing that person. With the symbol itself you convey your 'theory' on society and on human nature» (p.267).

therefore, reality does not respond to criteria of true/false, but is offered in all its variability. The interaction between researcher and object of study is a fundamental premise for the reaching of a new reality, redefined on the basis of a hermeneutic/interpretative activity – inferences based on models – so as to entirely capture its richness (Manetti, 2002).

3.1 The unstructured interview via e-mail: the process of negotiating the response modalities as a guarantee of the validity of the tool

The unstructured interview was thought to be the most suitable and consistent tool to collect the kind of data required for the type of analysis (Corbetta, 1999). Relevant factors being lexical distribution and co-occurrence of vocabulary, it is important for the interviewee not to be guided either by pre-established topics or by the content of the questions and the way they are presented. What was favoured was therefore for the interviewee to freely organize his/her discourse and to be free of any form of influence.
Both the way of administering the interview (via e-mail) and the way of responding were negotiated. In fact, the participation of the research subjects envisaged the following commitments:

- to write as much as possible, explaining and giving reasons for one's opinions, in the way thought most fitting;
- not to communicate with any other members of the community during the research;
- to ensure the unity and uniqueness of the responses by arranging not to be disturbed or interrupted;
- to respond within 48 hours of receiving the questions.

At the same time, the interview via e-mail was the means to establish *a relationship* with the subjects. Being a communication tool typical of the virtual community guaranteed the process of immediate data access between the researcher and the object of the study, based on the *continuity of communication rationale* used by members of Digiland. [15]
The following topic areas were offered to the subjects being interviewed, as a stimulus to the discourse output:

- What is your idea of the virtual community? Could you tell us a positive and a negative experience related to this? What is your view of its possible development?
- What is your idea of the real community? Could you tell us a positive and a negative experience realted to this? What is your view of its possible development?[16]

3.2 The sample

The sample, of the non probabilistic type, was composed of a total of 33 subjects all registered with Digiland. The subjects were balanced according to the following variables:

a) sex;
b) age (a=25-35; b=35-45; c>45);
c) communication channel (*Chat, Forum, Tribe*);
d) duration of membership of Digiland (a=0-12 months; b=13-24 months; c>24 months);
f) membership of a different real community (metropolitan area, town, village)[17].

The use of the *snowballing* technique (Morse, 1989) made it possible to constitute the sample. In fact, this recruitment system enables the sample to be formed thanks to the cooperation of the first

[15] The interviewees made a 'self-attestation' of their own identity. Some studies on the new technologies consider a response given by an anonymous subject to be unreliable. For the approach adopted, anonymity is a characteristic of the model of fruition.

[16] There were six questions altogether and they were asked in a linear sequence. Considering that the data collection took place between June and July 2004, while some interviewees were on holiday, there were no drop outs since the subjects advised and agreed with the researchers on the delay in sending the responses. We considered this type of behaviour a sign of successful negotiation between researcher and interviewees, as well as of the validity and reliability of the e-mail tool in interviews, also made possible in our view by the sampling technique.

[17] Our initial hypothesis is that each individual has a geographical location: s/he belongs to a community. Therefore s/he is able to fulfil both forms: VC and RC

participants in the research, who identify others belonging to their own network of contacts. In the case in question, by contacting the Head of the Digiland project at Wind we were able to identify a leader for each channel (Chat, Tribe and Forum); these triggered the construction of the sample on the basis of the characteristics required.

4.The results of the data analysis

The interviews were brought together into a single textual *corpus*. The dictionary was then constructed for the analysis of the data and at the same time the pronouns, auxiliary verbs, conjunctions, prepositions and the word “community” were excluded, the latter because it was the object of our analysis.
The lexemes subjected to statistical analysis of multiple and factorial correspondences had a minimum frequency of 6; the statistical analysis therefore produced four *clusters*, with a different percentage weight, as can be seen from the following figure (Fig.1)[18].

[18] This seemingly technical information actually has a high methodological content. In fact, a variation of the procedures indicated determines a different output due to the algorithm of calculation used by the software.

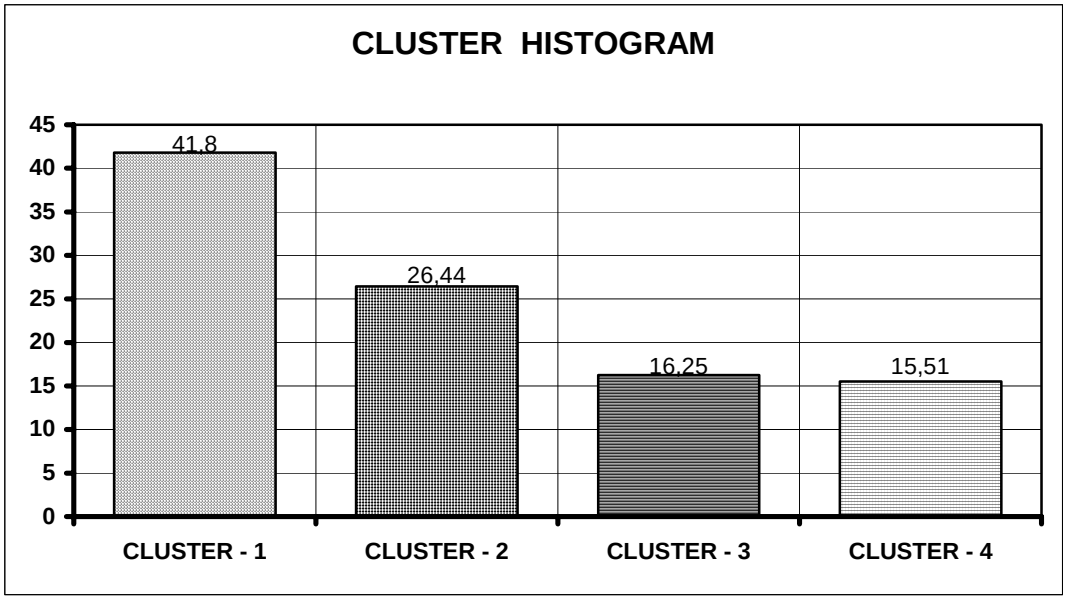

CLUSTER HISTOGRAM
45
40
35
30
25
20
15
10
5
0
41,8
26,44
16,25
15,51
CLUSTER - 1
CLUSTER - 2
CLUSTER - 3
CLUSTER - 4

Fig. 1

The four clusters identified constitute the different representations of the concept of community organized by different collusive processes, which orient the subjects' attitudes into the specific social representations of the Community. In other words, each representation determines different behaviours.
As we have already said, such representations can be identified thanks to inferential activity on the lexemes of each cluster, excluding those with a *χ-square* < 5.02 (accepted level of significance).
The words in italics below are the lexemes present in the four groups.

4.1 Cluster I

In this first group the first word, *virtual*, is followed immediately by *real.* The lexemes *exchange* and *world* follow.
What emerges therefore is a representation of the concept of community in which there is no difference between the real and the virtual community. The virtual and the real community are the same thing, a place where one *has a transient attachment,* where one can *drop in* and *leave opinions* through the discussion with the various *personalities*. This discussion is not without difficulty but it generates *feelings*, at times of *friendship* when one is able to build an affinity with others, at times of *hatred* when there are such shortcomings that no relationship can be constructed.
These dimensions therefore give rise to various actions, such as *ignoring* and *believing,* in order to vet the *contact* established with the other, which is never mechanical.
In this sense, the community is the means by which one *achieves relationships* that support the process of *knowing* the world, the reality, and also through the *screen*, a tool that helps to break down mechanical tone of relationships and to build a system that serves to *understand* the other, the new, the different.
The social organizer of this representation of the community is therefore the **choice** made about the capacity to look at the other for what s/he is and for what s/he can bring into the relationship. The other is never an object of attack, is not treated like an enemy, but like a *person* who is always and in any case given an opportunity to be together, to *support* the action.
Recognising the value deriving from relating to others engenders a sense of empowerment, due to the power to choose.
This dimension of power allows us to consider ourselves people that are alive, to throw off all anonymity and all indifference; in a word, to exist.

4.2 Cluster II

Here the idea of community is mainly circumscribed and enclosed in the family nucleus.
The action of going out of (*moving*) the family circle can only be accepted by a *child* (in Italian *bambino*, from the Latin 'bambo', foolish) who is not properly equipped to understand that beyond the known there is the *extraneous*, people of a different kind.
As a result, one can only *believe* in one's own *group,* in the *parent* as the means of developing one's *identity* and one's existence (*Racism*).
Consequently, it is pointless pursuing any mixing/meeting with those who are different; this would entail a person who wants to remain closed and protected asking to be invaded.
The *local component*, the *family*, however, must be able to *change, open* the *door* to the *new citizen,* for example through *voluntary work,* i.e. through actions that allow one to meet what is different, all the while responding to widely accepted and even desired social conditions.
The representation of the concept of community is therefore **based on the homegeneity and uniformity of its members**, above all in its response to the other. The other, with his history and his values, is a stranger, an outsider, seen as an imposition and a danger. The only way to accept his diversity is with respectability, that is, through attitudes that respect social habits, which nobody can criticise. The example of this behaviour is *voluntary work*.

4.3 Cluster III

The idea of community that emerges from this dimension is tied to the clash of diversity in relating to others. In fact, the first lexeme *user* is associated with *accepting*. The verbs *write, answer, explain* follow, accompanied by the word *sensitivity*, to indicate the difficulty of being with others

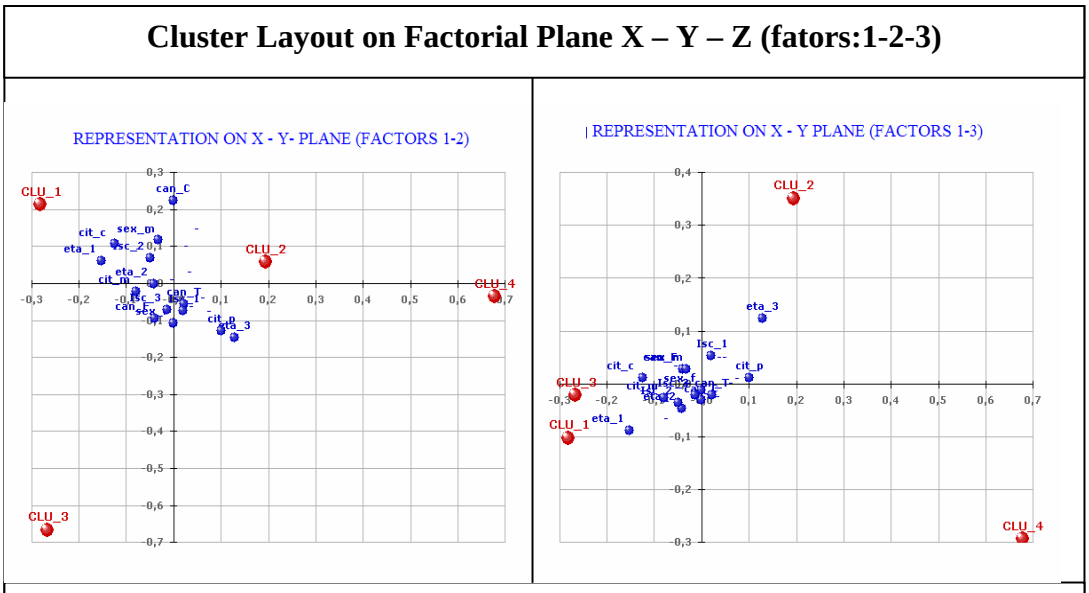
who are different from us and of having to be careful of the way of behaving when relating.
The lexemes *man* and *woman* associated to *language* point to the considerable difficulties in mutual understanding between people who are completely different, not only in their physical characteristics, but also in up-bringing, education, role in society, etc.
Consequently the community is a place where relating is an occasion for meeting but also for clashing; in fact it is possible to *reach* the other to *embrace* his arguments, as well as *improve oneself* and *acquire* new knowledge. Similarly however one needs to *defend oneself* from *harassment,* with *courage,* overcoming *shyness* and trying to *start coping with* insults by *behaviour* that calls for *respect.*
Therefore, the **dimension organizing this social representation is the dialectic of conflict** through the assertion of oneself and one's own ideas in relation to those of others. **The rationale is one of compromise** more than the negotiation of one's position. The *focus* here is on the other as a possible enemy from whom to defend oneself.

4.4 Cluster IV
The first lexeme present in this cluster is *belonging,* immediately followed by *territory, security, common, interest*
The concept of community is therefore tied to the local area (territory from the Latin 'materia'), i.e. having material roots; in this sense it helps to construct a feeling of security, being also the product of common interests (*cum* = together; *munus* gift; *moenia* defence), or of mutual relations based on supporting others according to one's own needs, as in a possible enemy attack.
The community is the place where one *lives* and in which one *grows* up, *goes to school*, where one *stays*, where one plays out one's daily routine by going to the *local bar.* The community is therefore identified with the *town* where the *services* and *streets* are a tangible sign of the *culture* of the inhabitants. It is a place where one can satisfy the *needs* that are typical of everybody's life: *work* and *home.*
All the words comprising this cluster therefore anchor the concept of **community to stereotyped dimensions**, which do not, in themselves, entail relating to others. All the word serve to defione objects. Also *initiative* and *participation* are anchored and associated to **a daily routine**, typical of everybody's life, comparable to the equation **territory = home = work = belonging**.

5. The models of fruition evoked by the concept of Community: from Belonging to Supporting

Looking at the layout of the clusters on the factorial space and checking the values of *Chi2*, one can see the level of significance that each cluster has for every single axis of the cartesian system.

Cluster Layout on Factorial Plane X – Y – Z (fators:1-2-3)



This information therefore enables a more thorough examination to be made of the dynamics at work in the various representations. In fact, by crossing the data related to the single clusters and keeping in mind their different contrasts in the factorial space, it is possible to infer other kinds of action to support the understanding of attitudes generated by the different social representations. In other words, they enable the models of fruition evoked by the concept of community to be identified.
The dynamics between clusters therefore opens the way to the hypothesis that the social representations contained in quadrant A (Fig.4 and Fig.5) are characterized by modes of relating that *deny the other* as having value. In this sense, these kinds of attitudes are set so as to serve **belonging** and the role it plays in the context of reference, both in relation to objects (*territory*) and to people (*family*). Consequently, the possible actions are those that are *automatic*, typical of the system's internal rationale, actions that do not envisage either change or assimilation of any information different from what already exists in the history of the family history or of the local area. Attitudes that consolidate belonging are asserted, based on the logic of the *in-group* and the *out-group*. These are attitudes based on a social motivation of an affiliative type (McClelland, 1985). The only different perception, the only possibility of identifying elements unlike oneself is the domain of objects, not of people (*Factor 3,* In-Out, Fig.5).

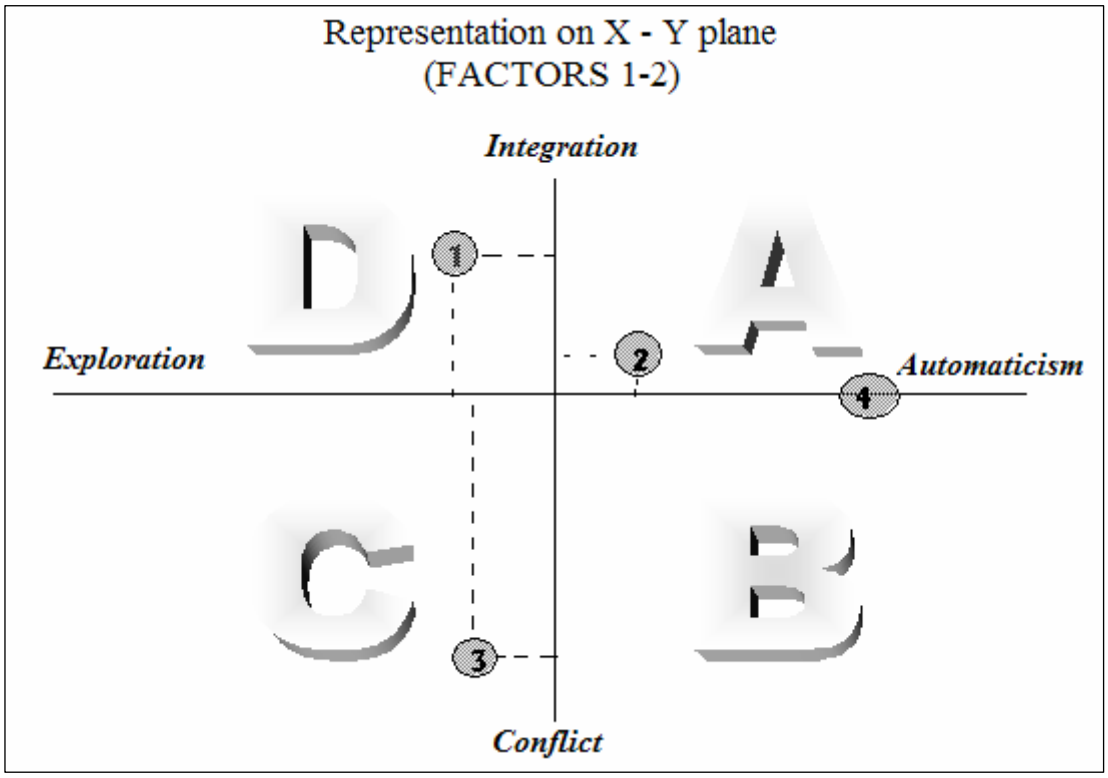

Representation on X - Y plane
(FACTORS 1-2)
Integration
Exploration
Automaticism
Conflict
D
A
C
B
1
2
3
4

Fig. 4

On the other hand, the denial of the other is in contrast with the meeting with diversity, the desire for knowledge and *exploration*. This however is organized in different ways in the two clusters (1 and 3) that are contrasted for the second factor (Fig.4). In fact, in cluster 3 diversity is an issue of contention: relating to others is recognized as being indispensable, and is therefore avidly sought. At the same time, relations seem to be anchored in attributing value, not so much to the object exchanged as much as to the people exchanging. On this point, the dynamic is typical of a 'quarrel', where the other is seen as an obstacle to one's own affirmation, as something that might reduce the value of one's identity. The underlying motivation is to be seen in terms of power (McClelland,1985). This type of behaviour is typical of the negotiation and compromise characterizing price dynamics or in general the various kinds of transaction. The logic at work is that of "I win you lose" (Arielli & Scotto, 2003; Castelli, 1996; Dixit & Nalebuff,1993; Harvard business Essential, 2003; Rumiati & Pietroni, 2001).
In contrast, cluster 1 presents some form of negotiation in relationships which however are affected by the utility that each action has for the individual actors. In fact, while the negotiation processes are activities that allow the creation of new value compared to the initial value, i.e. they are actions that enable new meanings to be generated which previously did not exist in the exchange, (Arielli & Scotto, 2003; Castelli, 1996; Rumiati & Pietrosi, 2001; Harward business Essenzial, 2003), quadrant D (Fig.4) is characterized by actions constructed on the subjects' **transient attachment to** certain objectives. **Transient attachment behaviours are those based on the extemporary nature of sharing objectives** in the light of personal interests and/or of the single criteria of the utility that each subject can obtain from a certain situation; it is **according to his self-interest that the subject "negotiates" his co-presence in that action**. Here, the underlying motivation is that of success (McClelland,1985).

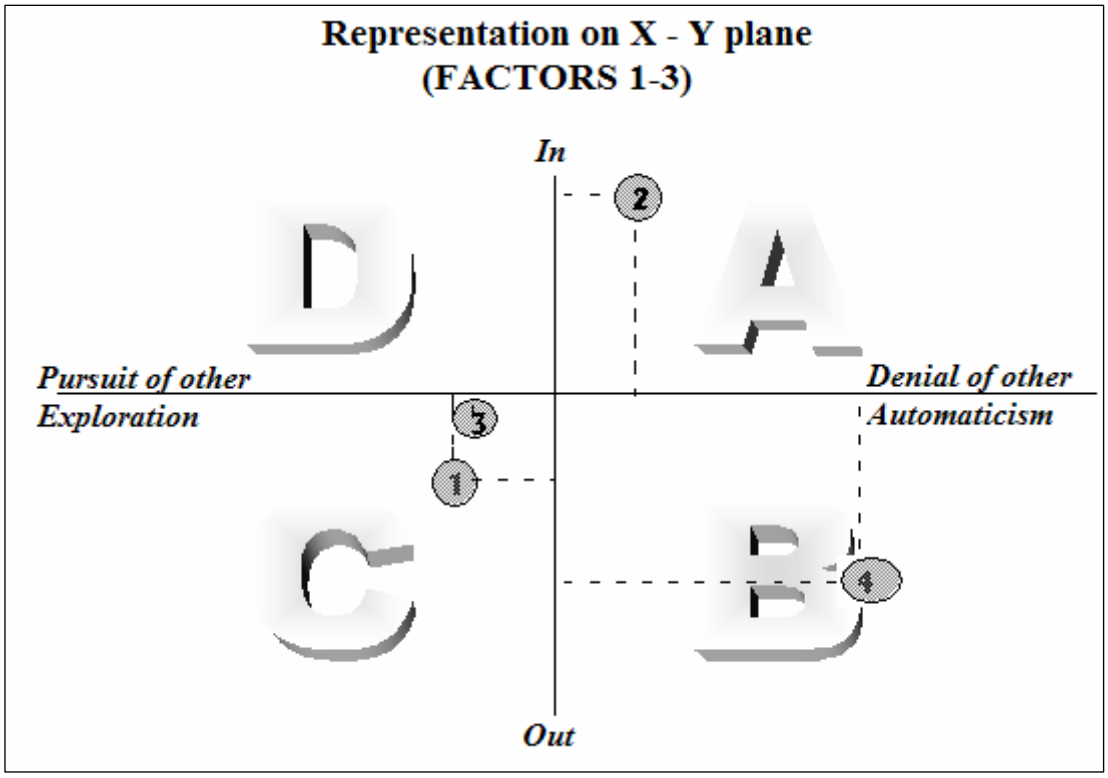


Fig.5

In this sense, what is not considered suited to one's purpose is discarded as if non-existent; it is, in other words, ignored and not attacked, as happens instead in models based on belonging. This perspective involves a partial triggering of the negotiation process, seeing that transient attachment is closely tied to satisfying one's need, therefore neglecting a possible reformulation of the need according to the relationship with the other (Arielli & Scotto, 2003; Castelli, 1996; Rumiati & Pietrosi, 2001; Harvard business Essential, 2003).

Concerning the variables used in the research, none of them showed significant values in the *Chi2* test, which means that none of the variables taken into consideration influences the generation of the above clusters.

6. The psycho-social impact of the new technologies. Some concluding remarks.

The results of the research carried out offer, in our opinion, various points for reflection related to measuring the impact of the new technologies in a range of fields. The 'transient attachment' model of fruition in fact lends itself to the understanding of some psycho-social processes.
An example can be found in an article printed some time ago in the daily paper "La Repubblica", which explained why firms lose young newly-hired employees. Nicola Bertin, an Assores councillor – the association of human resources consultancy and selection businesses - declared: «[...] businesspeople are all complaining: they protest because the young people who come into the firm don't develop any loyalty to the company and when there is the opportunity, they don't think twice about leaving»[19]. The article goes on to denounce on the one hand the employers' lack of competence in managing human resources, and on the other, the degree courses in Psychology of Work and Organizations, which do not teach the laws governing the employment market.
Apart from Bertin's arguments, in our opinion, the discourse can be approached in a different way. The following question might help to understand what we are going to say: why have the rules of the job-market changed? The answer lies in the debate that preceded 'the Biagi law', when firms were asking the government for labour flexibility so as to guarantee their competitivity on the global market. Well, our argument is that the employers see flexibility in a self-referential way, purely as a tool for the reduction of labour costs. This kind of approach does not take into account the social process set up by 'transient attachment', which makes it necessary to recognise the duality of flexibility, i.e. it makes it necessary to recognise the interests and goals of the worker, which are not to be seen as being definite and permanent, but highly variable. In other words, firms find themselves having to renew/innovate the way they relate to their workers, who become resources just as scarce as external customers.
When this does not happen, flexibility becomes a boomerang which instead of guaranteeing competitivity, develops a sudden loss of energy with consequent delays in business. In the previous section we underlined how in 'transient attachment' one tends to ignore what is not the object of interest in the exchange, instead of attacking it as happens in 'belonging'. This same characteristic also seems to be affirmed in production processes. In fact, conflictuality taking the form of strikes and demonstrations are greatly reduced compared to the past; instead, employees leave their jobs in search of another job better suited to their interests and to their desire for self-realization.
The brain-drain from our universities in our view tells a similar story, when the interest of the researcher is blocked within a system that denies him/her any chance of realization (Gelli, Mannarini & Ruggieri, 2004). Think for instance of the figure of the PhD student and how the rules governing it vary from university to university. In some of them, the PhD student is under a series of constraints that make his/her activity incompatible with any other form of work; in others the constraints only concern certain activities and income caps; in yet others there are no constraints at all. At this point there are questions that demand answers: isn't the PhD studentship supposed to be a scholarship? Isn't it a qualification of specialization? Why is it treated as if it were a permanent job? And then, one could also ask: who says that studying and specializaion are incompatible with work?
The same direction is taken in the well-known "project contracts" which today control the activity of research scholarship holders. As the term itself says, the work is paid on completion of a project. It is a pity that the universities translate the project into an exclusive employment contract. It is interesting to notice that the "VAT–people" have always worked per project; and yet nobody has ever told them that they are subject to incompatibility. Try telling a lawyer that s/he can handle only one case, a doctor that s/he can have only one patient, a firm that it can have only one customer,

[19] The article is taken from www.opsonline.it/?m=show&id=1366.

an architect that s/he can handle only one design.
When this happens, then the relationship is set up on a model of 'belonging' which, as such, requires affiliative motivations and an exclusive relationship (*in*/*out group*).
The examples here could be endless and could also concern the consultancy sectors, i.e. those in the job-market with high mobility.
However, to complete the discourse, we would like to keep the attention trained on the examples we have given concerning the young person and the job-market. In fact, the PhD student, the scholarship holder and the newly-hired employee are all young people working for the first time. What is the relationship then between age and model of social exchange? Our research data shows that the age variable has no influence in structuring the exchange model. If this is true, then access to society, to say it Rifkin's way, clearly does not depend on age.
We are therefore faced with a reversal of the logic ruling social relations. While in the past children were with children (kindergarten), teenagers with teenagers (school), adults with adults (work) and the old with the old (aged care centres), today with the new technologies none of this is so definite and everybody can be with everybody else. Suffice it to think of children, of their use of mobile phones and computers, to understand that they have access to society and are able to act in it, interacting, exchanging information etc.
So this is the answer to the mystery of online paedophilia and why this phenomenon is back on the agenda of the media, the police, psychologists, etc. It is interesting to notice that the reasoning that aims to fight this phenomenon remains tied to classical models based on the division of the society into age categories and to protectionistic policies that deny the minor the right to choose. In our opinion, alongside O.L.D.Pe.PSY programmes, which work to identify the paedophile's criminological and digital profile (Strano, 2003), there should be pedagogical and psycho-educational programmes in schools to support the construction of the minor's competence to recognise danger on the Net, be it paedophilia or other forms.
Today, power therefore becomes a variable that is the result of competence in the use of certain tools enabling one to have access to society. Power is no longer tied to age. On this point, much of the work that we carry out in schools – with those called "difficult cases" – has enabled us to understand the teachers' difficulties in dealing with this new social organization when they base their teaching activity on the power of their position and their age, rather than on the use of competencies as a tool of convergence of interests - as 'transient attachment' have it. In fact, the fruition of competences would enable the usefulness of the teacher-pupil exchange to be constructed and tested each time according to the object (history, maths etc), triggering cooperative models that recognise the power of both actors: the student's power of demand, of his/her competencies, equal to the teacher's power of competence.
Returning to the labour market it is obvious that firms have difficulty drawing up human resources management policies that take into consideration the skills of the newly-hired both for wage levels and for the specific work activities. It seems to have been quite forgotten that the knowledge-based economy needs *knowledge workers*, who, armed with the power to use their own knowledge, choose each time whether to take this job or that one, as has been clearly shown by Butera (Butera, Donati & Cesaria, 1997).

The discourse could continue with reference to other categories such as marketing, organizational models in firms, politics, participatory democracy, social cohesion, etc., but we will postpone this to other publications. We will instead conclude by drawing attention to Khun's message, mentioned in the introduction to this paper: the wrong research paradigms lead researchers to ask themselves the wrong questions. By saying this we certainly do not want to seem arrogant and over zealous; rather, we would like to invite the reader to recognise that the object of research (the internet and the new technologies) is changing faster than we can conceptualize and theorize it. Our proposal is to think of models of fruition as the methodological objective that can guide research work.

References

Arielli, E., & Scotto, G. (2003). *Conflitti e Mediazione*. Milano: Mondadori.

Augé, M. (1992). *Non-lieux: Introduction à une anthropologie de la surmodernité*. Paris: Seuil.

Bagnasco, A. (1999). *Tracce di comunità*. Bologna: Il Mulino.

Bagnasco, A. (2002). Il concetto di comunità utilità e trappole. In B., Gelli (Ed.). *Comunità, Rete Arcipelago* (pp.37-42). Roma: Carocci.

Belardinelli Olivetti, M. (1986). *La costruzione della realtà*. Torino: Bollati Boringhieri.

Bonaiuto, M. (2002). (Ed.). *Conversazioni virtuali*. Milano: Guerini e Associati.

Burman, E. (2002). *Internet Nuovo Levitano*. Milano: Etas.

Butera, F., Donati, E., & Cesaria, R. (1997). *I lavoratori della conoscenza, quadri, middle manager e alte professionalità tra professione e organizzazion*e. Milano: Franco Angeli.

Cardaci, M. (2001). (Ed.). *Ciber-Psicologia*. Roma: Carrocci.

Carli, R. (2000). *Le rappresentazioni sociali e la collusione*. Retrieved from: http/www.spsonline.it.

Carli, R. (1990). Il processo di collusione nelle rappresentazioni sociali. In *Rivista di Psicologia Clinica*, *3*, 282-297.

Carotenuto, A., (1998). "Realtà e verità", in J. Jacobelli (Ed.), *La realtà virtuale* (pp.40-45). Bari: Laterza.

Castells, M. (1996). *The Rise of the Network Society*. Oxford: Blackwell.

Castelli, S. (1996). *La mediazione*. Milano: Raffaello Cortina.

Corbetta, P. (1999). *Metodologia e tecnica della ricerca sociale*. Bologna: Il Mulino.

Di Maria, F. (2001). *Psicologia della convivenza*. Milano: Franco Angeli.

Di Maria, F., & Cannizzaro, S. (2001). (Eds.). *Reti telematica e trame psicologiche – Nodi, attraversamenti e frontiere di Internet*. Milano: FrancoAngeli.

Di Maria, F., Lavanco, G., Novara, C., & Cannizzaro, S. (2003). Artefice ed artificiale: psicologia del 'creatore dei mondi. In *Psicotech, 2*, 19-45.

Dixit, A., & Nalebuff, B. (1991). *Thinking Strategically: The Competitive Edge in Business, Politics, and Every Day Life*; New York/ Norton & Company.

Forgas, J.P. (1989). *Interpersonal Behaviour: The Psychology of Social Interaction*. Pergamon Press: Sydney.

.

Formentini, C. (2000). *Incantati dalle reti*. Milano: Raffaello Cortina.

Fornari, F. (1979). *Fondamenti di una teoria psicoanalitica del linguaggio*. Torino: Bollati Boringhieri.

Foster R.N., Kaplan S., (2001). *Creative Destruction*. McKinsey & Company: Currency Publishing.

Galimberti, C., Gatti, F., Cantamesse, M., & Mauri, L. (2003). La fiducia nelle interazioni in rete: dall'artefatto all'interlocutore. In *Riassunti delle comunicazioni al V Congresso Nazionale AIP*, Sezione di Psicologia Sociale.

Galimberti, C., & Riva, G. (1997). *La comunicazione virtuale*. Milano: Guerini e Associati.

Gallarini, S. (1994). *La realtà virtuale*. Milano: Xenia.

Gelli, B., Mannarini, T., & Ruggieri R. (2004). Le culture professionali dei docenti universitari. In B., Gelli & T., Mannarini (Eds.). *La comunità universitaria*. Milano: Edizioni Unicopli.

Gelli, B. (2002). (Ed.). *Comunità, Rete Arcipelago*. Roma: Carocci.

Ginzburg, C., (1986). *Miti, emblemi e spie*: *Radici di un paradigma indiziario*. Torino: Einaudi.

Harvard Business Essential, (2003). *Negotiation*, Boston Massachussets: Harvard Busines School Press.

Henckel, P. (1991). *The elements of friendly software design*. Alemeda CA: Sibex.

Jacobelli, J. (1998). *La realtà virtuale*. Bari: Laterza.

Khun, T.S. (1962). *The Structure of Scientific Revolutions*. Chicago: The Univ. of Chicago Press .

La Barbera, D., (2001). Infonauti alla deriva: il tech abuse di internet e dei mondi virtuali. In F. Di Maria & S. Cannizzaro (Eds.). *Reti telematica e trame psicologiche – Nodi, attraversamenti e frontiere di Internet* (pp.43-68). Milano: FrancoAngeli.

Laurel, B., (1986). Interface as mimesis. In D.N., Norman & S.W., Draper (Eds.) *User center system disegn.* Hillsdale, NJ: Lawrence Erlbaum Associates.

Laurel, B., (1990). *The art of human-computer interface design*. Reading, MA: Addion-wesly.

Laurel, B. (1991). *Computer as theatre*. Reading, MA: Addion-wesly.

Manetti, L. (2002). *Strategie di ricerca in psicologia sociale*. Roma: Carrocci.

Mannarini, T., (2002). Comunità virtuali. Figure del legame sociale. In B. Gelli (Ed.). *Comunità, Rete Arcipelago* (pp.115-124). Roma: Carocci.

Mantovani, G., (1998). Le mobili frontiere della realtà. In J. Jacobelli (Ed.). *La realtà virtuale* (pp.103-110). Bari: Laterza.

Maracchia, S. (1998). La matematica tra realtà e virtuale. In J. Jacobelli (Ed.). *La realtà virtuale* (pp.111-117.). Bari: Laterza.

Matte Blanco, I. (1975). *The unconscious as infinite sets. An essay in bi-logic*. London: Duckworth & Company Ltd.

McClelland, D. (1985). *Human motivation*. Glenview: Foresmann and Company.

Mettieri, F., & Manera, G. (2000). *Dalla email al chat mutimediale*. Milano: Franco Angeli.

Morse, J. (1989). *Qualitative Nursing Research: A Contemporary Dialogue*. Rockville: Aspen Publisher.

Moscovici, S. (1988). Le rappresentazioni sociali. In V. Ugazio (Ed.), *La costruzione della conoscenza* (pp.81-95). Milano: Franco Angeli.

Norman, D.N. (1988). *The disegn of everyday things*. New York: Doubleday.

Palomba, M., & Martinino, G. (2000). *Chat to Chat*, Roma: Kappa.

Parisi, D. (1998). La realtà elastica. In J. Jacobelli (Ed.). *La realtà virtuale* (pp.154-159). Bari: Laterza.

Peirce, G. (1998). Una virtualità inedita. In J. Jacobelli (Ed.). *La realtà virtuale* (pp.160-164). Bari: Laterza.

Perez, C. (1983). Structural change and the assimilation of new technologies in the economic and social system. *Futures*, *15*, 375-393.

Pravettoni, G. (2002). *Web Psychology*. Milano: Guerini e Associati.

Rafaeli, B.R. (1988). Interactivity: from new media communication. In R.P., Hawkins, J.M., Wiemann & S., Pingree (Eds.), *Advancing communication science: Merging mass and interpersonal process*. Newbury Park CA: Sage.

Rheingold, H. (1991). *Virtual Reality*. London: Mandarin.

Rheingold, H. (1993). *The virtual community: Homesteading on the electronic frontier*. Reading, MA: Addison-Wesley.

Rifkin, J. (2000). *The Age of Access.* London: Penguing.

Roversi, A. (2001). *Chat line*. Bologna: Il Mulino.

Rumiati, R., & Pietroni, D. (2001). *La negoziazione*. Milano: Raffaello Cortina.

Scheinderman, B. (1992). *Designing the userintereface: Strategies for effecive human computer interaction*. Reading, MA: Addison-Wesley.

Stone, A.R. (1995). *The War of Desire and Technology at the Close of the Mechanical Age*. Cambridge Mass.: MIT Press.

Strano, M. (2003). O.L.D.Pe.Psy (On line Detected Pedhophilia Psychology): Un progetto di ricerca criminologica sulla pedofilia on line. *Psycotech*, *1* (1), 85.

Tajfel, H., & Turner, J. C. (1986). The social identity theory of intergroup behaviour. In S. Worchel & W. G., Austin (Eds.), *Psychology of intergroup relations* (pp. 7-24). Chicago, IL: Nelson-Hall.

Tapscott, D., & Caston, A. (1992). *Paradigm shift: The new promise of information technology*. NY: McGrawHill.

Taylor, F.W. (1911). *The Principles of Scientific Management* (Reprint) New York: Teknisk.

Turkle, S. (1984). *The second self . Computer and human spirit.* NY: Simon Schuster.

Turkle,S. (1995). *Life on the screen*. New York, NY: Touchstone. Weinschenk.

Wallace, P. (1999). The Psychology of internet. Cambridge: Cambridge University Press .