# The Conditions of Permeability: How Shared Cyberworlds Turn into Laboratories of Possible Worlds

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*Abstract*— **Numerous simultaneous paths open in front of the cybernaut, whose person is reflected in the various windows opened on the screen like many fragments of mirror. Yet, the fragmentarity of the online persona does not necessarily imply a disintegration of the self. This paper conducts a philosophical critique of the conditions under which cyberworlds can constitute a psychosocial moratorium virtually always available, where the subject can experience possible realities and dialog with the other within and outside the self. Virtual worlds can afford a condition of semitransparency that could represent an important opportunity to a new relationship between the individual and the community: a third way beyond the objectivation to a communitarian identity of traditional society and the derealization of impersonalism of bureaucratic society.**

*Keywords-philosophy of technology; shared cyberworlds; identity; community*

## I. INTRODUCTION

Cyberworlds seem to carry an irreducible ambivalence: they offer media representations of the world that literally become worlds themselves, transparent as reality and opaque as the thickest interface and representation that has ever been built. Therefore, social interaction via virtual nets is intrinsically immediate and hypermediated at a time, and could either strengthen or weaken the sense of reality of an individual.

Understanding shared cyberworlds as representational spaces allows an analogy between virtual reality and theater that can be particularly fertile in implications. In Erikson [4, 5], the process of identity construction emerges particularly in the identity moratorium: a status of identity crisis, typically granted during childhood and adolescence, in which the individual is looking for her commitments via the exploration of the world, in particular via representations in "toy situations" [4].

Consistently with the idea of identity moratorium, the anthropologist Turner [19] includes the fruition of theater among the liminal experiences, which are characterized by a momentary withdrawal from social responsibility, likewise during the phase of transition between the abandonment of a social role and the assumption of another in rites of passage.

Online exploration can be understood in terms of liminoid status [19] offered by modern western societies (likewise rock concerts or analog situations) where the individual is allowed to withdraw her social masks and experience different habits.

The analogy with theater suggests another conceptual framework for the interpretation of the interactions between online and offline identities, from Aristotle's *Poetics* [1]: theater (tragedy in particular) represents potential realities and allows the audience to elaborate and confront themselves with these realities. In order to do so, the conditions for catharsis (purgation from overwhelming emotional loads) must be fulfilled, that is, a balance between identification and distant contemplation from the personae of the tragedy.

Moving from this theoretical framework, the present paper outlines the result of a philosophical critique of cyberworlds aiming to understand under which conditions virtual human interactions may open a liminal space in contemporary society; a space to explore possible personal and social changes. If this is possible, it is certainly not an inescapable consequence of the spreading of new technologies, but the result of social preconditions as well as sociotechnical conditions of uses. This paper focuses on the conditions of uses, called here 'conditions of permeability', as they keep real and virtual experiences distinguishable but permeable to reciprocal enrichment. The following sections discuss in particular the conditions of (a) semi-opacity of the interlocutors' offline identities (section two), (b) exposure to different media (section three), and (c) suspension of intersubjective judgment (section four). Section five introduces the relation between the individual and the community that may be supported in conditions of permeability; while section six suggests some implications for communication and design research.

## II. PERMEABILITY BETWEEN REAL AND VIRTUAL

Paccagnella [17] adduces three conditions under which online interaction can be considered the opening of a liminal space in contemporary society. First, one must have the possibility to participate in anonymous interactions, protected by a pseudonym, or filter some or all characteristics of her offline identity.

Second, one must be able to distinctly circumscribe her participation to online conversations in order to be able to keep them hidden from whoever is physically near, e.g. the windows opened to her virtual interactions are camouflaged between other open windows. This second condition is essential for a suspension of serious offline social consequences of the users' online exploration. Moreover, it keeps the time and space not saturated by the virtual experience, obtaining an effect of demystification somewhat similar to what Meyrowitz [14] describes about certain social roles and status symbols as Television

merged them with everybody's everyday life time-space. However, there are differences between the "intermediary space" [14] created by traditional mass media and the one stretched out by shared cyberworlds. In particular, the latter is an inhabited space where personal avatar-mediated interactions take place, enabling the distinctive possibilities addressed in this paper.

The third condition Paccagnella adds is the possibility to change the terms of one's participation, changing the persona's characteristics or proposing a completely new one. Although this condition seemed to challenge the accountability of the online persona, it is possible to design virtual communities in order to create internal accountability without linking the persona with a real identity [6]. In order to guarantee the freedom to maintain opaque one's real identity online there are in fact various organizations, such as the Electronic Frontier Foundation.

The same conditions are important to let something "slip" from the virtual to the real dimension and avoid de-realization effects of virtual experiences. Virtual experience must not be a hyper-real duplicate absorbing real experience, just as the two dimensions must not remain completely parallel and separated. Greblo [8] supports this argument when he affirms that virtual communities must resist the temptation to duplicate themselves in reality. Accordingly, in Turkle's study [20] it emerges that those who fell into that temptation remained nearly systematically disappointed.

One of the MUD (Multi-User Dungeon) participants who Turkle met online (Stewart) lived his virtual experiences either as an escape into a completely imaginary dimension or as an outburst of his real life distress. Introverted and victim of inferiority complexes in real life, online he was either Achilles, an extremely extroverted persona, or, during other sessions, he revealed himself completely, said anything about himself and even renounced his anonymity. In his case the integration of the persona online and his real identity has failed. And when Stewart used the MUD as an escape he precluded himself any chance for a catharsis. To use Turkle's psychoanalytic language, there weren't the conditions for the transfer.

The conscious creation of a virtual persona is an important step in order to maintain a certain distance from the narration on the screen. In this way interaction online offers a greater chance for a psychological and social catharsis.

Aside the semi-opacity of one's identity in the persona online, another fundamental condition to keep this distance is that, once the persona online has been integrated/elaborated in one's self, the avatar itself should be thrown away, as the scale in the end of Wittgenstein's *Tractatus* which the reader must throw away after having scaled it, in order get to an higher level of understanding. Virtual communities constitute an elective space to access "our many selves" [20] and keep open the communication channels between them. But if we forget this process and remain captivated by our virtual selves, there would not be any personal growth as we would remain entangled in the Net's fractality. Metaphorically, it might be said that virtual personae give us a chance to zoom in ourselves and resolve our inner conflicts, but sooner or later we must zoom out again and get back, enriched, to our original dimension. It is easy to remain captivated by one's self-reflections. It is what McLuhan called "Narcissus narcosis" [13], the slumber elicited by the addiction to the extensions of ourselves provided by technology.

## III. EXPOSURE TO DIFFERENT NARRATIVE LANGUAGES

While investigating the theme of addiction to technology, Turkle [20] cites *Until the End of the World*, the wonderful movie directed by Wim Wenders, where a scientist attempts to record the brain's signals and video-project people's dreams. The protagonists "intoxicate" themselves with the video of their own dreams, becoming addicted to their portable monitors. Turkle warns of this risk, but she doesn't tell how detoxification is possible: as a psychologist, she thinks of a therapeutic use of MUDs with the guide of an analyst who can prevent this risk. So, let's go back to the movie and to see how it continues (warning: the end will be revealed). A character, who is also the narrating voice, is writing a novel about the same story we follow in the movie: he is writing about his adventures while they happen. When the monitor of Claire, a dear friend of him, runs out of batteries, she suffers from a withdrawal syndrome. While she sleeps, he leaves his novel close to her, so that she finds it when she wakes up. He says he believes "in the thaumaturgic power of the words", and it actually works.

Arguably, Wenders, a movie director, doesn't want to say that the words are "safer" than images. The key may rather be that video and novels are both two discourses about the world, they use different languages and capture the flow of the events in a different way. In those videos Claire's dreams' events constitute the world, they are the only meaningful events to her. By reading the novel, Claire attempts to resize their value and comprehend them in a wider horizon. To use the metaphor introduced above, the novel serves Claire as a zoom out, to gain a certain distance from the situation and realize that the world is wider and she needs something more then her own dreams. Claire had lost this consciousness because she had been plunged too long and too exclusively in the representations offered by her own dreams.

Recognizing ourselves in a narration of our story expressed in a new language is an experience comparable with the encounter with a subject belonging to a different Reality: it is the experience of the encounter of the world developed from a different perspective (for a discussion on the concept of Reality underlying this paper see [25]). If one can translate the new language into her previous one, her worldview may result enriched and more comprehensive.

Therefore, keeping alive other languages beyond those emerging with the cyberworlds, might be crucial in order to maintain the ability to enrich one's perspective. Indeed, even though the Internet can be seen as a multicultural forum, as Rheingold calls it, it is important to notice that also the hypermediated and "glocal" perspective ("glocal" indicates here the convergence of the global and local dimensions in individuals' and organizations' networks [23]) constitutes a determined representational language and we should always be trained to mediate our experiences with other languages.

Actually, every medium has always concurred in the reconfiguration of previous media because it reveals and indicates by difference their peculiar way to represent

reality. The Internet is a sort of meta-medium: then, which is the language to be revalued by its diffusion? Probably, just any less "complex" and less "superficial" language than the virtual one, such as reading a book, or interacting with any not-artificial environment.

Realizing the necessity of a re-comprehension of virtuality through different representational languages means accepting virtual reality as a decreased reality, rather than an augmented one. Moreover, it means understanding that in its missing features – in particular the loss of physical co-presence and, partially, of users' offline past – that are the condition to enrich reality, re-comprehending the horizon accessible via the mediation of the five senses, or natural language, or traditional institutions. Similarly, the virtual dimension acquires a sense only if it is re-integrated in real life, which remains an antecedent space of experience, while online experiences can just prepare, reinterpret, and elaborate experiences in the broader context of online and offline life.

Therefore, another important condition for online interactions as enriching experiences is the attention to other languages and the necessity of other kinds of experiences and mediations. As emerged in section two, Virtual reality should be circumscribed. Shared cyberworlds are elective environments to explore unexpressed fears and desires, unknown realities, and to meet and approach the other: there should not be limits to online expression. Therefore every individual should establish for herself the conditions of her participation: which aspects of her reality she wants to express online and which not, what she wants to appear, and what instead must remain opaque; what she wants to share with the other users, and what instead belongs only to her own reality. The beauty of cyberspace consists of the free sharing of information of any kind, but it is fundamental that everyone selects and decides what they want to share.

## IV. EPOCHÉ

Another important condition for shared cyberworlds to become laboratories of social and personal changes is the exercise of epoché, that is, suspension of judgment about the other persona encountered online.

To suspend the judgment on the reality or unreality of the interlocutor – as a person (in case of interaction with a bot) or as a person with corresponding features with the relative online persona – is not the same thing as being indifferent to her. The limitation of the possibilities of reification and relegation to a discriminated condition is considered one of the more interesting aspects of online navigation: even if it not expressed exactly in these terms, this is a fundamental concept in Donna Haraway's *Cyborg Manifesto* [11].

Cyberspace as a "psychosocial moratorium" [4, 9] can be used as a leeway to reconstruct the self, to integrate the different personae acting in one's existence. Could this mean also the opening of a space for reinterpretation and renewal of tradition, experimentation of social changes and cultural mediation? Paccagnella asserts that "Nets could be seen as a new moratorium, available at any age, which would serve as forge of experimentation for social innovation." [17] (Translated from the Italian by the author. Paccagnella has also published in English, although maybe less comprehensive works, in the *Journal of Computer Mediated Communication*.)

A frequent online phenomenon related with the re-conceptualization of social roles is gender-swapping: the very common practice to assume online a persona that has a different gender than the offline person. There is a case of gender-swapping that became topical and can be found with some variations in several studies [20, 21]. Sherry Turkle [20] talks about it in terms of a myth of which the original events are unknown, while Stone [21] gives an historical version.

Lewin opened a new account on CompuServe, with a woman's name: Julie Graham. He personified a woman who was speechless, paraplegic and disfigured after an accident, who fell into depression and still couldn't find the courage to go out (it was also an alibi for her systematic absences at the community's meetings offline). Julie said that social life in the Net gave her a chance to react, and she became more and more social and popular in the chat. She opened a group for women only, where she gave suggestions to those who trusted her and she told how she was regaining life. She recounted that in her attempt to get over the psychological trauma of the accident she also met a partner, and then she started giving conferences (via keyboard and video) and travelling with him to exotic places.

Although she curated carefully her representations (she even sent real postcards), other handicapped women frequenting the chat unmasked her. They didn't think that she was a man though, and this fact in particular offended them more than anything else, because this fiction aimed to undeservedly gain their confidence. This kind of deceit will be considered further in this paper. Here it is more relevant to emphasize that impersonating Julie online gave Lewin an opportunity to approach and comprehend something about the world of those women that before was precluded to him. Incidentally, he was a psychiatrist and wasn't presumably totally uninitiated to gender issues. Anyone can experience something similar on the Net, without necessarily tricking her interlocutors: in many MUDs, for example, gender-swapping is not considered a deceit but is a common practice when creating one's avatar.

In shared cyberworlds anybody can experience how the concept of gender is socially and culturally constructed [17]. Many cybernauts interviewed by Turkle [20] explained that online they have learned something about gender social dynamics. Men often change sex in order to obtain more attention in chat, even to ask technical support. Many of them realized in this way how insistent and annoying male approaches were, or they could observe that frequent and not requested offers to help connoted an underestimation, which could generate an inferiority complex. Women instead pretend to be men precisely to not receive undesired attentions and to experience franker communication, free from expectations on the feminine behavior, realizing that the continuous offers to help often inhibit the development of their own abilities, letting them think they are in need of help.

In another case described by Turkle [20] a woman decided to haunt gays' chats because she has always been curious to know what do men do and say between them,

but she just couldn't go to a gay bar and spy without be recognized. Turkle [20] defines as "trolls" the participants like Lewin/Julie or the woman who haunted gay chats, who pretend to belong to an online group when they don't. Although the current usage of the term implies also an outrageous behavior to provoke arguments, the term indicates here only the identity deception. In thematic communities in particular, identity deception is not very welcome, but if "trolls" reveal themselves spontaneously and if they are opened to the dialogue, they are often allowed to participate to the conversation.

Trolls, together with lurkers, have an interesting role in the dynamic of rethinking social categories. The lurker is the voyeur who gets into the interaction spaces online without participating, is generally considered vexatious and often banned by the space administrators. Apart from MUDs and environments where the construction of a persona who has nothing to do with the real person is common practice, it is the encounter with lurkers and trolls, especially trolls, that offers more cues for reflection and developing the strategy to suspend the judgment about a supposedly real nature of their interlocutors, accepting them just for the stimulant cues they can offer: a strategy that could be actually practiced also in everyday life [17].

Greblo [8], in epigraph to an article about virtual communities, cites a passage from Mumford, stating that human beings "tend to socialize in distance better than in the immediate, limited and local spheres; sometimes they reach an optimal relationship when, as in the case of the barter between primitive populations, no group is visible to the other" (translated from the Italian by the author).

The elements of the other group are admired and recognized for their virtues during collaboration: in that moment other believes about the participants are suspended. This is an example of the possibility of sharing certain practices with no need to assimilate the two parts in a unique identity. The encounter between members of different groups is easier in a neutral land, a liminal space where the reality of the two groups can remain partially opaque and the interaction can be carried out relatively free from the webs of social meanings of each of them, their meshes being temporarily loosened. This is the only way the exercise of judgment suspension is actually possible, as noted above when talking about trolls. This *epoché* is a necessary condition under which cyberspace could constitute a liminal space, accessible ideally to all of humanity, where it is possible to create a community in distance, a community free from rigid belongings, a net of relations and interactions that does not presuppose the identification in the other, but the opening to a not assimilated difference.

As it emerged analyzing online individual experiences, also at a social interaction level we can also find opacity and transparency: the information of each group is not secret and esoteric anymore, but the web of social meanings in which each of us is immersed remains, and must remain, partially opaque to the other groups. Transparency involves just the social meanings implied in the cooperation process with the other group; this partial transparency opens a channel to enrich the groups' realities. A total revelation would have a deconstructive result: instead of being temporarily untied, the groups' web of social meanings would gradually dissolve – as it is based on the others' exclusion as well as on being shared by the group's members.

In the virtual moratorium, as in a liminoid status [19], personal and social acts are not irreversible; therefore it can be the laboratory of personal and social identity experimentation. On the other hand, for the same reasons it cannot be considered a realistic model of sociality – where usually no one has a moratorium of her responsibility. But some psychological and ethical dispositions online can be fruitfully transposed offline. Judgment suspension can "slip" from the screen to real life.

Virtuality enriches reality if there is a certain degree of permeability between the two dimensions, some elements of the virtual dimension must "slip" in the real one and vice-versa. This does not lead to a confusion of virtual dynamics with real ones: the two dimensions must remain differentiated, but must have a point of contact too, to keep open the communication channel between them. The separation of the two dimensions is necessary not only to avoid the de-realization effect of virtuality, but also because to keep its function of intermediate and liminal space.

The *epoché* does not concern the real existence tout court of a subject (or of more subjects who interpret a single person) from the other side of the screen, but the existence of the Reality of the person with whom we interact online. This *epoché* occurs because ideally in virtual communities anyone can interpret anyone.

Turkle sustains [20] that this freedom to interpret a character that differs from one's offline self is fundamental in order to let the virtual reality enrich real life, but she wonders if this does not raise a moral

question about deceiving others. To face this point, firstly, it should be reminded that there are different kinds of communities: in MUDs and other generalist communities it is actually common to interpret different characters not necessarily connected with one's real self. This is not considered to be offensive, moreover, it offers an important opportunity to let these kind of communities serve as "laboratories" to meet and experience the otherness within and outside oneself.

The personae online are experienced as a "nearly-other", holders of possible realities. Therefore they can have a value in themselves, no matter in which measure they correspond to the real person interpreting them. As Paccagnella remarks [17] the deceit of a troll is mitigated by the fact that participants confer significance to experiences online integrating them in their identity. The existence of the real persons behind virtual personae confers on them a value that animates them with a peculiar horizon of reality. This level of inter-subjective acknowledgment elicits the projection of oneself in the representation, similarly to the phenomenon of catharsis that Aristotle saw enacted during ancient Greek tragedy [1]. As well as in the fruition of tragedy, the catharsis is necessary to comprehend the possible realities represented on the screen/scene.

What interaction with virtual agents or robots lacks compared to interaction with online personae is the encounter with the other outside oneself. Therefore interactions online could be richer in social implications, as it has emerged in some cases of gender-swapping.

When masking real identities online does not create deep contradictions betraying the community's shared reality, we cannot really condemn this practice as a deceit. Once the troll is unveiled, competitive yet constructive dialogues can occur. However there's always a margin of users who can feel tricked by the "falseness" of the personae, since not everybody uses shared cyberworlds as experimentation spaces, but many surfers consider it an impoverished extension of reality. In both approaches subsists the perception of "lie" with reference to real life. It is precisely playing with the differences between real and virtual that users can inhabit cyberspace as liminal places; in this game virtual reality remains then clearly comprehended within the horizon of real life.

## V. COMMUNITY OF DISTANT CONTACTS

Virtual communities are often considered a phenomenon of modern localism. However they differ from traditional localism mainly in two ways: firstly, new communities are not integrated in a physical territory; secondly, their creation is an aware and searched process. One enters into a virtual community by choice, typically nobody is included or excluded *a priori*, and anyone who has a connection can register and login. When a community is reserved for people sharing certain characteristics one can pretend to possess them. Precisely for these reasons they are often considered "pseudo-communities" [2].

As personal home pages represent for Turkle a powerful metaphor, as a model and a practice for the fluid personality, shared cyberworlds can be a metaphor and a practice of a community of sharing [8], a community of "stellar friendships" [16] instead of "brotherhood", where the belonging is chosen and never imposed [8].

An early example that can partially illustrate this approach is the Shwashlock project's usage of the Santa Monica Public Electronic Network, a virtual community that has canalized the meeting between groups that would normally avoid each other. The project offers essential services (SHowers, WASHers and LOCKers: Shwashlock) for homeless people and opened a dialogue between them and some wealthy citizens of the metropolitan area, thanks to the mediation of telecommunications to soften the difficulties of the first approach.

Online carbon copies of offline communities would just deprive virtual communities of their benefits. Real actions of real communities and their members can be imagined, planned, prepared, discussed, improved and put in synergy with different groups' actions via virtual communities, thanks to the encounter online of a group of people far ways wider, more heterogeneous and variable than the primal real community.

Online collaborative development of ideas, scientific models, and software can be very incisive. For example, the discussions about the Internet that appeared on the WELL newsgroup (a virtual community founded in 1985 and frequented by several academics, notably Howard Rehingold) anticipated and started many debates about online communities.

In the scientific community, it is a common custom to publish on one's personal home page or blog drafts or passages of next offline publications, in order to receive feedback and eventually improve the work before publishing it offline.

One may call them pseudo-communities [2], nevertheless they are not unreal nor influential in their members' lives and the society in general, indeed, their lacks can be their forces: the "strength of weak ties", to use the expression developed by Granovetter [7] in the framework of the Social Network Analysis. An individual who has few weak ties is excluded from information and opportunities that are not available in the restrained group of strong ties (usually nuclear family and very close friends). A complex society lacking in weak ties is fragmented, incoherent and, within its few communication channels, ideas circulate slowly.

Beyond favoring the development of a community of distant contacts characterized by a dense web of weak ties between people [3], Information and Communication Technologies (ICTs) can also keep strong ties notwithstanding space distance. But, even though ICTs are a powerful tool to maintain strong ties, these ties must find their prime origin offline. In fact, virtual communities do not offer sufficient conditions for the birth of a full inter-subjectivity precisely as a result of the distance (not only physical) kept between their members. This is the other side of the *epoché* experienced online: co-subjectivity, the full recognition of the other as a person, is supposed with strong reservations.

Virtual communities are defective communities and precisely because they are based on sharing instead of belonging they cannot constitute the space for the original formation of one's identity. According to Taylor [18], personal identity is characterized from one's position in a moral order. The search of self and one's moral position has no universal recipe and Taylor has no fixed axiology to propose, but an exploration "by means of personal resonance" within the places of one's morality sources. Morality sources exceed the pure subjective dimension, but they can be explored only through personal resonance. Virtual communities can actually represent various moral orders to be freely explored.

If reality is the horizon inter-subjectively shared, a world where any element to share is more ephemeral than any subject wouldn't make sense. Nevertheless this is the case of many places and objects in cyberspace. While criticizing instrumental thought, Taylor [18] cites modern technological products as messengers of a "miserable wealth": instrumental goods, aiming to satisfy subjective determined and circumscribed needs, incapable of referring to a moral dimension of shared experiences. He adds with Arendt that reality and reliability of the human world rest mainly on the fact that we are surrounded by things that last more permanently than the activity required to produce them, things that retain a possibility to be shared exceeding my subjective possibility to experience them. Therefore the immersion in an ephemeral artificial world can be de-realizing. Those who react to instrumental thought with the supremacy of self realization often propose voluntary associations as the only ones in which one can identify herself, but in this way we actually fall back into instrumentalism because associations are subordinated to specific objectives. These critics somehow can refer to virtual communities too: surfing online in itself is a practice that doesn't pass beyond self-realization, as

surfers use virtual personae like mirrors. Cyberspace can be a place for morality sources' exploration only when it is re- comprehended in the real world, and when at least some among temporary relationships developed online change into a long-lasting offline one. Voluntary association online is accessory to another more essential fact: it permits an approach to different shared realities representing as many moral orders to explore through personal resonance in the search of one's self and "stellar friends" [16].

## VI. SOME IMPLICATIONS FOR COMMUNICATION AND DESIGN RESEARCH

The conceptual framework outlined in this paper might suggest some practicable research path for both the individual process and the incidence of system design on the phenomena addressed here. Indeed, this framework suggests that variables like media richness, immediacy and synchronicity, often considered positively related with a satisfactory virtual experience [8] might not be directly correlated with a personally enriching experience.

If we consider identity as a socially constructed process, we should focus on social presence at least as much as on telepresence. Many studies [12, 15, 22] suggest that social presence is not necessarily enhanced by media richness, Walther [22] argues that the communication via apparently "poor" media can eventually reach the same level of richness of social informations as face to face communication. Hollan and Stornetta [12] suggest that semi-synchronous systems can enhance interpersonal exchanges beyond "being there." Moreover, a fully immediate immersion, might break the balance between identification and distance toward the online persona, whilst this balance is required to fulfill the conditions for the Aristotelian catharsis [1], or, to use Erikson's [4] psychoanalytic terminology, the conditions for the transfer, which seems to convey a positive integration between online and offline personal identities.

An increasing number of studies [9, 24] highlight the fact that the embodiment of avatars in online communities enhances the development of interpersonal skills and online achievements can be successfully applied in offline settings. However, they do not search directly the conditions under which we can expect a constructive permeability between real and virtual to emerge, and the embodiment of an avatar online to enhance personal change and growth. More researches might address these questions.

Yee and Bailenson [24] conducted an experiment suggesting that the embodiment of virtual identities can help reduce the effects of negative stereotypes on personal attitudes toward social categories like the elderly, and they explain the phenomenon as a very direct experience of perspective-taking. Their experiment was aiming to develop Virtual Realities settings for educational purposes. The framework outlined in this paper, instead, would suggest to understand the possibilities of personal growth open to the frequenters of cyberworlds shared also independently from institutional contexts, either in informal or formal situations. Moreover, it can be argued that, in order to study the eventual development of deep personal changes, more studies should be conducted in long-term situations, triangulating online and offline observations with subjects involved in different kind of personifications.

## VII. CONCLUSIONS

The networks of distant contacts, can easily be, and often are, transverse to consolidated institutional and local ties. For this characteristic they could reveal themselves to be vital keeping united a complex system such as modern society.

Under conditions of permeability shared cyberworlds might really be inhabited as 24-hours worldwide open laboratories of social change and flexibility, where one can improve the dialog with the otherness, within and outside oneself.

The semi-opacity that virtual realities can afford supports collaboration and dialog between people that would not interact in a face-to-face relationship due to their social and cultural distance, unless they partially neutralize their differences. Creative virtual networks can open communication channels that maintain the distance between physically and culturally different people. In this way the interlocutors can interact without neutralizing the distance between them. The conditions for the interaction with a new reality can be offered by the *epoché* and not by the encounter in a de-individualizing non-place.

In conditions of semi-opacity it is possible to experiment with different personifications in a protected liminal space, without having to cut the contacts with the original social spaces of belonging. The kaleidoscope of cyberspace represents a suspension of the narration of one's offline identity that is not necessarily destructive. Indeed, in conditions of permeability, the ambivalence of virtual reality described in the beginning of the paper turns from problematic to advantageous: the immediacy of shared cyberworlds offer a responsive intersubjective space to explore future possibilities, while their hypermediacy can support a smooth and gradual change.

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