

Transformations through the technological mirror

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1. Introduction

In recent decades there has been a breakthrough in technological developments that has led to significant changes in our minds, as well as our ways to understand our grouping forms and social life.

The global village idea (McLuhan, 1983), together with the psychoanalytic reading that explains the origin of culture in totemic societies (Freud, 1913), allow us to have a vision of these micro and macro sociological changes. Current society would be like a globalized village, in which the organizing totem of these small primitive groups is replaced by modern technology.

Life on the screens (Turkle, 1997) is a significant fact of our contemporary world, in two opposite extremes: the fears that every new sociocultural advance generates, that leads us to imagine a hyper connected world but in solitude; and on the other hand, a modality of hybrid virtual-f2f functionality. This functionality allows, especially for today's young people, to be simultaneously connected, in virtual & f2f (face to face) spaces, in an unlocalized and global matrix relationship and with access to an unprecedented digitized memory capacity in the entirety of our civilization's development.

In the field of online group psychotherapy, we can count on this enormous described potential but we must also consider the effects that psychopathologies can produce in the use and meaning that is given to these technologies.

We define online group psychotherapy as a psychological procedure that considers the same objectives as f2f group psychotherapy and uses different online communication devices as instruments to connect the group.

In this chapter we will discuss the similarities and differences between online and f2f group psychotherapy. We will elaborate on some preliminary theoretical ideas about technology and mental apparatus, as well as the basics of online psychotherapy with its essential components. We will examine the possible applications in virtual, f2f and mixed environments and how they adapt to the psychopathological characteristics of group participants.

Finally, we will present two studies: A 3-year work of a technology-mediated psychotherapy group and a case on the use of video games in the group approach of children and adolescents diagnosed with Autism Spectrum Disorders (ASD).

2. Mental apparatus and technology

We think that the development and systematization of methods of technology-mediated group approaches could produce fundamental changes in the mismatch between demands and offers existing in the public and private mental health systems.

These new virtual spaces, which together are called "cyberspace", are built through the network connection made possible by Information and Communication Technologies

(ICT). According to their different applications in mental health, they can be classified as follows (Vaimberg, 2005):

1. In primary health, as a means for the promotion and prevention of mental health.
2. In secondary and tertiary prevention, as a means for intervention in mental health problems.
3. In public systems and mental health management as a vehicle to improve them.
4. As a tool for the training of mental health agents.

Focusing specifically on the mental apparatus, we can affirm that the relationship with technology in the human species was installed as a prosthesis within the mental apparatus representation itself (figure 1). In *the narcissistic relationship type*, the other (in dark gray) exists only as a part of oneself (the other is included within oneself). In *the support relationship type* a part of the self generates an extension in the manner of an amoeba's pseudopod, which goes to meet the other's relationship, now experienced as something external to the self. In *the technological prosthesis relationship type* the black segments represent technology that as prosthesis produce an extension of the self, which mediates in the relationship with the other, producing variations in the temporal and spatial dimensions and in the sensorceptive apparatus in general. It's a type of inter-objective relationship that influences and is influenced by intersubjectivity, unlike the analytic third (Ogden)¹.

The third model of relationship, technological prosthesis type, could well represent the virtual environment's matrix in a normal person, this interconnection of different technological prosthesis, allows digitalization and communication of the self with the other virtualized.

Figure 2 represents a type of pathological relationship that is established in cases of addictive relationships with technologies. There are people who for prolonged periods can develop psychological distress and social deterioration symptoms caused by the amount and quality of internet connection. These addictive relationships tend to coincide with other pathologies and especially with serious situations of social isolation. Circles in light gray represent individuals, the roles graphic representation has disappeared to represent the ego's high degree of involvement in the phenomenon; a part of each individual's self is incorporated into the cyberspace (black circle), which occupies a large part of the individual's life.

The myth of Narcissus and the technological mirror

¹ Differences between the analytic third (Ogden) and the prosthetic relationship: Ogden conceives projective identification as a form of the analytic third in which the individual subjectivities of analyst and analyzed are subjugated to a co-created third subject of analysis. Successful analytic work involves a superseeding of the subjugating third by means of mutual recognition of analyst and analyzed as separate subjects and a reappropriation of their (transformed) individual subjectivities. In the technological prosthesis relationship type, these constitute a third place, which broadens the dialectical relationship between subjectivity and intersubjectivity. But the point is that the concept of prosthesis is based on the conception that a "physical and inanimate object" is animated by the subject. ¿What is the difference between the analytic third and prosthetic object then? Electronic circuits support an inter-objective communication (for example, between electronic devices). In other words, the prosthetic relationship is based on an interobjective relationship that supports an object-subject relationship and from that point access to intersubjectivity, although the reverse path is also possible. The prosthetic relationship establishes an intersubjectivity through physical objects. As it happens in the constitution of the psyche, in the online communication the physical (technological) object will give shape to human intersubjectivity.

The myth of Narcissus, reworked by Freud (1914) in one of the fundamental articles of his metapsychology, represents the irresolvable dilemma between self-love and love for others. Psychic life begins with a fusion experience that leads to the fantasy that there is only one body and psyche for two people. When the mother-child relationship is "good enough" (Winnicott, 1979), a progressive differentiation develops in the young child's psychic structuring between his own body and the first representation of the external body that is the maternal body.

For McDougall (1987), in narcissistic pathologies we find ourselves facing a "theater of the impossible", in which the desire to be one is represented, the narcissistic enchantment, in which separation, sexuality and death are denied as external realities. These patients complain of dissatisfaction, inability to love, vague states of emptiness, depression and anguish.

In technology-mediated relationships, if the personality structure has narcissistic characteristics, it is more likely that it cannot establish an intersubjective communication, since the other will only be a reflection of itself or, in the *ecoist* aspect², the self will only be a reflection of the other, an echo.

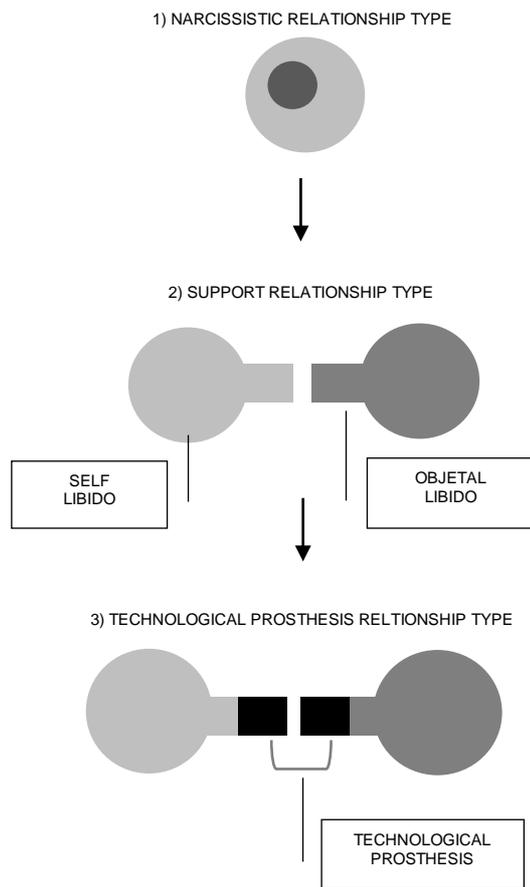


Figure 1. Narcissistic, support and technological prosthesis relationships

² Ecoist: neologism that aims to highlight a form of narcissism that appears in the myth of narcissus represented by the character of Eco. This type of narcissism implies a marked tendency for the self to be constituted as a mirror in which to reflect the other. Unlike the character of Narcissus who values fundamentally aspects of himself that he sees reflected in the other.

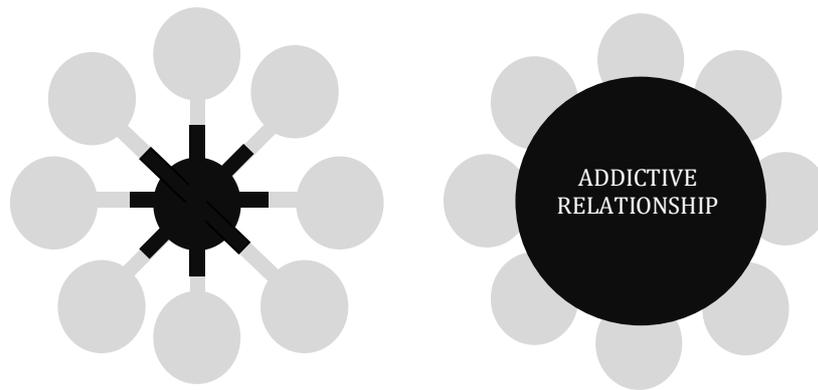


Figure 2. Left: cyberspace. Technology-mediated relationship. Right: addictive relationship with the cyberspace.

From this conceptualization of the relationship with the other we can understand a series of internet communication pathologies. By not seeing the other's image, as well as the body elements that intervene in communication (especially touch and smell), the narcissistic relationship is favored; In addition, the distance established by written communication, asynchronous in time, produces a dislocation in space that favors the other's discrimination. We are facing a 'technological mirror' that will reflect a different image to that of the Narcissus pond. In cases of online communication by videoconference, in addition to being able to see the members of the group, the image of oneself is reflected on the screen, this may influence the characteristics of online group communication.

We define 'technological mirror' as that formed by a variety of technological artifacts interconnected through electronic networks, reflecting everything that is capable of recognizing, memorizing and hypertextualizing. Several texts and images can appear on the screen simultaneously, allowing the participant to make their own edition or an active and personal interpretation of the hypertext. The richness or poverty of the technological mirror and the connection characteristics between the virtual and f2f mirrors will strengthen the narcissistic positioning or facilitate the intersubjective constructions.

The technological mirror, depending on the use made of it, can favor the transition from narcissism to the relationship with the other and the connection between the internal and the external world, allowing new forms of collective construction and creation.

In the opinion of Turkle's book (1997) she argues that internet can enrich us in the real world. She considers that future actions in online psychology will consist in producing more theorization and work methodologies so that people can make better connections between the virtual world and other aspects of their lives. Following her ideas, we think it is necessary to advance in the field of online psychotherapy, online interventions and research in these fields.

3. Online psychotherapy bases

The bases of online psychotherapy (Vaimberg, 2012) arise from the understanding of the special characteristics of the virtual & f2f space and the methodological instrumentation of a new intervention modality through technology.

3.1. Techno-social structure and psychopathologic structure

Online interventions are more effective if there is an adequate articulation between the technical and social characteristics of the virtual communication structure and the characteristics of a person's psychopathological structure or groups connected to a specific techno-social device.

The individual's personality structure connected to the network produces different subjective experiences with which the individual perceives her/himself and the relationship with the other in virtual environments. These subjective experiences determine different ways of moving through the interface between virtual and f2f, online-offline environments. For example, in a group of neurotic patients (see case 1, page xxx) we observe in people with paranoid or phobic characteristics different ways of manifesting in the virtual and f2f space. Patients with paranoid characteristics present great difficulties to register their intervention in the virtual space, the imborrability and unchangeability of the intervention is found threatening, and they find it easier to intervene in the f2f space. The opposite occurs in patients with phobic characteristics, who usually express themselves more freely in the virtual space, while direct contact is anxious.

In another example, in a group of patients diagnosed with ASD (see case 2, page xxx) who work in person through a virtual reality platform, we observe that relationship difficulties with their companions are moderated in the online space and can be intervened more easily. The contact within the virtual space is represented on a more concrete and protected plane than that of the f2f space. For example, in one session one of the members loses the thread of the activity in the online space and does not respond to the demands of attention from colleagues. In this situation, there is a meeting between two avatars of the children, one speaks to him through the chat and the other does not respond and moves his avatar away, the companion who looks for him expresses his discomfort because they are not paying attention to him and he does not know what to do. In this situation, the therapeutic team can work on the need for isolation and the children's communication possibilities, but using the example of their characters and the experiences they've had through the game. This gives them a useful distance to address personal issues indirectly and through a game they like.

3.2. Virtual & f2f relationship

As much as possible, we prefer to mix virtual and f2f frames, since they strengthen the respective benefits and the reduce respective risks. We can consider the advantages and disadvantages of each of these environments. (See table 1.)

	<i>F2f environment</i>	<i>Virtual environment</i>	<i>Alternating Virtual & face-o-face environment</i>
Advantages	<ul style="list-style-type: none"> • Synchronous and multisensory perception facilitates the permanent modulation of the intensity and quality of 	<ul style="list-style-type: none"> • Time and space boundaries do not exist, facilitating meetings. • It has a large memory capacity but not necessarily memories. 	<ul style="list-style-type: none"> • The continuous virtual space created by online meetings between f2f sessions allows the interaction to extend beyond the space-time of the f2f session, facilitating group

	<p>communication phenomena.</p> <ul style="list-style-type: none"> • Shared emotional experience as well as collective phenomena is made possible. 	<ul style="list-style-type: none"> • The 'disinhibition' effect or 'screen effect' allows people to express and recognize their fears or conflicts. • The delayed time between the message and its response can be beneficial for reflection, the expression of ideas and feelings, and the possibility of researching oneself. 	<p>cohesion and therapeutic adherence.</p> <ul style="list-style-type: none"> • As a result of the permanent rotation between virtual and f2f environments, a space for elaboration & reflection arises around both. • The psychic fragmentation experience³ has been mitigated by the mixed modality of the online/offline communication system used.
Disadvantages	<ul style="list-style-type: none"> • In certain psychopathological structures, such as borderline, direct presence can promote too intense and threatening transference • There are major complications related to f2f meetings in terms of schedules, absences and geographical transfers. 	<ul style="list-style-type: none"> • The virtual communication structure allows erroneous interpretations of the meaning of what has been said, including massive projections. • The experience of permanent presence created by the virtual forum can generate the emergence of paranoid defensive mechanisms and control experiences, or merging fantasies. • Passivity and silence are more difficult to interpret or to contain in the virtual forum. • The 'disinhibition' or 'screen effect' allows to express violent or perverse aspects. 	<ul style="list-style-type: none"> • Possibility of splits between the f2f and the virtual experience. • Those members who do not actively participate in the virtual space may feel displaced or alienated in f2f sessions.

Table 1. Virtual, f2f and mixed environments. Advantages and disadvantages.

3.3. Use of the characteristics of online communication

The computer screen stands as a transitional space, resulting in a diversity of projections determined by the connected participants personality characteristics, as well as those of the online connected groups. We can develop the following online communication's general aspects:

1. *Immersion.* In psychoanalytic terms, the virtual space can be considered an extension of the intrapsychic space. It can be experienced as a transitional space between the self and the other, which is partly oneself and partly the other. This feature allows us to have the experience of being inside the screen.

³ We consider the existence of three organizations or matrices of the self: integrated (neurotic syndromes), fragmented (border syndromes) and fused (psychotic syndromes). We understand by psychic fragmentation a state in which the self appears divided into different fragments. The depth and breadth of the crack that exists between these fragments will determine a greater or lesser tendency to recognize the different constituent parts of the self. In the border disorders this psychic fragmentation will produce identity alteration symptomatology, however in the neuroses, it will allow anguish attenuation and the possibility of resolving the situations by parts, to later integrate them again with some transformation in their interior. The prolonged connection through technologies increases the tendency to fragment the ego due to the partialization of the perception of the body, the integration of the perceptual systems and the time-space configuration of communication.

2. *Disinhibition effect, screen effect.* When a person separates his actions from his real world and his identity, he feels less vulnerable, as well as a decrease in responsibility for the effects of taken actions. There is an operational dissociation between the person and the character that is represented in a certain scenario.
3. *Non-specific space.* The extension of the global village in cyberspace is one of the greatest potential characteristics. This can connect people with geographical limitations or disabilities. In technology-mediated group psychotherapies, group cohesion is especially favored by this communication characteristic.
4. *Timeless time.* In all types of online communication there is a delay from seconds to minutes or days between a message and its response, a time that is effectively different from f2f communication. This time gap generates a space for reflection and delay that might be beneficial. The possibility of editing text, image and sound allows to alter the story's temporal sequence of lived events.
5. *Fragmentation of the self.* In modalities that use asynchronous textual communication such as forums, it is possible to project fears or problems but in a fragmented way. This fragmentation might mean new protective or enriching defensive aspects of the self or the lifting of repression and expression of aggressive, destructive and disintegrating aspects of the internal world.

3.4. The role of the online psychotherapist

The online psychotherapist should follow the rules established by the professional code, paying special attention to ethical issues related to network confidentiality and guaranteeing necessary professional accreditations. Given the special characteristics of the communication dynamics and the psychotherapeutic processes that are produced online, a specific theoretical-technical training is required that includes that characteristics of online therapy and the online therapist's role.

4. Different environments and their applications

In the study of online psychotherapy groups, we will describe three fundamental aspects: modality, interconnectivity and synchronicity. In these groups, we have access to different modalities: textual, hypertextual, online virtual reality platforms, collective creation platforms and videoconference⁴. All these modalities can be used in a uni-user or multiuser formats or in multigroup network structures and also in synchronous, asynchronous or mixed modes.

Throughout 15 years of experience we witnessed the evolution of communication modalities from textuality and asynchronicity to moving images and synchronicity. In the past, multi-user videoconferencing communication could only be used for a short time and with some technical difficulties. We have learned to differentiate the applications of the different techno-social tools according to the particular characteristics of the people's psychopathology and of the characteristics of the treated groups.

<i>Modality</i>	<i>Neurosis</i>	<i>Personality disorders</i>	<i>Psychosis</i>
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⁴ *Hypertextual:* environment created from written words, voice files, image files and hyperlinks between them. *Virtual reality platforms:* they allow an interactive experience from the artificial simulation of an environment. *Collective creation platforms:* they allow creative works online through words, images and sounds, in small, medium or large groups.

Textual	XX	XX	X
Hypertextual	XX	XX	X
Video conference	XX	XX	-
Virtual reality	X	X	XX
	Specific symptoms xx		
Collective creation platforms	X	XX	XX

Table 2. Types of virtual modality and their adaptation to different psychopathological structures.

As can be observed in table 2, the textual and hypertextual modalities of online communication, due to the absence of non-verbal language, often generate frequent difficulties in the field of message interpretation, meaning that the severity of psychopathology increases. In contrast, environments that use preverbal resources, such as collective creation platforms, facilitate communication processes in pathologies where deeper regressive states occur.

In the neurotic pathologies, with a greater development of transitional space and creative capacity, textual communication can facilitate the unveiling of hidden contents. Videoconferencing is very useful in individual and family interventions but still has technical deficiencies in the approach of small and medium groups. Finally, virtual reality platforms are useful in the treatment of specific focused symptoms such as certain phobic disorders and are significantly helpful in different groups of children and adolescents.

5. Case studies

In this section we will describe two investigations carried out in online psychotherapy groups. The first one consisted of a virtual combined with f2f psychotherapy group of neurotic patients that lasted three years. The experience was carried out through an asynchronous textual online forum combined with a monthly session of four hours f2f. The second vignette was conducted in a group of adolescent patients diagnosed with Autism Spectrum Disorders (ASD) using virtual reality platforms.

5.1. Case 1. Friday group

The Friday group worked for a couple of years in a classic format of a 2 hours weekly session. Then, about 15 years ago, the group raised a continuity difficulty, due to the new dynamics that daily and work life acquired, group absence had increased, and this affected achieving the group task. In one of those sessions, because I was late to the group session beginning, they started sending messages to my mobile phone. This accidental event raised the idea that we could have the session online.

The idea was initially taken as a joke but little by little it was starting to acquire consistency and the group raised the possibility of holding a closed text forum for its participants. Everyone was enthusiastic about the project, one of its members (computer

engineer) offered to build the platform and we decided to modify the structure by changing the f2f sessions to a four-hour session per month in addition to the online forum, and to explore how the new online space worked. An asynchronous text forum was organized, open 24 hours a day, 7 days a week, including holidays.

At first the feeling of entering an unknown and innovative terrain generated great enthusiasm, a new way of communication was being created. Little by little, new possibilities and difficulties offered by the forum were experienced. Once the f2f session arrived, a great deal of work had been done during the month, this produced a quick and intense start of the session. In the online forum, dreams were analyzed collectively, conflicting situations occurred during the month and even weekends, discussions and misunderstandings created, some days, a very high message circulation. New leaderships were appearing, some coincided with those of the f2f space but others were really new. We detected that some members participated more in one environment and others handled both in a similar way. The elaboration of this topic led to interesting discoveries about subjective experiences that the physical and virtual environment generated in each member. For example, the record of the written word was extremely disturbing for some participants, probably because of the permanence of what was said and the impossibility to modify or erase this information; others experienced the effects of virtual absence intensely, reacting strongly to periods of silence or response delay to some of the sent messages. The virtual presence sometimes generated feelings of idealized encounter, related to the fantasy of permanent unions in bonds that can last eternally. This experience continued for five years, three years for this study and two more years until the group finished its task.

5.1.1. Therapeutic macro and microprocesses study in an online psychotherapy group using text.

Many classical socio-psychological principles of group dynamics can be applied to the understanding and improvement of these online groups, such as issues related to leadership, communication patterns, cohesion, the unconscious and the group mind, vital experience and collective creativity (Weinberg, 2013). However, for the special psychological characteristics of 'cyberspace' determine that online groups dynamics can also be very different (Suler, 2005). We point out characteristics provided by text and hypertext communication, the greater equality of communication possibilities and the opportunity to alter or hide the participants identity.

The group consisted of 8 participants, half of them males and half females diagnosed with neurosis. This research work produced a doctoral thesis (Vaimberg, 2010).

5.1.2. Research design

In this research, we used a mixed-method design, based on systematic observation; the qualitative data collected in the initial observation phase is transformed into quantitative data and subsequently interpreted qualitatively.

One of the first concerns raised by an observational study should be the adequate design. Anguera (1978) understands the design in observational methodology as the process integral strategy of the process. This is a series of guidelines related to the empirical organization of the study that are materialized in a sequence of decisions about how to collect, organize and analyze data, always subordinated to the specific objectives setting of the study. Material produced by the psychotherapy group was digitally self-registered in a textual and asynchronic online forum, which worked for 3 years, 7 days a week and 24 hours a day. About 500 text pages, approximately 300,000 words.

Stage 1: Creation of an indirect observation instrument

An indirect observation non-standard instrument was elaborated *ad hoc*, based on the theoretical framework and produced text. The data analysis obtained criteria for the following themes: degree of presence, relationship to the other, emotionality, capacity for thought, positivity and realism. Based on each of these criteria, a system of categories was created. (See table 3.)

DA. Degree of presence	From overpresence experience to abandonment: A scale in which one extreme represents exhaustive control of the other, in the middle a balanced relational distance and ends with the feeling of non-existence of the other or extreme loneliness.
DB. Relationship to the other	From overidentification with others to isolation in the self: A scale that goes from fusion with the other, through a balance between self-love and love for the other, to the other extreme of melancholy identification feeling and self-absorption.
DC. Emotionality	From hyper-emotionality to alexithymia: On one extreme, the experience of hyperthymia and emotional lability, through states of emotional balance and ending with emotional coldness, alexithymia or psychosomatic diseases.
DE. Capacity for thought	From hyperrationality to irrational action: On one pole, the capacity for abstraction and rationalizing tendencies, going through a balance between thinking and acting, and reaching impulsive anger and violence situations or suicidal actions.
DF. Positivity	From hypomanic positivity to depressive pessimism: On one extreme great optimism or euphoria, going through balanced assessments of the positive and negative aspects of the self and relationships with others and reaching situations of life dissatisfaction, anhedonia and apathy.
DG. Realism	From hyperrealism to derealization: From adaptation to reality, through situations of modulation between reality and fantasy, and reaching immersions in a world of fantasy, delirium or hallucination.

Table 3. Description of the PSICAT.G instrument. Studied dimensions.

The instrument was structured, for each dimension, in the form of rating scale. In the central positions of each dimension there are categories that describe mental states of equilibrium, while progressively moving from the center, in the extreme positions, to mental states that represent excesses or defects.

The results show that at the beginning the group moved cyclically between centered and extreme positions, creating crisis along the lifetime of the group. As the process evolved, both group and individual processes showed a tendency toward centralization and balance.

Stage 2: Text codification

The PSICAT.G instrument was applied for coding the entire registered text. The Atlas.ti program (Muñoz, 2005) was used for this task. (See figure 3.)

Stage 3: Computerized analysis

Computerized analysis of the code sequence was carried out through five specialized software: Atlas.ti, Excel, Ucinet.6-NetDraw (Social Network Analysis), SDIS-GSEQ and Thème.

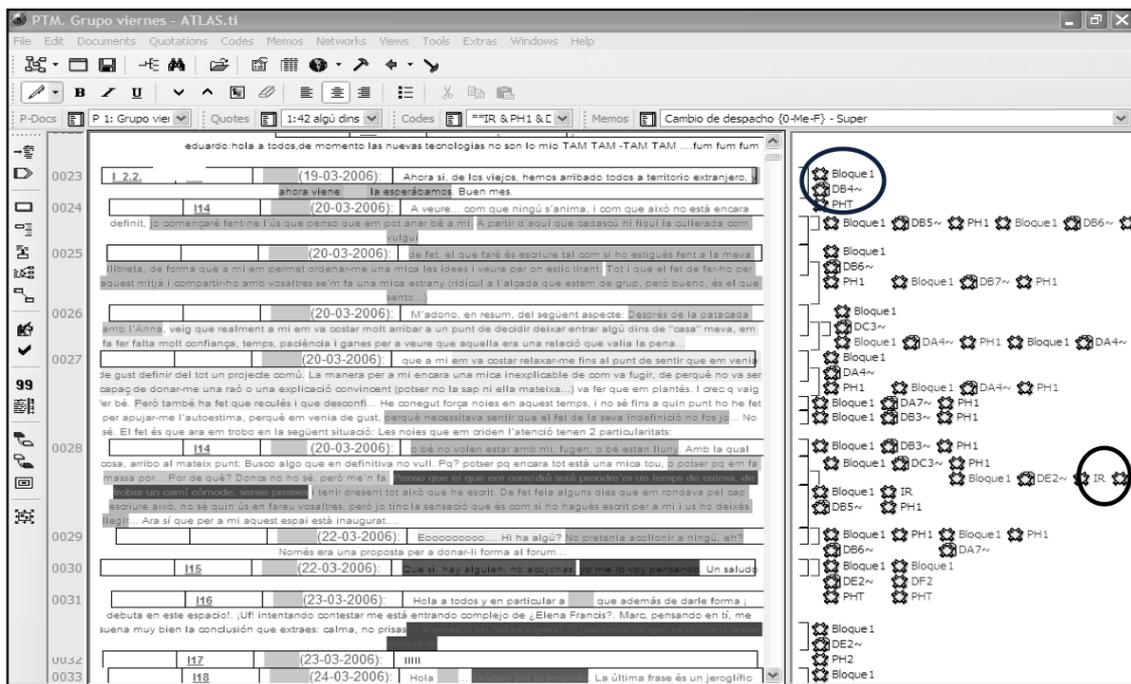


Figure 3. Screenshot of the Atlas.ti program. The PSICAT.G instrument application can be observed in the coding of the text analyzed. The different shades of gray highlight texts corresponding to each dimension. *On the right*, you see the corresponding encodings for each text segment. *Above, upper circle:* we can observe different codes applied to the same text (Block 1: Codification by textual segmentation. DB4: where DB corresponds to the relationship to the other dimension of the PSICAT.G instrument and 4 corresponds to category 4 of dimension B. Finally, HT corresponds to the male therapist participant).

Stage 4: Results interpretation

A qualitative interpretation of the results was performed, detecting different macro and micro therapeutic processes. Therapeutic macroprocesses (across long time periods) showed a marked tendency to develop in phases partly conditioned by the following contextual characteristics: 1) the frame, 2) group task objectives and 3) the extragroup reality characteristics. Therapeutic microprocesses were collected from the analysis of short and continuous group text sequences. We discovered t-patterns that involve the detection of patterns of the group relationship.

Therapeutic macroprocesses

Therapeutic macroprocesses are understood as the study of the therapeutic transformations observed along prolonged sequences of group interaction, such as a month or in phases of group dynamics. We described and studied five phases of the group process: 1) formation, 2) idealized group cohesion, 3) real group cohesion, 4) group maturity and 5) group termination⁵. In these macroprocesses we analyze the different

⁵ There are several authors who describe the phases through which a psychotherapy group goes through (Lewin, Tuckman, Pichon Rivière) We describe these 5 phases (Vaimberg, 2012) existing similarities and some differences with online psychotherapy groups:

1. Formation: elaboration of fusional and paranoid anxieties that allow initiating idealization processes.
2. Idealized group cohesion: Group consciousness as a whole. Experimentation of identification, dependence and counterdependence phenomena. Experimentation of passivity and submission to authority relationships.

communicational leaderships as well as the development of the emotional and intersubjective states of the group. They were analyzed through the evolution of the different dimensions presented before and the scales described for each of these dimensions.

One software used was the Ucinet.6-NetDraw (Borgatti et al., 2002), which facilitates social network analysis. It helped understanding the position in which an actor is located within the network, based on one's attributions and the different relationships that were established.

The simultaneous observation of the group members mutual relations multiplicity allows the visualization through graphs of the dynamic group structure (see figure 4.) In the graph the program allows visualizing nodes (each group participant) and lines. Line thickness describes a relation between proportionality and intensity of the existing interaction.

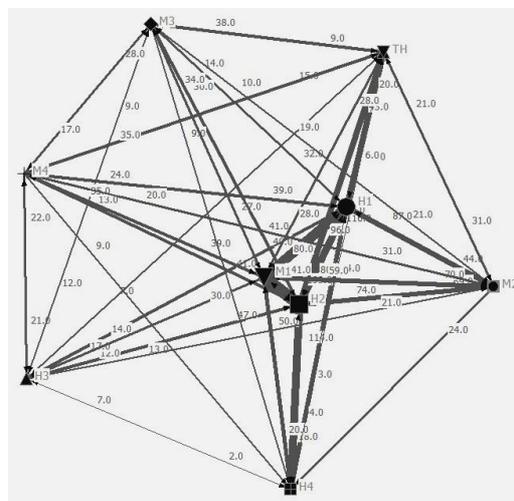


Figure 4. Ucinet.6-NetDraw. Social network analysis. Group graph. Phase of group formation.

Therapeutic microprocesses

Therapeutic microprocesses study the moments of therapeutic transformation observed in short sequences or in hidden patterns of group interaction. The systematic study of these microprocesses allows us to visualize more clearly the brief constellations of group interaction phenomena and intersections of emotional experiences that affect the production of subjectivity transformations.

5.1.3 Case 1 conclusions

Online psychotherapy group benefits and risks

The creation of a continuous virtual space between f2f group sessions, allowed group interaction to extend beyond the space-time of the f2f session, clearly facilitating group

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3. Real group cohesion: experience in the group of intrapsychic and intersubjective conflicts, expansion of discrimination and differentiation capacities. Creation of subgroups and exclusion experience elaboration.
 4. Group maturity: deepening of nuclear conflicts. Attempts of psychic and intersubjective transformation. Development of potentialities and acceptance of limitations.
 5. End of the group: Elaboration of experiences of mourning, separation and farewell, closure and future projects.

cohesion. From the permanent transfer between both virtual and f2f environments, an elaboration space arose around both spaces that facilitated the discrimination and stabilization process of intersubjective relations.

The forum's communication structure, through written language, sometimes created erroneous interpretations of the meaning of what was said and the possibility that these would be anchored in the virtual space. We found out that passivity and silence are more difficult to interpret in the forum.

Regarding the benefits and risks of online group psychotherapy, we can conclude that the fluctuation of virtual and f2f therapeutic environments offers a series of benefits that outnumber the risks observed, providing new therapeutic possibilities, reducing their respective risks and generating new problems that require the development of innovative solutions.

Characteristics of group dynamics

First, we observed that the psychotherapist position is much more active in f2f sessions, whereas in the forum patients are more active. In the virtual space the most precise intervention of the psychotherapist produces a more free and spontaneous dynamic in the interaction, although subject to restrictions of another type due to the absence of physical presence.

According to the personality structure characteristics of the individual connected to the network, different subjective experiences in virtual environments are observed, as well as different ways of acting in virtual and f2f, online-offline environments.

The experience of psychic fragmentation, emerging as one of the online communication characteristics, was lessened by the mixed modality of the communication system employed online-offline. Despite this, we collected sufficient qualitative data to affirm the existence of this psyche fragmentation characteristic. We also observed that the incidence of this phenomenon in different participants had favorable effects on the therapeutic process or generated new difficulties and that the predominance of different tendencies was related to the previous personality structure of each subject. For example, a group participant, frequently experienced situations of confusion and conflict with his f2f group companions, due to a marked use of projective identification mechanisms. In the online text group, he was able to develop a capacity for literary creation through metaphors and narrations that referred to experiences of his internal world and the internal world of his peers. The temporal space distance provided by the online device had a beneficial effect on his intersubjective group experience.

The virtual space introduces a new type of presence, virtual presence and a new type of absence, virtual absence. Virtual presence grants a greater possibility of disconnection, by pressing a key or using technology as a communication filter. Virtual absence allows you to try to reconnect more easily. Cyberspace is constituted as a special space in a transition between the inside and the outside (transitional space), with a physical support made of electronic devices connected in a network that make possible an intersubjective experience among the people connected to the network at a certain moment.

Regarding the group macroprocess, the detailed study of centered categories/extreme categories made it possible to detect the existence of group macroprocesses of cyclical characteristics, each group phase having specific characteristics.

Finally, we think that the group process in general is characterized by evolving crises as the group dynamics progresses through new problems and conflicts⁶. The group process works like a spiral, in each phase working on similar issue but on a deeper level.

Analysis of therapeutic transformation mechanisms

The lag sequential analysis (Bakeman, 1992)⁷, detected the existence of specific therapeutic processes and microprocesses in online group psychotherapies. The lag sequential analysis, when considering moments of transformation or individual or group insight, detects 74 moments of therapeutic transformation that we studied by interpreting the microprocesses that allowed these transformations. These studies showed characteristics of category centralization in the different studied dimensions.

Finally, we would like to emphasize that we consider that the possibilities offered by online group psychotherapy in terms of the development of group psychotherapeutic processes are sufficiently demonstrated. We used specialized software in this research and found out that it helps in exploring therapeutic processes and microprocesses. It can support clinical research and deepen the methods of therapeutic processes evaluation.

5.2 Case 2: Video games in the group approach of children and adolescents diagnosed with ASD

In the case below, the use of virtual reality platforms in the group treatment of children diagnosed with ASD is addressed. The group consisted of four children between the ages of 11 and 14 and two therapists: a psychologist and an educator with experience in the use of video games.

The group basically worked with the Minecraft video game (see figure 5), which all participants knew before starting therapy. This is an online construction game, a fiction planet where collective constructions can be produced. According to Vaimberg (2012), solitary games, in which one competes with oneself, can keep a young person connected to the computer in an absolute narcissistic withdrawal. Online games encourage virtualized contact with the other. The type of spontaneous choice of computer games that people perform depends on the different needs of the individual connected to the network.

The choice of the game is determined, in part, by the interests of the group participants. It is important to work with a virtual support that fulfills these essential characteristics: 1) facilitating interaction between participants, 2) allowing group participants to decide freely about their act and having an open story and 3) there is a task to be carried out, creative or collective in nature, encouraging the establishing of common objectives.

From this perspective, virtual reality is presented as a transitional space that allows the transfer of representations and emotions that come from factual reality and that affect the psychic reality. The screen, then, is structured as a place for staging situations from the

⁶ For example, in the group formation stage, if we analyze dimension B: "From overidentification with others to isolation in the self". Successive crises of decentered, of isolation or overidentification states are observed, evolving into intersubjective states centered on a balance between love for oneself and love for others. Subsequently, new crises are repeated, although in different ways in each phase of the group.

⁷ The Lag sequential analysis is the specific sequential technique that is appropriate for event sequential data. Using this type of data, lag sequential methods ask whether the presence of one code (often termed the "given" code) increases the probability that another code (often termed the "target" code) will occur. The term lag denotes where in the sequence the given and target codes occur.

participants internal world, the interactions that take place between them and where situations that occur in the screen's virtual space can be elaborated later in the f2f space.

General objectives of the ASD and virtual reality groups

First, we create a space for group participation where we can work on the relationship and communication difficulties that follow the pathology. A play and reflection mixed space, and necessarily f2f in this type of pathology, where in the same session both f2f and virtual spaces were used.

Secondly, we seek to use the transitional space of the screen as a place to travel between the f2f group world with all the limitations that these pathologies produce, and a virtual reality world in which to explore and elaborate the children's fantasies, ghosts, difficulties and abilities. The screen not only constitutes a space of representation but also a protected environment free of physical contact and direct gaze of the other.



Figure 5. Minecraft video game screenshot.

Finally, it is important to create a playful space in which group activity can be associated with moments of enjoyment. Often this activity is carried out alone at home, but this time it is different. We have witnessed cases of children diagnosed with ASD in which the videogame is not only practiced in a solitary and abusive way but also creating a restricted or obsessive interest, becoming abnormal due to its intensity and perseverance.

Session Structure

Case sessions had a duration of one and a half hour with a weekly frequency and consisted of five fundamental stages that were varying in duration and importance during the course of the group.

In the first stage (f2f) we discussed with the group members the structure of the session, record the important moments and remind the patients at what point the previous session had ended. As the group progressed, the discourse in this space took up more time, there

was more participation of the group members and it the participants brought more daily issues for discussion.

In a second stage (online) we played a short videogame that worked as a warm-up for the activity. The game was chosen by the therapeutic team to facilitate a certain atmosphere for the rest of the session. Games were initially collaborative and with pleasant themes to facilitate group cohesion and friendly attitudes in the participants. As the group progressed, competitive games were added that produced more intense sensations and emotions and aroused some of the individual or relational conflicts that were working on.

In the third stage (f2f) there was a short dialogue about what had happened in the warming-up and we proceeded to set group objectives for the Minecraft space and reach some agreements, if necessary. This space needed more intervention of the therapeutic team at the beginning of the group, as well as at the beginning of certain creative projects.

In a fourth stage (VR) the activity was carried out with Minecraft, which was mainly based on cooperative building construction projects that could last from a single session to two months. In this space, both group members and the therapist-educator participated in the game. However, the therapist-psychologist remained as a participant observer during game time. The group could progressed from simple building individual constructions in the game's 'easy mode' to more difficult game levels such as having difficulties in obtaining construction resources in 'survival mode'.

In a final stage the group elaborated on what happened in the session. At the beginning, it was very difficult for the children to participate, as they were still immersed in the game and very frustrated by the end of the activity. Little by little they became more willing to talk about what happened and to close the session.

Group specific objectives

Specific individual and group objectives were established. The first had to do mainly with observation and intervention on the role of participants in the group and their emotional reactions before specific situations of the activity.

In the case of group objectives, we work on establishing a group identity and a sense of belonging, as well as adapting the task to the needs, limitations and characteristics of each individual.

Therapists role

In this group, we differentiated two roles in the therapeutic team that facilitated the transition between virtual and f2f realities. The first is the therapist-psychologist role, leading the reflection spaces (first, third and fifth session stages). When the game started, the therapist-psychologist remained outside the virtual activity observing and interpreting the participants verbal interactions, body postures and emotional states.

The second role of the therapist-educator, provided information to the group regarding what happened in the game in the stages for reflection. He guided the playing time (second and fourth session stages), participating in it and proposing or generating concrete situations as agreed with the therapist-psychologist.

It is worth noting the essential coordination between therapists that nourishes both spaces. Thus, for example, when the group could not say goodbye temporarily to one of its members, who was absent during several sessions followed by a hospitalization period, the following proposal was made by the therapeutic team:

The therapist-psychologist discussed the situation even though the participants tried to avoid it, some feeling very sorry for the partner's absence and others not being able to perceive this change in the dynamics of the group. It was decided to use the game facilitating a situation in which the participants had to build a room for each group member within a castle of fear project. The group decided to jointly build a room for the child who is absent. During building the collective construction the therapist-psychologist commented on participants' attitudes and verbalized what these attitudes imply for the absent child and for those present in the group. In a later stage the group assessed their attempt to repair the vacuum left by the partner's absence.

As a final conclusion, we can say that life and psychotherapy are currently being developed in virtual & f2f environments. We need original theories and techniques to understand and intervene on the new forms of mental functioning that occur for all ages and psychopathologies.

Communication mediated by technologies and the new mind architectures have developed a universe that incites us to different understandings of the intersubjective phenomena and the development of new psychotherapeutic intervention methodologies. In the two cases presented, we believe we have made progress in the field of online group psychotherapies in neurotic patients and in children diagnosed with ASD. There is a world of possibilities to continue investigating.

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