Chapter 15
Aside on Children and Youths, on Identity Construction in the Digital World

Abstract Symbiotic processes have a special impact on children and young people. Born in a world of technological tools paraphernalia linked to the Internet and the most widespread media, they cannot even conceive of a life where they would not be permanently connected to the network. Traditional notions associated with privacy are thus questioned without much awareness. The impacts of fragmented information, of the way social networks summon reactivity and immediate emotional response, of the permanent presence of the other mediated by a smartphone, a tablet or a computer, are not yet thought out and conceived in all their consequences. However, the phenomena of scattered and diffuse identity and the emergence of behaviours intolerant to frustration are becoming increasingly evident. In a world where in each of those present in the network there constitute within themselves like one alter ego (or more), youths have difficulty in structuring a solid and differentiating identity, caving before the multiple pressures they are subjected to. Perhaps in the near future the notion of building a differentiated identity will not have the same pertinence it has today.

We are not born complete. Our identity is built in interaction with the environment. This is one of the safe acquisitions of Developmental Psychology. While there is no widely shared paradigm about identity-building issues, not even the staunchest advocates of genetic determination deny the influence of the environment on its construction.

Bearing this in mind, it should be noted that the ubiquity of computer media—from smartphones to tablets and computers—characterizes the context of any child or youth today, in any culture, as long as they have a minimally acceptable standard of living. The term "minimally acceptable" means that people do without purchasing books, family outings, or even an enriching trip to acquire the latest phone of a given brand, or the most alluring tablet on the market.

On the other hand, the emergence of a new addiction is well known and relatively well documented. This not only involves the need to be permanently online, connected to social networks, but also involves Internet games that become a priority in the lives of children and youths. Many adults also suffer from such dependence, with severe consequences on their social and professional lives.

The case of children and youths is emblematic because they are at the stage of building their identity. Yet, it is at this critical stage that the whole panoply of digital technologies is mediating their social relations. Online games, virtual social networks and the ubiquity of the internet thus bring about a new context for development. Is it possible to characterize the impact of these new technologies on developmental processes, namely on the construction of identity?

There is much research to do in this area, but it is certain that the terms *cyberculture symbiosis* and *syncretism* provide the key to an approach to the issue. First of all, we can identify what is important in the immensity of what is now called "cyberculture", trying to find structural and structuring concepts. At the outset, we will identify two. The first, is about dilution, namely the concept of "syncretism". The other, "symbiosis", refers to a contributive and constructive individuality in a common ocean of individualities.

The symbiosis/syncretism issue dates from far back, it is a problem inherent in biological life itself. Bacteria had to symbiotically cooperate to form eukaryotes, single- or multi-cellular living beings with cells already containing an individualized nucleus, separated from the cytoplasm by a surrounding membrane. Eukaryotic cells were formed by bacterial associations. From the latter, they maintain mitochondria, which are self-replicating entities with their own individuality, within the eukaryotic cell. In addition, organelles from other eukaryotic cells (viz. primitive and unicellular green algae) were adopted. All of these entities participating in the global metabolic cooperation that constitutes a cell with a nucleus.

The issue of individuality/dilution, symbiosis/syncretism then recurs and emerges at successive levels: from the organs to the organism, from the latter to the individual, from it to the group, from them to society, and from the latter to information networks and planetary info-ecology.

In order to proceed, we shall first of all provide the structuring meanings of cybernetics and cyberculture, the latter defined by analogy with the former, as well as the definitions of symbiosis and syncretism.

15.1 Cybernetics and Cyberculture

In his book "*Cybernetics: Or Control and Communication in the Animal and the Machine*," Wiener (1948)[1] first coined the word "Cybernetics." It results from the Greek κυβερνητική (*kybernetike*), meaning "governance": i.e. all that pertains to driving, navigating, and piloting. The word κυβερνήτης (*kybernetes*) means "the steersman, or captain of the ship."

The book's subtitle, "*Control and Communication in the Animal and the Machine*," suggests that there is something common to the animal and the machine concerning communication and control. Namely, how informational signals may be encoded, transmitted and decoded; and how such signals allow to exert control,

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[1] Accessed at https://en.wikipedia.org/wiki/Cybernetics.

through retroactive loops that keep the focus on the objectives, and through sensors and discrepancy correctors between the target stage to be reached and the current stage. After all, Wiener was interested in employing these communication and control capabilities to pilot anti-aircraft missiles, as well as in stabilizing the human heart. The research focused on the mathematical formulation and implementation of mechanisms of control and communication, inspired by those found in living beings. Cybernetics had immediate applications in radar, missile control, and medicine, and has since been influential in the study of mechanical, physical, biological, cognitive, and social systems.

Although in the 21st century the term "cybernetics" is loosely utilised to identify any system using information technology, we are not far from the meaning of "cyberculture" in the context of a social cybernetics (or "socio-cybernetics"). This has led us to an attempt to define it, by analogy, with "Cybernetics." There results the definition "*Cyberculture: Or Cultural Control and Communication in Networked Mechanisms*." That is, we appeal to the abstract notion of enabling mechanism, while something common to living beings and their artefacts (such as the machines of human technology), but now extended to the notion of networking, which is a locus of cyber-cultural opportunity for cooperation.

"Cyberculture" thus comprises: cultural communication through technology; emergence of cultural behaviours in a technological network; cultural influence and control of communication and behaviours in that network.

It involves various components and features, among others: attention and inattention; encoding and decoding; human and non-human agents, plus avatars; sensors and actuators; augmented reality; multi-tasking; collective and distributed memory; big data over data mining; emerging network structures; self-evolution; control and lack thereof control; and so on.

Cyberculture therefore encompasses the networked emergence of culturing behaviours—and this is new—because emergence is what happens when several previous things are brought together, and new entities and new phenomena that were not anticipated at the outset appear in the newly formed set. This is what happened when the first eukaryotic cells appeared, whose emergence took, however, a good couple of billions of years subsequent to the first living cells. Emergence generates the problem of cooperation. Darwin did not know how to explain cooperation: how, despite all competition cooperation comes, which is a prime requisite for gregariousness.

It is extremely important that we study emergence, because when we put all the many entities together—some of them entirely new—into the world network, new things will emerge. New elements and behaviours will emerge, adjusted to the new system of co-dependent interactions. And just as an organism is made up of similar cells, functioning in groups and syncretically in organs, and these in turn functioning in symbiosis in that organism, etc., through various multilevels of association, we may say that we are still in a, say, infantile stage of network emergence, where we are probably going to become diluted. The question arises as to what extent we will syncretically dilute ourselves, or to what extent we will introduce, individually or in groups, some amount of symbiotic structuring.

We have studied extensively this facet of emergent cooperation using Evolutionary Game Theory (EGT), i.e. the application of game theory to mutating evolutionary populations. Indeed, EGT provides scaffolding for the mathematical definition of competitive games, strategies, and analysis of competition and cooperation models, and is used to predict the results of having a multiplicity of strategies that evolve in co-presence. EGT differs from classical game theory in its emphasis on the dynamics frequency of each strategy, even under the effect of spontaneous mutations. EGT helps explain the basis of altruistic behaviours in evolution, whether biological or cultural. Consequently, it has gained the interest of economists, sociologists, anthropologists, philosophers, and computer scientists.

Therefore, we have been examining how and under what conditions moral behaviours emerge in networks of agents (Pereira 2016a). Because without moral rules there can be no cooperation between agents, be they machines or humans. We are engaged in researching how to make machines moral, since they have to live among us, and be convivial with one another too (Pereira and Saptawijaya 2016). Machines from different manufacturers will need to have something in common, with respect to their behavioural regulations, and that will be the said emerging morality. EGT is the ideal mathematical theory for studying the emergence of moral behaviours as a result of various co-presence strategies, as it allows us to analyse this in the abstract, and to indicate how they may be concretely implemented, in a computational manner.

How can we think about this problem from the cyberculture standpoint, with some of the above-mentioned components and functionalities? A cyberculture which involves an entire info-ecology—an information ecology—where each of us is but a small portion of a huge network (symbiotic?) , itself evolving (overly syncretic?). How and where to begin to grasp such a complex thing in what it concerns us as a whole?

Yet, cyberculture manifests itself in both syncretic and symbiotic structures; therefore, it is important first of all to provide the definitions that we will use.

Symbiosis—According to the "*Infopédia*" Porto Editora, there are three meanings to "Symbiosis", the last two in a figurative sense[2]: (1) Meaning in biology: association of individuals of different species, with mutual benefit (at least apparent); (2) Figurative sense: intimate association of individuals; (3) Figurative sense: cooperative relationship that benefits the individuals involved.

From these above-cited meanings we will specifically embrace the third one.

Syncretism—According to the "*Infopédia*" Porto Editora, there are three meanings to "Syncretism"[3]: (1) Meaning in Religion: fusion phenomena of different religious doctrines or practices; (2) Meaning in Sociology: fusion of different cultural elements; (3) Meaning in Psychology: primitive form of perception and thought; characterized by global, undifferentiated, indistinct apprehension; patent in early childhood mentality.

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[2]Accessed at https://www.infopedia.pt/dicionarios/lingua-portuguesa/simbiose?ic-click.

[3]Accessed at https://www.infopedia.pt/dicionarios/lingua-portuguesa/sincretismo?ic-click.

From these above-cited meanings we will adopt and extrapolate more specifically the third. This psychological sense begins when the child is born, in which it is still fused with its exterior, as if it were still in the womb; in which it does not distinguish between itself and the world. Only afterwards does it begin to disentangle the homogeneous and the heterogeneous, to distinguish between itself and the mother, between itself and the world, and there begins the process of identity creation.

15.2 Focus on Young People

Now we are all in an infant phase of the web's development. The impact of what will happen to us in the future in the long term will be very much the result of what will happen to our children in their development with the web. How will our children and grandchildren be affected by this stage of identity attainment in an environment that is largely one of dilution?

Therefore, given the importance such dilution has for each of us own future development, and of our current joint infantile stage on the web, let us focus here mainly on the problem of young people's identity development in this engaging web age, leaving aside those of us who developed their identity at an earlier time. From now on we will concentrate only on this focus of origin, on young people, so as to grasp, by whichever end, the vast complexity of the "cyberculture" theme—one too unfathomable for a single chapter.

So far, little attention has been paid to this problematic topic except by psycho-analytic authors. In particular, attention has been paid to the reasons or motives that lead young people to be increasingly together via the net, and at the same time ever more alone, according to Turkle's felicitous title, *Alone Together* (Turkle 2011).

In this book, Sherry Turkle also tells us extensively about robots for the elderly, and robots for children and young people. In what that also impairs the formation and maintenance of identity, as we need to have some other that is not just an extension of ourselves, one other that is human, that has initiatives, that can say no, that can argue. Such one other tends to disappear.

This dilution is not only propitiated by the relationship with active screens, but also by the excessive access to the network as well. It is also favoured by the increasingly intense and widespread relationships of proximity with robots. We will not deal here with these "plush toy robots", but more abstractly rather with digital communication.

Digital technology has profoundly changed lifestyles, the speed of interpersonal communication, and the quality of relationships.[4] For young people, digital devices are extensions of their own bodies, inseparable from the sentiment of self and group identity (Lemma 2013). The boundaries between virtual world and external reality become blurred, and the self may omnipotently lose the organizing references of actual circumstances.

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[4]For further discussion, see: Gonçalves (2016) (Portuguese Psychoanalysis Society).

What is the influence these changes have had on young people's subjective life and development? There is more impulsiveness, activity and perception, but less structuring thought about information. There is no time to organize the information. The (psychoanalytic) defence mechanisms are, therefore, more primitive, thus giving rise to a greater self-cleavage, a greater denial, and a greater tendency for adhesive identifications.

Such changes in the subjective lives of young people do not respond to their evolutionary and emotional needs.[5] Tensions between internal needs and external determinations increase; its resolution is frustrated and, in psychoanalytic language, there is less repression (mechanism that keeps emotions, drives, affections, etc. in the unconscious), and less displacement (unconscious transference of an intense emotion about the object of origin to another one). It also diminishes patience, attention and concentration, tolerance to frustration, to waiting, and to uncertainty (Bilbao 2016), so far are the stimuli. The connection to the net creates a dependency that needs to be continuous (Kardaras 2016).

There is, therefore, more externalization (people live more for what is external), and hence less interiority and cohesion of the self. The very parental dispersion, when permanently and daily taking place, caused by this same digital technology, aggravates in the youth the feeling of isolation and self-devaluation. It creates the addictive need to see immediate responses to postings, whose return produces biochemically pleasure, as demonstrated in laboratory. Almost like the mice that incessantly press the button that provides them pleasure via an electrode implanted in the brain.

On this, José Pacheco Pereira writes:

> Societies without human neighbouring relationships, companionship and friendship, without group interactions, without collective movements of common interest, depend on artificial and, I insist, poor forms of relationships that become as addictive as drugs. There is no greater punishment for a teenager than taking away their mobile phone, and some of the most serious conflicts that occur today in schools are linked to the mobile phone, which acts as a lifeline.

> Nothing is more meaningful and depressing than seeing people at a school entrance, or at a popular restaurant, or in the street, people who are together but barely talk to one another, but are attentive to their cell phones, texting, sending pictures, viewing their Facebook page hundreds of times a day. What life remains?[6]

The permanent connection to the network, and the being chained to their devices, does not favour independence from the object—the one other—nor mental elaboration, due to its absence. The web is an extension of us, and of our avatars. Alter egos can be created, not consolidating any particular ego, because it is easier to remain diluted amongst alter egos. This leads to schizoid situations.

Obviously, the construction of a solid self-identity, with a well-defined differentiation, essential for creativity, consolidation, and security is compromised. One of the reasons why animals, in general, are always alert or on the move, permanently busy

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[5]This whole universe of questions is properly explored in the text of M. J. Gonçalves, referred to in the previous note.

[6]Pereira (2016b).

in their awake time, is that being alive requires energy, and energy must therefore be constantly used in the possible best of their ability. If the animal uses calories to stay alive, and does not use that energy well, looking around to perceive and scrutinize the environment, and to detect eventual predators, the energy cost is wasted. There is, therefore, a deep anguish of life itself in employing time well. This horror of the vacuum has to be reformulated in human beings in internal constructions that prepare us for the future, not leaving us permanently obsessed with the present.

The psychic work of de-idealization of the image of parents is also put into question. The youth moves into a wider fusion rather than striving to break free from parental fusion. This compromises the ability to be alone with themselves. The historical track record of reality in space and time is lost. Personal identity is denied via the ever-available floating identities—evident in the personal profiles provided on social networks, and in game avatars. Even sexual difference might be denied. All in all, no good lessons are learned from too easy an alienation in the relational virtual world and its apparent opportunities.

For all this, the mimetic and adhesive identifications are reinforced. We tend to say "I am the same as that one" or "I reject that one." Growth is established by dependent mimicry and affiliation, and not by self-construction.

15.3 Symbiosis and Syncretism

We have been placing on both sides of the scale syncretism and symbiosis—the latter, it should be noted, does not correspond to the psychoanalytic use of the term. Both are needed and coexist. The problem we raise is that there is increasingly more syncretism and less symbiosis. We risk amalgamating ourselves as individual beings in the planet's info-ecology, in the global semantic network, as well as losing our identity. We may dissolve into a superorganism. Perhaps like the ants, perhaps it is inevitable even to be diluted in this superorganism. We have no answers to this, but we believe that questions about Cyberculture involve these two concepts, and pose such problems.

We highlight the constructions below, which are clearly few, but decisively exemplary of Symbiosis in Cyberculture:

- Wikipedia, Wiktionary.
- Common blogs.
- Public data repertoires.
- Software in common, viz. SourceForge (https://sourceforge.net).
- Real-time scientific cooperation.
- Provision of common Cloud resources.
- Preparation of petitions.
- Deposits of joint collections.

We also highlight these diluting facets resulting from Syncretism in Cyberculture:

- Imperfect psychic evolution.
- Superficiality.
- Lack of time. Misused time. Agitation.
- Hyperactivity and attention deficit.
- Fusional incoherence. Constant need for new stimuli.
- Discontinuity and continuation failure, due to hopping.
- Ineffective multitasking.
- Schizoid personality disorder.
- Dilution of the self and emotional bias.

In short, it could be said that, in Cyberculture, concerning youths:

- There is too much syncretism and too little symbiosis.
- Further co-construction of knowledge is lacking.
- Greater and more independent personal cognitive deepening is lacking.
- The capacity to be alone is lacking, in place of *Alone Together*, in the serendipitous expression of Turkle (2011).

It is, therefore, the very cognitive development of the new generations that is at stake. What this means for humanity as a whole, and for subsequent generations, is that there is more and more "being together, but alone." The face-to-face and relationships as wholes, are lost. Each one is on their smartphones. On Facebook, or other social networks, everyone is controlling what they say. Young people today do not like to call, because the phone opens up conversations, who knows where they can head to, and how long they can take. They do not even like the email, because it is too open in length, and left pending longer, waiting for more elaborate answers. They prefer the compact, controlled, two-line SMS, and if one message exchange does not suit them, they drop it and move to another.

15.4   Causality and Free Will

Symbiotic causality occurs due to the persistence of a strong internal determination from the inside out. The individual wishes to do this or that, and has his personal reasons and track record for wishing to do so, in order to influence the outside and avoid being overwhelmed by external causes. Syncretic causality is submerged by external determination, which occurs from the outside in. The person is diluted before the external stimuli constantly bombarding, without time to elaborate and counteract a causality in the opposite direction, from the inside out. The person therefore then reacts on impulse with the *sound bytes* of the occasion, often "kicking towards the corner."

15.5 Coda: Cyber-Selves—Distributed or Not At All??

These topics raise vast questions, hence the double question mark. Below we provide some provocative interrogations in response.

At the cybercultural technological intersection we are in, can we at all costs maintain an individuality, perhaps symbiotic, or will we rather collapse in the face of invasive syncretic synergies? Do we want at all costs to retain and affirm an individuality, or will we inevitably become diluted in the identities of the group? Will we resist, or will we surrender to the invasive and syncretic synergy of football events in the media? Or to the dilution on reality shows of the TV news about judicial and court cases in daily episodes? Or in the comic-book news about the economic life of the markets and world politics?

In the emerging Cyberculture, the core notions of self, separation, and individuality are very important. These, with their much emphasis in "Western culture", are not so relevant in other cultures. In the West, it is known that the concepts of self, separation, and individuation are very pronounced, and in contrast to other cultures, namely in the East.

An example of this occurs in therapy. In the West, the individual self is the object of therapy: a self that values differentiation. In the East, the relational self is more permeable, and the self-other boundaries too. In this case, the identity unit is not that of the internal representation of oneself and of the other, but that of the family or community where the self is distributed and given priority (Lemma 2013).

The wisdom of the East may be relevant to Western Cyberculture (Roland 1988). There, the individual asks himself how he can, in symbiosis, contribute more, giving priority to the whole. Instead of how they can defend themselves more, giving syncretic priority to themselves.

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