

Rock the Internet Blues!

A critical view of the evolution of the Internet

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(Full length, more detailed versions of this paper, with references and sources, in English, French and Spanish, can be read at <http://funredes.org/RockInternetBlues>)

One of the most powerful and interesting virtual objects that emerged in the early history of the Internet is the virtual community. A place where a group of people who share a common interest or a specific topic exchange messages, usually in an environment of mutual respect. Consensual rules must be accepted by any subscriber, and anonymity is generally not allowed. Some communities, also called learning communities, are fertile ground for the collective creation of knowledge. The cognitive enrichment of participants is fostered through intense dialogues, sustained upon arguments and cross-thinking.

The authors were creators and animators of one of those spaces¹ where some 500 people gathered, mainly activists and academics, all motivated by the issue of the social impact of the Internet in Latin America and the Caribbean.

The Internet has evolved into a place where mutual disrespect, dissemination of false or biased information, without clear rules for the behavior of its inhabitants abound and, therefore, it has become a breeding ground for hatred and racism.

There are still wonderful realities and elements to be optimistic, but it is necessary to face the dark side of the evolution of the Internet and find a way out. The *synergy* proper to the original network shall not leave all space for *antagonism*.

The dominant behaviors in the network reveals the propensity to transform the act of communicating into one of just informing and therefore the **end of dialogue**. In other words, the basic meaning of "communication", as a dialogue between people, has been transforming into broadcasting, a one-way act of communicating one to many. The extraordinary factor of *serendipity* that characterized the Internet blurred into a highly redundant loop of often useless information. Today the sequences of exchanges between people that are authentic dialogues are uncommon; they have been reduced to their minimum expression with the "likes" typical of the Social Networks (SN) and to their maximum expression with a comment, which rarely is meant to provoke a thread of responses. Otherwise, short and definitive statements which do not appeal to dialogue and cut off a potential collaborative process of building new knowledge.

¹ MISTICA (Methodology and Social Impact of Information and Communication Technologies in Latin America and the Caribbean) whose website remains largely preserved despite the fact that the project and the institution that supported it ceased operations: <http://funredes.org/mistica>.

Dialogue has been replaced by "*egomation*". *Egomation* includes information that can be described as trivial and without charge of general interest, except for those who want to market some products (examples: my current state of mind, what I am eating and other *selfies*) and an articulated projection of the user, his virtual self. It can include statements based on issues relevant to the interests of that self and beliefs on any topic and whatever opinion on whatever subject, with or, too often without argumentation to sustain.

The *egomation* is then a kind of predominance of the self together with information related to what is directly or indirectly relevant to that self. Naturally each person seems to be much more interested in designing his *egomation* than in knowing that of others. The conditions are then not very conducive to dialogue.

The sum of *egomations* is a noise in terms of knowledge, a noise that the Technology Giants (TG) learned to use for their benefits. But it is still a noise for society, no matter how loud it is, in blatant contrast to the amount of valuable information that the Web has managed to gather. That background human noise has always existed, although it naturally dissipated fast; now digital platforms record and magnify it with unavoidable social repercussions.

How was the dialogue lost along the way? Why does the common mortal now behave as a marketing self-agent? How did dialogue evolve into recursive exchange of *egomation*?

There is a singularity (or "original sin") that triggered a series of events that has led us here. The emergence of TG, such as Google, who made a decision that was followed by others and created a powerful, and apparently irreversible, pattern in the virtual business. It created the conditions to transform users into products which made their business highly profitable and sustainable. Furthermore, the GT managed to ensure that users assume massively and fully the product role they have assigned them. Thus, they have become self-marketing agents (through their *egomation*) unaware they were the product that benefits others.

The Internet was built in the 1980s within the world of academia and libertarian civil society groups². Their DNA was to share, free of charge, openly and inclusively, the foundations of their creation and further developments on these principles and values. These traits unleashed the multiple and attractive utopias that accompanied it, while at the same time represented an obstacle for profitable businesses, even those with value and possibilities of success.

Fighting a culture based on gratuitousness, so anchored in the depths of the community, was an impossible challenge and could only be overcome by an actor of power who managed to break another deep cultural foundation of academic and civil society heritage: not mixing advertising with inter-human professional³.

²The official discourse confuses the history of Arpanet (and TCP-IP) with that of the Internet. The cultural and sociological foundations of the network of networks have little to do with Arpanet and its paternity is more clearly located in academic networks like Bitnet and libertarian networks like Usenet.

³ To promote yourself in this context, you had to donate to the community part of your own expertise and this pattern molded the ecosystem.

For creating a solid business case Google had two options:

- 1) Break the free culture and propose services at a fair price.
- 2) Respect it and find another indirect way to generate incomes.

The prerequisite of option (1) was to easily invoice cents or fractions of cents. The system had the ability to do it. The outcome would have been significant:

- The price parameters could have been adjusted so that the services generate the same income, with no critical amount for users;
- It would have meant the end of email spamming, a toxic parasite generated by gratuitousness;
- It would have represented a solid basis for an information ecology⁴;
- It would have provided a solid foundation⁵ for an information economy and long-term coherence;
- It would have kept intact Internet's privacy policies and protection against improper and unwanted advertising.

Google selected option (2) and found no resistance from society. With that decision, Google opened the virtual world to the huge advertising market that eventually it will dominate and the by-product was to set the destiny of the Internet.

Thus, the users and their profiles were transformed, together with the *egomation* that they could directly or indirectly generate, into juicy products for that business. In doing so it was going to give rise to other powerful players to get in action, expanding and extending the same logic, mainly and not only Facebook.

The destiny was drawn:

- Google was going to keep the search history of each user and thus know more about each of them than their psychologist.
- Subsequently Google proposed very effective free applications that were massively adopted and that allowed to complement the capture of *egomation* in all directions: the content of emails (1.5 billion active Gmail users in 2019), visited sites (80% of websites use Google Analytics to collect traffic data), registered images and videos, all complemented by the spatial positioning via GPS of cell phone users who use the Android operating system (88% of them).

So, we arrived two decades later, at the moment when the Internet dog that said in 1993 "*On the Internet nobody knows that I am a dog!*"⁶ is no longer anonymous. Not only does Google know that it is a dog, but it also knows its breed, its taste for food, its taste for bitches, what disease it suffers from and the schedule for the groomer or buy a bone. Google reports this *egomation*, in some way and certainly not free, to companies that want to sell some bone to this dog.

⁴ The unregulated use of Internet resources led to unbridled electricity consumption which in 2007 represented an impact on global warming comparable to that of air transport. Pricing could have played a natural regulatory role by reducing unethical traffic. On the other hand, a suitably structured tariff scheme could have avoided the acute financing crisis suffered by the traditional information media in the current situation where GoogleNews uses them without mercy and without cost.

⁵ Referring to Shannon state equation on entropy and derived Brillouin's studies on negentropy as information.

⁶ https://en.wikipedia.org/wiki/On_the_Internet,_nobody_knows_you%27re_a_dog

Furthermore, Google proposed that content providers leave a space on their websites for dynamically placed advertising according to its audience. Depending on the traffic generated, the producers will receive a remuneration that could reach significant figures if the page is much visited. Many actors in the digital world joined the trend on pursuing the greater number of visits as objective and became intermediaries for digital advertising.

In doing so, users started nurturing the immense databases that TG have built to be treated with tools associated with Artificial Intelligence (AI), big data and data science. **Surveillance capitalism** was on the rise.

Google deserved recognition for its contribution on an algorithm to present search results inspired by the researcher evaluation model of counting citations instead of only publications and enhance it with clever recursive weighting (a well referenced link weight more). However, with the choice made on the business model, the algorithm initially conceived with the mindset of open access to knowledge was ruthlessly perverted by choosing to first present the sites that generate greater advertising benefits. Then the algorithm incorporates into the results additional parameters such as the history of searches and visits of each user.

With this, a capsule is created that more accurately describes the market segment to which each user belongs, enclosing users inside a bubble despite the immensity of valuable content available. That logic quickly spread to applications and services promoted by other providers amplifying the side effects of *egomation* growth and bubble closing.

What only matters now is to reach the largest number of visitors and likes. Those who market themselves the best are rewarded: **buzz**, a word qualifying at the origin of a parasitic noise in sound equipment and **virality**, an extremely pathological contagion, are today considered the two supreme virtues of that toxic planetary marketing and the north of the new avatar of homo sapiens, *homo mercadens*.

The evolution leads to a point where the global weight of information of the Internet decreases because of the growth of entropy due to *egomation* and the average chunk of the Web visited by users shrunk due to the bubble phenomenon.

The global knowledge society evolves into the *society of egomation*, sister of the *society of opinion* and mother of the *society of disinformation*. The one where fake news prevails.

The most recent stage of this evolution goes beyond the digital realm and contaminate the democratic foundation of the society: many people take the behaviors observed in the virtual world as unquestionable truths and use them as guideline for behavior in the real world. As example, the confused belief that freedom of expression has priority over all others because if on the Internet I can defame, insult and threaten death without taking the risk that corresponding laws apply then I can physically approach the person I am assaulting and insult and threaten physically. Another example from those pandemic times, an online survey, involving people who do not understand medicine or biomedical research "demonstrates" in France that chloroquine is a suitable medicine to combat the disease.

Why is the retention of private information a sensitive point for citizens if the act is carried out by a government and not so much if it is perpetrated by private companies (as for example with Cambridge Analytica scandal which manipulate 200 elections using Facebook profiles in 68 countries)?

When Edward Snowden, in 2013, reveals to the world that the National Security Agency (NSA) is spying on communications worldwide, using the global digital platform, this caused a tremendous and healthy commotion, except that informed persons know well that for many years OECD countries had developed advanced telecommunication espionage systems.

What is surprising is that the same people who declared themselves shocked by this revelation will not show comparable concern about the fact that the TG were doing the same, driven by the expansion of their businesses and without any control mechanism that regulates their actions.

Will it be a fully thought-out and assumed decision or will it rather reflect the lack of education in betting on what happens in the digital world? Our main hypothesis is a low level of a **digital culture** which needs to be massively taught to act harmoniously, within humanistic and ecologically sustainable values, in the digital world. This has become absolute priority for the planet, at the same level as the fight against global warming.

We are faced with the urgency of building a new paradigm focused on **quality education to integrate a digital culture** with an environment where there is an overwhelming amount of information circulating without the majority of users being endowed with the capacity required to assess it⁷. It is a complex environment where simplistic views, such as the cause-effect model, fall short to address the volatility, ambiguity and uncertainty that the inhabitants of the global knowledge society have to deal with.

The bottom line of the strategy encompasses reaching all citizens in their respective and diverse roles and giving them an attractive proposal to adopt disruptive behaviors that allow creating an alternative digital culture. **Information literacy** involves influencing the culture of the public official, the politician, the businessman, the entrepreneur and the ordinary citizen. It implies appropriate curricular interventions at all levels, from pre-school to higher through the various degrees of professional training, in order to humanize the sense of appropriating technology throughout life.

The national, regional, international, multilateral and global bureaucratic bodies that are currently in charge of promoting and assimilating technological developments mainly collect trends optimistic and complacent. They seem to lack the intention of making visible the issues that are already being noticed by various sectors of society and for which prompt action is recommended.

It is the responsibility of the ICT and information professionals to ensure that the quality of the services made available to citizens comply with the ethical and

⁷ The required competencies are not yet included in the academic curricula of formal educational systems.

transparency standards that guarantee the rights of information and expression without subjecting them to pecuniary or subordinate interests. Users have the right to demand **the transparency of the algorithms** which process their explicit or implicit inputs, in order to control biased, unfair or unethical use. On the business side, they must demand that the use of the information they capture from users, particularly in SN, should be previously explicated.

Along with this demand to the developers, ethical mechanisms must be created to **combat anonymity in the networks** that allows to hide the attacks of all kinds of criminals and slanderers who are protected under this figure.

The **4th. Industrial Revolution** is marked by an unprecedented technological convergence where ICTs come together with nanotechnology, biotechnology and cognitive sciences, creating a framework that makes it possible for the people, sooner rather than later, to be cybernetically integrated into what *the Internet of Things*⁸.

The great impact of the **4th. Industrial Revolution** on the global knowledge society is beyond the reach of local or national public policies and demands widely concerted efforts, without imposition by any of the parties. We believe in a strategy that must be taken from now on a call to declare a **Digital Emergency**, similar to the one existing with respect to climate change. The time to recompose the charges and attack the asymmetries is running out. Lack of action favors undesirable effects.

⁸ To give a frightening example, it is not science fiction a scenario where, within 10 to 20 years, augmented reality glasses are complemented by brain sensors that allow TG to capture and interpret brain information. With the subconscious of the user-products within the reach of the business world, the ethical consequences will be colossal