

BRAINWASHING BY SOCIAL MEDIA: A THREAT TO FREEDOM, A RISK FOR DICTATORSHIP

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Believe nothing just because a so-called wise person said it
 Believe nothing just because a belief is generally held
 Believe nothing just because someone else believes it
 Believe only what you yourself test and judge to be true

(Bhudda)

Do human freedom and free will exist? Again: might they exist in a physically-determined world? These are questions highly debated amongst philosophers in the past centuries who until now could not resolve these problems than continue to foster distant and often opposite positions.

More recently, the debate has involved the neuroscientific domain given the increasing research on brain processes of the past decades. A series of data deriving from studies of experimental psychology centered on the conscious control of the state of the action, seems to lead to the conclusion that free will does not exist and is a mere “illusion” (Lavazza and Inglese, 2015; Libet et al., 1983; Libet, 1985, 2004). Obviously, although the findings of these experiments are just a partial, albeit intriguing contribution to the complexity of the original questions, nevertheless they help to highlight the role of brain structures that unavoidably have intrinsic (deterministic?) limits and constraints (Lavazza, 2016).

However, currently we do know for sure that our brain processes result from the interactions of different factors: genetics (for a small part), experience and thus learning, as well as triggers deriving from internal and external environments. Without the constant relationships with the context we could not exist, up to the point that, as Bode et al. (2014) stated, the complete absence of context is “impossible”.

Every kind of triggers and stimuli leaves traces in our brain that, if positive, may become good incentives or memories somehow comforting us in bad days, but if negative, may represent a sort of “wound” that might lead to a permanent “scar”. In both cases there are new fingerprints in the brain that continuously changes and remodels itself through neuroplasticity, that is one of its most peculiar functions permitting neuronal development, growth, repair and survival (Fuchs and Flügge, 2014). Perhaps, while trying to answer the question of being or not being free, we could say that we are slavers of the dynamic activity of brain working in the range of milliseconds, the so-called connectome that modifies functions through neuroplasticity, just to simply explain the complexity of these processes (McEwen, 2018; Horn et al., 2014). We are what the changing connectome decides after modifying and shaping synapses, neurotransmitters, hormones and modulators on the basis of a continuous flux of information from both the body and the environment, especially, in the case of our species, the social environment, that is to say, the others. We do know since we are born, as it is embedded in our nature, that nothing is more rewarding and able to elicit a sense of safety and to decrease the stress system with increased health than a strong social bond (Sue Carter et al., 2020). Needless to say, about 70% of the brain structures are devoted to implement and modulate social processes.

However, what happens if the environment is virtual, and the possibility of relationships are just limited to those provided by social media? This is another great issue emerging with the exponentially increased availability of Internet in the cell phones that currently outnumber the world population. Less than 10 years ago, in her famous book entitled *Mind change* (2015), Susan Greenfield,

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a British neuroscientist, had already underlined the possible problems and effects on the brain of excessive use of Internet and reduced socialization especially amongst millennials and younger generations. Indeed, the potential of Internet seems limitless (“all world in one hand”), the benefits are immediately rewarding, and the positive effects evident on almost all aspects of everyday life make it a formidable tool. The benefits or “bright sides” of Internet include interconnections (easier establishment/maintenance of relationships and even telemedicine that was extremely useful during the lockdowns due to Covid-19 pandemic), rapid communication and source of any kind of information, socio-metric analyses, entertainment and shopping. However, these positive features might easily turn into “dark sides”, specifically, incorrect information and fake news, privacy issues and hacking, harmful thoughts or behaviors, cyberbullying, inappropriate website, distraction from reality and addiction. Not surprisingly, the abuse of the Internet is dramatically emerging as a latest epidemic that, similarly to substance abuse and other behavioral addictions may lead to significant impairment in work, social and relational activities (Beard & Wolf, 2001; Marazziti et al., 2014; Wydianto & Griffiths, 2006). This pathological condition is now called problematic Internet use (PIU) that still remains an elusive concept, to the point that it is not actually recognized as a mental disorder with nosologically dignity but requires to be deepened. Given also the controversial diagnostic criteria, the real prevalence of PIU is also hard to assess although it is estimated to range between 7 and 51% (Tokunaga, 2017) with a peak amongst students (Campanella et al., 2017; Starcevic, & Billieux, 2017; Marazziti et al., 2020). Our findings gathered in two different studies, one carried out in a large population of university students and the other in drug-addicted individuals, showed that both groups share a similar pattern of use of Internet and prevalence of PIU, as well vulnerability factors, such as being male or single (Baroni et al., 2019; Marazziti et al., 2020). The areas involved included: social withdrawal, abstraction from reality, loss of control, pornography addiction, online gambling addiction, addiction from instant messaging; addiction from social networks, diminished sleep time. According to us, these results are appalling. Are we facing a new epidemic (social media intoxication?) and related mind change? Our opinion is that the bright sides of Internet ultimately expose users to its dark sides. As such, the easy interconnections and rapid communications may lead to avoidance of real relationships and dependence on social media. Therefore, the real issue is: who does actually control social media? The easiness to obtain any kind of information may be at the basis of fake news. Everybody, even those with no real competence or skills can become experts in the great spotlight of the web promoting the search of visibility. The related problem is: who does actually select information? Or how many Internet users can distinguish what is true from what is false? Again, it is also evident that in the Internet realm there is no possibility of contradictory comments: when there are dominant opinions, the opposite ones are neglected, hated, demeaned or persecuted. Is this a real risk for homogeneity of thinking, the so-called “unique thinking”? Entertainment/shopping may be easily shifted and directed, if we only consider the great impact of the so-called “influencers”, some of whom are individuals who do nothing except getting money from different brands. Therefore, who does actually select or direct choices? Similarly to choices, every desires, opinions, faiths, religions, attitudes can

be influenced. Are we aware or should be more aware that advertisements use overt elements, but may also include hidden elements to exert pressure on our choices? This process is called brainwashing or dark persuasion, according to Joel Dimsdale (2021). We are convinced that this is a predictable and real risk of the excessive use, faith and reliance on social media that involve all us. Homogeneity of behaviors is often related to homogeneity of thinking.

The next crucial question is the following: is there a current risk for unique thinking? My answer is positive, if we keep in mind that social media through Internet may induce a real modification of our brain structures given its extraordinary neuroplasticity that may be tuned into dark.

The human history is full of past and recent examples on how easily humans can be influenced and can change their opinions, political or religious beliefs through open or subtle means of indoctrination and become controlled individuals that may even perpetrate heinous acts, in the name of the dominant (unique) thinking. Indeed, the final outcome of homogeneity in thinking may be dictatorship.

The example of the raise of Nazism is paradigmatic and widely deepened in hundreds of publications that will be not recalled (Arendt, 1951). We prefer herein to underline what happened in Japan in the 19th century. At that time, the cherry blossoms, celebrated in that country since centuries, were used to aggregate people around the emperor and to promote the sense and the pride of the nation towards uniformity. In order to have the rapid growth of cherry trees and blossoms, the authorities chose those varieties of trees that were faster, such as the *somei-yoshino*. The consequence was that the clones of *somei-yoshino* trees became the dominant species to the detriment of the other (Abe, 2019). Only the government’s wicked choices and dramatic consequences during and after the second-world war promoted the great change of paradigm in Japan that also led to the rediscovery of the neglected cherry trees and the different nuances of their blossoms that we can admire during the *hanami* season.

Homogeneity of thinking is a possible danger and predictor of conformism until dictatorship. Just think about the progressive decline of artisan products, from food to clothes, in favor of large-scale industrial ones that are similar one to another that, it is true that they are cheaper, but they have lost their originality, and their peculiar flavor. Again, to accomplish the increase demands, they destroy our planet. On the contrary, evolution relied and relies on diversities that should be considered fundamental elements to be nurtured and exalted in all societies. Only acceptance and integration of diversities and related clashes, may enrich societies that, without varieties unavoidably are condemned to lose their “soul”, to decline and/or even to end.

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