

Mini Review

Digital Technology: From Dehumanization to Effective Ethical Contribution in Psychiatry

Rialle V*

Équipe Associée n° 7407 AGEIS, Université Grenoble Alpes, France

***Corresponding author:** Rialle V, EA n°7407 AGEIS, Université Grenoble Alpes, Faculté de Médecine de Grenoble, 38706 La Tronche Cedex, France**Received:** October 14, 2019; **Accepted:** November 12, 2019; **Published:** November 19, 2019**Abstract**

Lots of psychic healthcare professionals and family caregivers express an unprecedented call for urgent and radical changes in psychic care. Mainly based on the French case, the proposed reflection suggests that advanced technologies can provide valuable and sometimes unexpected levers to assist the organizational and clinical aspects of the solutions to the current crisis in psychiatric institutions, provided a strong ethical intent governs their use.

Keywords: Psychiatry; Ethics; Social Innovation; Robotics; Digital Innovation

Mental Health Sector Issues

Despite a frequent exemplary commitment of psychic health professionals and family caregivers, the psychiatry sector is today in a state of unprecedented crisis in several countries. As shown by many works and testimonials [1,2], there emerges a feeling of helplessness in the distance between what would be required to properly treat many categories of patients with mental health symptoms, and what the psychiatric institutions offer, sometimes in reverse of this requirement. In France namely, a recent Information report of the Social Affairs Committee of the French National Assembly, signed by the deputies Caroline Fiat and Martine Wonner [3], vigorously stressed the “Unavoidable overcrowding of the psychiatric hospital due to insufficient outpatient care”, the “contradictory injunction to the development of the ambulatory: the abolition of hospitalization at home”, “The deleterious effects of compartmentalization with general medicine”, the “preference for confinement”, the “acute inadequacy of alternatives to hospitalization”, etc. Faced with the “catastrophic management” of mental health patients, the report prones to “finally get psychiatry out of the hospital”, and recommends redeploying 80% of the psychiatric staff to the ambulatory care by 2030. Besides, this report follows numerous strikes by medical staff, media articles, analytical reports, and previous ministerial emergency calming measures. If social unrest and discontent seems now to reach a sort of point of no return, and the desire for change appears to be understood by the whole political class, it now remains to invent a new psychiatry organization and operational clinical efficiency. Advanced technologies (digital, robotics...) could be an important lever for this mutation, provided they are wisely used.

Technology and its basic ethical double bind

The ever-growing technical creativity and the exponentially growing use of smartphones and tablets, along with their subsequent social or medical innovation potentials undoubtedly provides strong levers to cope with healthcare problems, provide quick responses to calls for help, allow aging in place, foster independence, produce rehabilitation, enhance social participation, improve quality of life, optimize expenditure, etc. However, this technical advancement opens up a huge Pandora's box of risks and harms: over-consumption of smart objects, compulsive use of Internet, dehumanization in

care and medical practice, family doctor bypass, infringement of privacy, two-tier medicine, improper replacement of professionals and voluntary caregivers by robots and automatic devices, etc. Such a global ethical double bind of ‘machines’ was presented long years ago by Ivan Illich as follows: “There are two ranges in the growth of tools: the range within which machines are used to extend human capability and the range in which they are used to contract, eliminate, or replace human functions. In the first, man as an individual can exercise authority on his own behalf and therefore assume responsibility. In the second, the machine takes over—first reducing the range of choice and motivation in both the operator and the client, and second imposing its own logic and demand on both” [5].

Ethical art of ‘technicized’ psychic health care

Nevertheless, for anyone who can spot them, our society produces a number of particularly inspiring pioneering initiatives based on digital media, artificial intelligence or robotic tools for psychic health care purpose. Moreover, the search for ethical digital innovation pathways in psychiatry began many years ago [6]. The following outlines a typical example of such initiatives.

As for all adolescents, the pleasure of playing is present in the young autistic. Among the wide variety of possible characteristics of the autistic person appear skill and agility in the handling of objects. It is from these two sides of autism that the “Rob’Autisme” initiative is conducted in France since 2013. Using the robot NAO (Softbank Robotics), a humanoid robot with a particularly elegant design and endowed with a user interface to program the robot easily and very quickly, especially by autistic persons, the authors—S. Sakka (AI and robotic researcher) [7] and R. Gaboriau (speech therapist) [8]—of this action-research invented together a particularly original and promising approach to treat autism within small groups of autistic teenagers. They designed an innovative therapeutic NAO centered game protocol involving both robot programming and interaction and cooperation between the adolescents, to allow these teenagers to overcome their symptoms. The use of the robot is central to enable interaction and co-construction within the group, but the lie consisting in presenting the robot as a person, a companion, is at once totally refuted. In agreement with the Illich’s recommendation, the robot is strictly presented as an extension of human capability

(through the very simple programming interface). So the robot is never the subject of the actions it performs, it only is a medium that do what the young person has decided. Given the first experiments of this therapeutic approach have shown surprisingly positive results, the method gradually comes out of the anonymity.

However, this robotic example should not play the role of the tree that hides the forest: the potential of advanced assistive technology, and smartphone and tablet apps (for 'applications'), has recently made an important step forward to cope with cognitive disorders such as schizophrenia or socio-emotional disabilities, and to favor psychic health care. Thus, a wealth of research, experience and knowledge is available today, which could lead to large-scale clinical and organizational changes [10,11].

Tekhnhè: rediscovering technology

The required qualities, on the part of pioneering creators, for designing the kind of above outlined therapeutic use of cutting-edge technologies largely exceed those of the purely scientific field. They include (a) the confidence in the hidden therapeutic affordance of the tool, (b) the will to act with an 'ethical intention'-defined as "aiming at the 'good life' with and for others in just institutions" by Ricoeur [9]-, and (c) the will of championing their creation. Such qualities are amenable to marry the 'art of care' with the 'art of good design or use of technology'...

In fact, a rapid etymological analysis of the word 'technology' opens up a much broader meaning to this word than it has nowadays [11]. What does the English online etymology dictionary reveal? « Technology (n.): 1610s, "a discourse or treatise on an art or the arts," from Greek tekhnologia "systematic treatment of an art, craft, or technique," originally referring to grammar, from tekhnō-, combining form of tekhnē "art, skill, craft in work; method, system, an art, a system or method of making or doing" » (www.etymonline.com). Henceforth, technology-the study of 'tekhnè'-is the study of a complex subject that stems simultaneously from science, art, and skill. Indeed, the previously outlined research initiative requires a lot of science, art of care, and skills. It perfectly illustrates the breadth of meaning that the research community and the whole society should give back to the word 'technology'.

Conclusion

The innumerable initiatives such as Robt'Autisme, between research and social and medical innovation, that are developing today and around the world should be considered as a societal resilience against current challenges, and as inspiring examples for the sake of the transition towards an inclusive, sustainable and healthy society. The ingredients of such a transition are on one hand the human and ethical qualities of pioneers and pioneering initiatives, on the other hand the availability of 'high-tech' objects highly reliable, efficient and commercially accessible.

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