

# Technology, Inclusion and Ethics

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## Abstract

The article addresses a reflection dimension on the use of technology and the need of technology for the construction of a democratic, inclusive, ethical, equalitarian and fair society which aim to indiscriminately develop each individual, and consequently the society.

**Keywords:** Technology; Inclusion; Democracy

## Introduction

Based on 2010 Population Census carried out by Brazilian Institute of Geography and Statistics (Instituto Brasileiro de Geografia e Estatística-IBGE), Brazil has 45.6 million persons with some kind of disability which stand for 23.92 percent of population. Pursuant to Brazilian Law (Decree No. 5296/04, Laws 10.048 and 10.098/2000) persons with disabilities include those having a long-term loss or impairment in their psychological, physiological or physical structure or functioning which limits their capacity to perform the activities within a normal standard for the human being. It can be categorized as physical, mental, sensory, and visual or multiple [1] (Figure 1).

Over one billion of people—approximately 15 percent of the world population—have some kind of disability. According to IBGE 2010 Census, 61 percent of persons with disability have no educational attainment and unfinished elementary school, 14 percent have finished elementary school and unfinished high school, 18 percent have finished high school and unfinished higher education, and 7 percent have higher education.

## Autonomy

When we refer to inclusion it is meant that no attitude, architectural, communication and other barriers whatsoever will hinder their full rights, thus leading to shunning social interaction and consequently not exercising their autonomy, characterized by the freedom that the individual has to make decisions, the ability to make choices and conduct their own actions. Autonomy does not happen in the people's minds; it happens in the world in which the civil and social laws are given, and it is exactly in the world that the act of reasoning should be possible, and consequently the condition of being autonomous [2-4].

According to Lind, a mature moral democratic conduct, then autonomous, not only depend upon moral ideals, or people's goals but mainly depend upon his ability to apply these ideas in their daily life in a consistent and detailed manner. It also does not only refer to a single correct attitude or values, but especially it is a matter of ability.

Concerning democracy, action in the world, communication, and autonomy we cannot also forget to mention the Habermas' Theory that claims the possibility of creating a democracy based on the argumentative and consensual power of people who would be engaged under the same purpose for the benefit of each person in an indiscriminate manner. Based on the reasoning principle and on the language, Habermas understands that the single manner to influence the political systems is achieved by these individuals engaged and by their participation in the life world. He asserts in a rationality that embodies and that reaches consensual solutions. In the life world, the

dialogues are analytical and always brought out by social groups that reach solutions and verbal interferences for these same social groups. By definition, the social group is not institutionalized. The dialogues, free of any influences that may favor somebody, or some groups to the detriment of other groups, are ontological for the outbreaks of democracy [5].

Habermas's democracy is reached by participants empowered with equal argumentative communication, rational opinion, and free organizations. His premises are individual, cultural, and citizenship being the latter in charge of mainstreaming the other two premises [6].

The discourse made through language, and used as a form of communication, is intended to express opinions and ensure the norms under the interaction with other speeches.

The subject of the speech acts in conjunction with other speakers, in a rational manner, by either validating or criticizing the content of the speech. The communicative action accounts for the moral norm which comes embedded in the discourses such as the Ethics.

It seems that Habermas's intention was to carry out a meta-study of the ideas generated by the language used in the people's discourses, and to emphasize its prominent role for the accomplishment, and in turning these ideas into actions, these actions into achievements which by their turn would result in social, cultural and political benefits to the social groups. By demonstrating that any action has to be preceded by an idea and, thus when the idea comes from the social group the results are to be applicable and internalized by this social group which is formed by free and equal people.

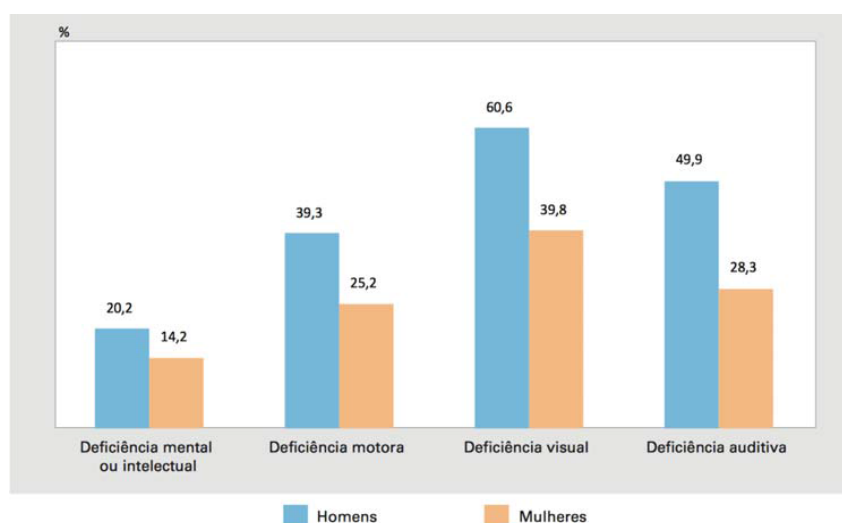
According to Habermas' Theory, using technology as an inclusive tool that allows the educational and social background of the society as a whole would favor the formation of citizens capable of taking part in the social groups equally. Based on this possibility, the inclusion via technology as a universal and ethical awareness, that is, a full condition of each citizen for exercising his capabilities should be considered. In this case, it is believed that ethical technology supported by inclusive

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Received February 20, 2015; Accepted March 18, 2015; Published March 20, 2015

Citation: Borges PC (2015) Technology, Inclusion and Ethics. *J Comput Sci Syst Biol* 8: 121-123. doi:10.4172/jcsb.1000178

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**Figure 1:** Level of occupancy of population aged 10 years old and over according to the disability studied. 2010 Census–Persons with disability.

public policies and by the science would be the grounds for a fair and egalitarian society [7].

### Information and Communication Technology–TIC

According to UNESCO Global Report [8], developing and favoring the access to the Information and Communication Technologies in conjunction with assisted technologies is a synonym of hope to ensure the empowerment of persons with disability, and creation of *the jure* and *de facto* egalitarian society. Exchanging of information, and continuous searching of knowledge promote the construction of a social ideal, so that coherent public policies and laws are required.

Concerning, and interest in the deconstruction of social prejudice toward persons with disabilities are part of the our times, and considering an inefficient educational system to guarantee full inclusion, lack of proper training, and adequate preparation of teachers to deal with matters along this dimension, a huge difficulty in the inclusion of disabled people into the labor market is noticed. In Brazil, TIC is still subdued in relation to broadband infrastructure applications, to the use of proper tools and local language [9].

Despite growth in the use of mobile phones, for example, supported by a strategic policy of expansion guaranteed by the reduction of their prices, improvements in the relevant infrastructure are needed, mainly in the generation of electricity and distribution of phone sets at the Brazilian blind spots featured by a very precarious access to the services.

A worldwide desire on ethical and inclusive technological development is noticed. In accordance with John Hopkins University, in the United States, educational actions using TIC for persons with disabilities may arise out of assistive IT and TIC as follows: Words processing, voice synthesizer, close-caption, assistive learning equipment, and Braille printing. Accessible websites having appropriate learning resources may also be developed [10].

Education and preparation applicable lifelong will make people productive and participants in the society.

Bioengineering and existing potential of new information technologies have changed the concept of world, belonging, and the world limits by making it a “liquid society”, as enunciated by Bauman

[11], in which the information is considered the society engine. In association, science and techniques have caused a radical change by providing to the “liquid society” the possibility of imagination in the inexistence of impossibility.

Bringing the promise of innovation, control of diseases and of our own aging process, the science collides with the rationality and moral and its expectations. According to Dupas [12], a global system of new technologies makes up a new social morphology of our societies.

Every day, man-machine interfaces have become more “friendly”. Use of optical resources, for instance, permits the implementation and the outcomes more accessible to the population. Despite all the technological development, and multiple possibilities brought out by this technological development, we still do not assess in a sufficient manner the possible and real consequences that this movement may hold in case there is no ethical principle in all the steps involved therein.

### Conclusion

We do envisage that the moralization of science, or the production of specific-applicable ethics is an impossible task, then the responsible use of technological tools may be the ethical response between the subjectivity and objectivity, between the subject and the action.

Therefore, it is believed that TIC may stand for the good or bad condition to make possible the social inclusion or exclusion of people with disabilities largely caused by the impossibility of access. Hence, it is expected that the use of technological tools may be the response for the construction of a fair, inclusive and ethical society.

### References

1. (2011) Brazilian law about people with disabilities. (7thedn), Brasília: House of Representatives, House Editions.
2. Abbagnano Nicola (1962) Dictionary of Philosophy. (2ndedn), Trad Alfredo Bosi.
3. National Secretariat for the Promotion of the Rights of Persons with Disabilities.
4. Vicente Zatti (2007) Autonomy and Education in Immanuel Kant and Paulo Freire, Edipuc RS, Porto Alegre.
5. Habermas Jürgen (1996) Between Facts and Norms: Contributions to a

- Discourse Theory of Law and Democracy. Studies in Contemporary German Social Thought.
6. Habermas J (1987) The Theory of Communicative Action. Lifeworld and System. The critique of functionalist reason. Boston: Beacon Press, Volume 2.
  7. Maia AC, Habermas J (2008) Philosopher of the right Renew Rio de Janeiro.
  8. (2013) UNESCO Global Report: Opening New Avenues for Empowerment: ICTs Access to Information and Knowledge for Persons with Disabilities.
  9. International Labour Organization. International Labour Conference. Convention 155 Brasilia, DF: Ministry of Labour and Employment.
  10. Jonas H (1994) Ethics, Medicine and Technology. Lisbon, Vega.
  11. Bauman (2011) Zygmunt 44 World Net Modern Letters.
  12. Dupas G (2011) Global Economics and Social Exclusion. ( 2ndedn), São Paulo, Paz e Terra.