

## **The triangle of animality, humanity, *machinity***

### **Ethics and robots**

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The evolution of life technologies and information technologies leads to a possible merger between humans and machines which raise fundamental questions. We need new ideas to address these issues. I propose the concept of *machinity*, which my current thesis will define and apply on the analysis of these technologies that are increasingly close to the human or even integrated into the human and animal body. The fear of the "man-machine", that is to say the fusion of man and new technologies such as NBIC (nano-bio-info-cogno) which one might fear an ontological impoverishment, interrogate our human development project. Does this fear corresponds to a reality? My model of reflection suggests rather to realize a system of imaginary projections, rewarding/demeaning. Some of these projections suggest animality, others *machinity*.

Humanity and civilization, in the vision of contemporary human sciences, are cultural constructions and to be analyzed as such. The concept of humanity is linked to positive values through which the human being is naturally evolved as "human". The humanization project is built also around the rejection of certain characteristics that are considered negative. Such is the case of animality. This notion has only the function of demeaning imaginative projection, and not the descriptive function that we could apply to it. It does not match the "object" animal, but the systematic need to project positive values on the concept of humanity. The damages caused by this ambiguity are two-fold: one cannot think straight in this context, about the nature of animals from one side, and from the other, we do not properly value the worth of the human when contrasted against such a model.

A parallel system of demeaning projections applies to the concept of *machinity*. This concept includes in its broadest sense all the "machines", the material and non-material technologies (software). It also deserves to be questioned as a human projection system. Fear of *machinity* is a fear of "over-sophistication", which would meet the "savagery" given to animals.

In this system of imaginative projections -animality, humanity, *machinity*- one can speak of *projective animality* when human, to reject some of his own aggressive behaviors, projects them in animals, and *projective machinisation* when humans want imaginatively to reject their cold behaviours, computers and emotionally distanced they want to reject out of them.

The concepts of animality, humanity and *machinity* can be represented as a triangle whose summit is the human being, projecting negative values on the animal, and the machine that is the base of this triangle. In this system of projections, the animal represents a "hot" pole and the machine a "cold" pole. Getting away from these two projective references allows the human to be self-constituted as a human towards a « tempered » ideal. Being aware of these projections would allow the human not to remain captive of his performances, to better know what he rejects and get to know himself. In the case of the machine, thanks to the concept of *machinity*, awareness of *projective machinisation* allows better evaluation of issues of new technologies and a better understanding of our own humanity by techno-ethical terms.

It is to note that *machinity* exists as a *projective machinisation* by humans, and *machinity* as it could be built as a reality independent of human projections. While robots are not, for now, biologically embodied by "reality", it has to be conceived that the robots *machinity* would be for robots as humanity for the human being: a set of values and ethics criteria that defines an identifiable unit by an ethical value system.

Indeed, the concept of *machinity* goes directly in the perspective of the ethics review about robots. The concept of *machinity* extends to machines in general, but is particularly popular in the case of robots near to humans such as cobots, pet robots and humanoids. The idea of *machinity* allows also to recognize and understand the projections of the human on robots, and so not to remain captive to these representations. This understanding would design a *machinity* for robots that would be independent of the often negative representations and projections that the human being has in the place of machines in general and robots in particular.

In addition, robots can have a positive ethical value to humans as they can for instance assist them, keep them company, etc. This is called the robot for its quality as "ethics officer" (C. Allen and W. Wallach)<sup>1</sup>. Indeed, although it is not incarnated, the robot can still have an ethical action, as positive action for humans, and not just in the sense of utilitarian term. For example, assistant robots, and companionship for seniors may have value beyond mere utility. By completing the wizard function - to remind medication , prevent emergencies in case of falls - by simulating a company

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<sup>1</sup> ALLEN Collin and WALLACH Wendell, *Moral Machines-Teaching Robots Right from Wrong*, ed. OUP USA, 2010.

- providing entertainment by the proposed interactive games, etc. - the robot can complete an ethics function by securing and comforting the elderly. This characterization "ethics officer" can be better understood in Shinto Japanese approach. Shinto believes that each entity has a unique function within a whole. The ethical value is determined by the function performed by an entity living or non-living, and not by an absolute only applicable on the human being. Thus, a machine can have considerable ethical value towards the function it performs.

Recognizing the animality (instinct, spontaneity) and *machinity* (automatic behaviours) as having a human value, a positive one, would help to better understand the human being whose action would have a positive value on one hand, and to design robots whose actions would have an ethical value, an autonomous one. The uniqueness of *machinity* applied to robots, as «ethics officers», would determine an ethical priority criteria to their own kind of machine interaction increasingly tight with humans; and ultimately to design a system of value for the *machinity*.

Specifically, the *machinity* might be recognized as a full status, as animality and humanity. To take the example of the robots for assistance and companionship for seniors, or any other company of robots usable by autistic children and even the general public, it seems appropriate to attribute them some human characteristics. However, even if it is not named as such, much research in robotics (for robots closer to humans and humanoids) go towards the development of a full *machinity*.

In France, the research team of Inria FLOWERS , led by Pierre Oudeyer<sup>2</sup> , also point in the direction of this double perspective : understanding the human being by dint of robots and observe the emergence behavior "spontaneous" own robots themselves. The principle is to generate robots with an operation based on "intrinsic motivation ". Intrinsic motivations imply an internal self-organization of the acquisition and development of behavioral and cognitive bases (learning to walk, language, interaction with other robots themselves in a learning situation).

Another example is the famous CB2 robot developed by the research team of Professor Minoru Asada of Osaka University in Japan: a robot that weighs 33 kg that simulates a baby. This robot, allows to better understand the basic learning situations of human baby. But Minoru Asada goes further in stating that these robots could "feel" sensations specific to robots. For

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<sup>2</sup> OUDEYER Pierre-Yves, *Aux sources de la parole – Auto-organisation et évolution*, éd. Odile Jacob, 2013.

example, the fact of not having battery might be "tested" and expressed by the robots; as humans can experience and express his hunger when it occurs. Admittedly, the comparison is not an analogy in the sense that it would be naive to think that the robot could feel the way of a human being. But what is interesting is that these possibilities are same cause singular form of empathy. This empathic sense on the part of human beings would then be directed to an otherness in the strongest sense of the word: a non-living otherness which nevertheless responds to behavior that coating a concrete meaning to humans. These behaviors, the type of the sensation of "lack of battery", however not belong to humanity, but to an emerging form of *machinity*.

These examples foreshadow the advent of autonomous *machinity*, which should be considered as an entity having an intrinsic value. There is a paradigm evolution for humanoid robots: they no longer intended to be mere tools but allow to better understand human functioning, and more: to develop a full *machinity*.