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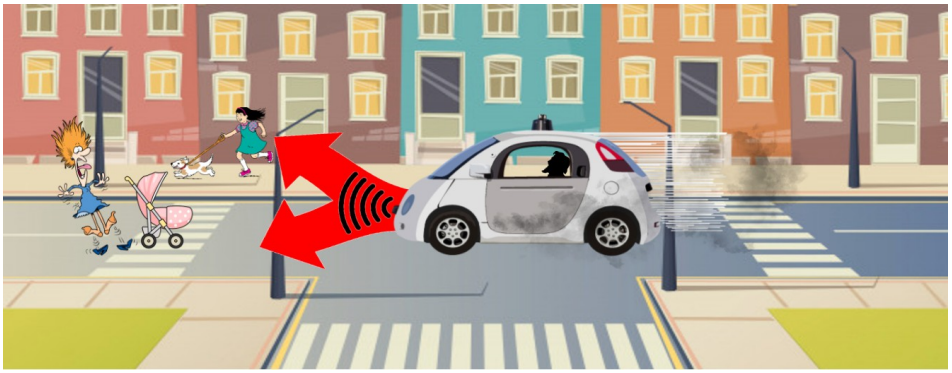

ETHICS AND INNOVATION: CONFLICTS WITHIN ORGANISATIONS

Today, innovation is credited with many virtues : it drives development, reveals the inventive nature of the members of an organisation, creates value, and is even becoming a quasi-injunction. If previously people were expected to publish, they are now expected to innovate: the traditional “publish or perish” seems to have been replaced by the implicit “innovate or abdicate”. However, it should be noted that, despite this injunction, not everyone innovates, just as not all organisations are innovative.

This injunction to progress, to go beyond one's own limits, to think “out of the box”, seems to be hampered by several elements which have not yet been fully identified.

We could nevertheless mention, among other things, a certain conservatism, even outright timorousness, a lack of ambition , enthusiasm, or creative spirit, the satisfaction of routine, the fear of the unknown, and even a reductive conception of ethics that would bridle scientific and technological progress by imposing limits that would be unecessary.

This opposition between ethics and innovation often gives rise to passionate debates. There is no need to dwell on bioethical issues, which have even become divisive. All it takes to be convinced of this, is to consider two subjects that are hallmarks of our modernity: artificial intelligence and robotisation.

Talking about robotisation implicitly calls for a discussion about ethics, especially when the debate turns to lethal autonomous weapon systems (LAWS) or, more prosaically , killer drones. But without mentioning this extreme function of robots, we can ask ourselves what “ethical” rules these increasingly numerous robots should follow. The classic aporia being that of the re-actualisation of the tram dilemma (should an out-of-control tram run over one person in order to save five?)[1] should be transposed to the autonomous car, which must now solve what is described as the algorithm of death[2] ; sometimes that algorithm even takes into account the nature of the potential victims (a scientist, a pregnant woman, etc.). We should not forget that setting the terms of the debate in this way would necessarily imply that the autonomous car is also able to identify precisely each person it passes, which raises other ethical questions.

Similarly, the question of ethics often comes up in debates on artificial intelligence: the fact that ethical choices reflect cultures[3] could explain why some countries allow developments that are much more regulated in France. The example of facial recognition and its use in China provides a good illustration[4].

Faced with this opposition, the question arises as to whether it is possible to innovate ethically?

To answer this question, we will first define the terms "ethics" and "innovation", then discuss the conflicts that their cohabitation generates, before seeing to what extent the many questions it raises can be answered.

1 FOOT, Philippa, “The Problem of Abortion and the Doctrine of the Double Effect”, *Virtues and Vices*, Oxford, Basil Blackwell, 1978, first edition : *Oxford Review*, 1967, number 5. THOMSON JARVIS, Judith, “Killing, Letting Die, and the Trolley Problem”, *The Monist*, 1976, vol. 59, p. 204-217.

2 DEBROISE, Anne. "Voiture autonome : l'algorithme de la mort." *Science & vie.* 2016, n° 1191, p. 86-91.

3 AWAD, Edmond, DSOUZA, Sohan, KIM, Richard, SCHULZ, Jonathan, HENRICH, Joseph, SHARIFF, Azim, BONNEFON, Jean-François, RAHWAN, Ivad. *The Moral Machine experiment. Nature*, 2018. Available on : https://www.nature.com/articles/s41586-018-0637-6

4 BLOCH, Emmanuel. "Quelle éthique pour l’intelligence artificielle ?". *Harvard Business Review,* 2020. Available on : https://www.hbrfrance.fr/chroniques-experts/2020/01/29103-quelle-ethique-pour-lintelligence-artificielle/

I) Definitions

Defining ethics is a challenge, as it is so difficult to reach a consensus. This philosophical discipline dealing with moral judgements is often confused with morality and deontology, because they are so close. Socrates, Plato and the philosophers in antiquity studied it, before modern philosophers gave it a different meaning. Applying ethics to science and, consequently, to innovation, leads us to bioethics: having emerged from the trial of the doctors in Nuremberg from December 1946 to August 1947, it inevitably has been and is closely related to the law.
It is therefore difficult to disentangle ethics from the mixture it seems to constitute with morality, deontology and law, since the boundaries between these terms can seem so porous. What elements make it possible to differentiate one from the other ?
If law is defined as "*the set of rules governing the conduct of men and women in society, and social relations"* [5] , or even *"the set of rules imposed on the members of a society so that their social relations escape arbitrariness and the violence of individuals, and conform to the prevailing ethics"* [6] , deontology is for its part *"the set of rules and duties which govern a profession, the conduct of those who practise it, the relationship between them and their clients and the public." 7*
Restricted to a group of people, deontology is increasingly formalised through the appearance of deontology codes and charters. Moreover, failure to comply with it is often reprehensible, as illustrated by the decisions of the Human Rights Defender[8]. The latter's website also mentions that one of its areas of competence covers the compliance of security professionals with deontology, and even specifies that "the rules of deontology governing the activities of public and private security professionals are set out in various codes and charters: professional secrecy and discretion, probity, discernment, impartiality, respect for the public, rules on the use of force, etc. In France, the Human Rights Defender is the authority responsible for ensuring that these rules of good conduct are complied with." [9]
What is left for ethics then?
According to Larousse dictionary, it is the *"part of philosophy that explores the foundations of morality"* [10] or even *"the set of moral principles that underlie one's conduct."* [11], which would then use morality to define ethics, morality itself being a *"a set of rules of conduct, considered good in themselves or derived from a certain concept of life"* [12].
Ethics would thus be a set of rules of conduct, not codified (in the strict sense of the term), which would concern individuals rather than groups. It would prove useful when dealing with loopholes left by law and deontology, as these two disciplines fortunately do not take into account all aspects of daily life.

Defining innovation is equally difficult because owing to the current implicit injunction to innovate, a consensus is just as difficult to reach. Innovation can be seen as a constant search for improvements to what already exists, as opposed to invention, which aims at creating something new. However, etymology tells us that "innovate" comes from the Latin *innovare* "to renew" (Académie Française), but also the verb *novare* which means "to change" (Littré). Innovation, renewal and change are therefore not mutually exclusive terms.
Beyond etymology, the main question is to know whether there is a boundary between innovation and improvement or whether the latter is a particular type of innovation. If improvement is a type of innovation, then everyone is potentially innovative. If the two terms are different, then innovation only concerns a minority of people who, through the originality of their work, question or even disrupt the organisation they belong to, because of the often unpredictable nature of innovation.
Innovation questions and disturbs, because it can indeed call into question ways of doing things, work methods or even a type of organisation. It is therefore logical that organisations should try to supervize innovations, as they cannot constantly change their way of working. However, innovation management, i.e. the implementation of management

5 Littré, *Dictionary of the French language*. « l'ensemble des règles qui régissent la conduite des hommes et des femmes en société, les rapports sociaux »

6 *Dictionnaire de l'économie et des sciences sociales*, Nathan, Paris 1993. « l'ensemble des règles imposées aux membres d'une société pour que leurs rapports sociaux échappent à l'arbitraire et à la violence des individus et soient conformes à l'éthique dominante »

7 Larousse « l'ensemble des règles et des devoirs qui régissent une profession, la conduite de ceux qui l'exercent, les rapports entre ceux-ci et leurs clients et le public »

8 *La veille juridique du CREOGN, rubrique Déontologie et sécurité, year* 2019, p. 13 et seq., p. 30 et seq. Available on : https://www.gendarmerie.interieur.gouv.fr/crgn/publications/les-veilles-juridiques-thematiques-annuelles/rubrique-deontologie-et-securite

9 Cf. https://defenseurdesdroits.fr/ « les règles de déontologie qui encadrent les activités des professionnels de la sécurité publique et privée sont fixées dans différents codes et chartes : secret et discrétion professionnels, probité, discernement, impartialité, respect de la population, règles d'usage de la force… En France, le Défenseur des droits est l'autorité chargée de veiller au respect de ces règles de bonne conduite ».

10 Larousse « partie de la philosophie qui envisage les fondements de la morale »

11 Larousse « l'ensemble des principes moraux qui sont à la base de la conduite de quelqu'un. »

12 Larousse « ensemble de règles de conduite, considérées comme bonnes de façon absolue ou découlant d'une certaine conception de la vie »

techniques to create the most favourable conditions for the emergence of innovations, has developed in many companies. For example, 3M is often cited as an innovative company, in particular because of the particular management it has implemented[13] , with William McKnight, one of its emblematic directors, saying: *"it becomes increasingly necessary to delegate responsibility and to encourage men and women to exercise their initiative. This requires considerable tolerance. Those men and women, to whom we delegate authority and responsibility, if they are good people, are going to want to do their jobs in their own way. Mistakes will be made. But if a person is essentially right, the mistakes he or she makes are not as serious in the long run as the mistakes management will make if it undertakes to tell those in authority exactly how they must do their jobs."*

II) Conflicts

Now that definitions, have been tackled, if not settled, we may address the relationship between these two terms. A first analysis leads us to note that when ethics and innovation meet, various types of conflicts arise.

The first conflict that emerges is a conflict of rules. Indeed, ethics defines rules that everyone is free to follow. Adopting an ethical behaviour therefore means voluntarily following the rules laid down, whereas, as we saw earlier, innovation tends to disrupt or even break the rules governing an organisation. This conflict of rules is characterised by three elements:

- First of all, location, which is in fact twofold. Indeed, this conflict arises both in the innovator's mind, who must decide whether to comply with ethical rules, possibly to the detriment of the innovation he intended to develop, and within the organisation itself, which must decide whether or not the rules that conflict with the innovation must be strictly observed;
- Secondly, time, because compliance with ethical rules arises not only when the innovator asks himself whether he should comply with them in his current work, but also when his innovation will be implemented: will it break any ethical rules and, if so, which ones? For example, it is said that Louis XV preferred to pay Dupré a substantial pension so that he would not divulge to anyone the secret formula of the Greek fire he had rediscovered , as the king was so afraid of the havoc it would wreak on the battlefield[14] ;
- Finally, people, because if the innovator is allowed to break certain rules, the other members of the organisation must nevertheless continue to respect them all.

This last element in the conflict of rules consequently leads to a conflict in the field of human resources (HR): should an organisation favour the innovator by allowing him or her to break certain rules or should it impose strict compliance with the rules governing the organisation? The answer to that question is not neutral, insofar as it may establish a de facto inequality between the members of the organisation, which will certainly disappoint those who are required to respect the rules. The seeds of potential future conflict are thus identified.

This internal conflict in the HR field will most likely turn into a strategy-based conflict for the organisation: should it favour its durability by advocating a certain conservatism or should it on the contrary favour innovation which risks calling into question what makes its current prosperity? Kodak is a famous example of this dilemma within an organisation : the company did not believe digital photography would take off, even though they invented it, because they preferred capitalising on the sale of silver film, which constituted the bulk of its business[15].

This conflict then spills over onto the organisation for which the innovator works. An organisation has to define which rules take precedence (those that favour the innovator or the organisation), which will have repercussions on the way the organisation will (re)structure itself.

This succession of conflicts leads us to move from the innovator's dilemma, as formalised by Christensen[16], to the dilemma of the organisation that wants to reconcile ethics and innovation: what should take precedence? Ethical rules so that production complies with them, or production so that ethical rules abide by it ? An uneasy compromise cannot do, because while compliance with rules can be suspended, an innovation cannot be watered down: it must be accepted or rejected in its entirety. The organisation must therefore resort to a real Solomon's judgment, which is a strong, even violent act, and not a timorous compromise.

We can thus see that introducing ethical reflection into the innovation process triggers a certain number of conflicts, or even dilemmas, within the organisation that wantts to innovate. These conflicts cannot remain unresolved for long, because a wait-and-see policy risks demotivating innovators and pushing them to leave.

Resolving these conflicts thus becomes an imperative for the organisation that wishes to develop innovation.

13 CONCEIÇÃO, Pedro, HAMILL, Dennis, PINHEIRO, Pedro. Innovative science and technology commercialization strategies at 3M: a case study. *Journal of Engineering and Technology Management*, 2002, vol. 19, nº 1, p. 25-38.

14 Even if opinions differ as to the veracity of the fact.

15 SILBERZAHN, Philippe. "Kodak, un exemple typique d'une entreprise leader victime du dilemme de l'innovateur, 2012". Disponible sur: https://philippesilberzahn.com/2012/01/23/fin-de-kodak-victime-dilemme-de-linnovateur/

16 CHRISTENSEN, Clayton. *The Innovator's Dilemma: When New Technologies Cause Great Firms to Fail.*

III) Resolving conflicts

While it is right and easy to proclaim that conflict resolution is essential, it is more difficult to move from injunction to practice.
Crossing that bridge is complex for several reasons.
The first is that, in the field of ethics, there is no higher rule to follow for an organisation other than its own. Its operating rules are its own, and it is free to modify them as it wishes if it believes that, in so doing, it will be more effective or will better accomplish its missions.
The second is that, even if it is up to the leader to decide, his or her decision cannot appear to be arbitrary : since nothing is set in stone in this area, he or she must argue and explain the reasons for the decision. All the more so as he may not be a specialist in the field in which the innovation takes place and the conflicts listed above reflect potential or proven imbalances within the organisation. Its leader is thus the one who must establish a new, – and if possible – stable balance.
The third follows on from the previous one: how can the leader ensure that his or her decision does not appear to be arbitrary, but that it is supported by at least some members of the organisation?
As there is no rule that compels one to decide one way or the other, and as this is one of those loopholes where law and deontology are not binding, it may then be useful to call on an ethics committee whose role is to explain to the leader the ethical stakes, present and future, of the innovation's development. This committee must be unequivocally free to advise , because if it was not, it could not loyally enlighten the leader. The limit of its action is that it does not compel the leader (otherwise it would be taking over the latter's powers) but, by providing him with new insights, the committee confirms the leader in their position as a leader who must decide.
The other advantage of the ethics committee is that it provides the innovator with a perspective on his work. The tunnel effect also exists for researchers who are convinced that they are working for the progress of science or the good of humanity. By submitting their innovation to an ethics committee, they benefit from a useful external perspective.

The conflict arising from the confrontation of ethics and innovation can be resolved in three different ways: by abandoning ethical rules or innovation, by distorting one of these elements to make believe that they are both respected, or by resorting to an ethics committee, leaving the leader free to enforce their recommendation.
Abandoning one of the elements is the simplest decision to make, but not necessarily the easiest to justify.
If the decision is made to distort one of them, chances are that ethics will feel the blow. It is indeed easier to find arguments to justify its evolution (progress, evolution, adaptation to the new century, etc.) than to ask the innovator to modify his work. However, adapting ethical rules when an innovation appears amounts to considering them as a simple adjustment variable. Although ethics is not binding, adapting it constantly will end up turning it into a weather vane.
The recommendation of the ethics committee may appear to be an unsatisfactory solution, insofar as it is not an injunction that can simply be followed, but a real decision support tool. The decision-maker must take a stand and, as the recommendation is argued, he or she must also argue, especially if he or she decides not to follow it.

In closing, we can see that being concerned about ethics while engaged in an innovation process leads an organisation to ask questions that it had not necessarily identified before.
Another point that needs emphasising is that ethics does not have an immediate answer: bringing ethics to the decision-making table means taking the risk of raising questions that are disturbing or that we would have preferred not to answer.
The advantage is that it clarifies things: an innovator's aim is to innovate and, as a former French President said, "Un chef, c'est fait pour cheffer". ("A leader is made to lead" Jacques CHIRAC, *Le Figaro Magazine*, 20 June 1992.)

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