



# CREOGN Research Note

French Gendarmerie Officers Academy Research Centre

## AUGMENTED HUMAN: WHAT ARE THE ETHICAL AND LEGAL ISSUES IN HOMELAND SECURITY POLICIES?

The augmented human<sup>1</sup> (human enhancement) is of great interest to the great political and military powers because of the range of possibilities it offers to cover the missional spectrum of defense and security missions. As a direct consequence of the digital transformation, we are witnessing an exponential growth of human capability enhancement technologies capacities, which are supposed to provide a decisive advantage over an adversary. The increase in the operational capabilities of agents who hold a monopoly on legitimate physical coercion<sup>2</sup> cannot be achieved without ethical and legal reflection in a democratic society organized on and around the primacy of around the primacy of human rights and dignity. It is in this perspective that the *Club de réflexion et de recherches stratégiques de l'Irsem*, associated with the *Centre des hautes études de l'armement* studies, had animated, for the first time in the sphere of Defense, an in-depth debate on these topics related to transhumanism. The cycle of study and reflection covered the period 2009-2010. These exchanges within the scientific community had led to the drafting of a final report in March 2010. More recently, the Research Center of Coëtquidan Military Academy (CREC) organized on June 8, 2015 a symposium entitled "The augmented soldier, the improvement of human capabilities, a scientific and technical research perspective". The present note intends to underline the key points concerning transhumanism and to apprehend the plausible applications in the field of Defense and Homeland Security. These applications are the subject of a debate within the community of concerned stakeholders, in particular when it comes to defining the social acceptability threshold of the increase of operational capacities. This is a question that a democratic society must ask of the army, a fully-fledged component of the Nation, which has delegated to it the right to use force in the general interest.

### What do we mean by Augmented Human?

The Augmented Human is part of the broader ideological trend of transhumanism. In 2002, one of the oldest and most influential American movements, Humanity +<sup>3</sup>, adopted its "Declaration on Transhumanism" and proposes to define the latter as "a cultural and intellectual movement that affirms that it is possible and desirable to fundamentally improve the human condition through the use of reason, in particular by disseminating and widely developing techniques aimed at eliminating aging and significantly improving the intellectual, physical and psychological capacities of the human being". We would witness the advent of a new being halfway between man and humanoid robot: the cyborg<sup>4</sup>. This augmentation can take the form of external devices by the mechanical way (exoskeleton), digital but also internal by implanting chips in the body or modifying the genome. The transhumanist doctrine questions the traditional notion of medicine, based on the repair and the relief of the body and not on the improvement of the performances. Contemporary philosophers, such as Jean-

1 This term refers at the same time to the enhancement of human capacities (augmented biological human being), of human nature (augmented human or augmented mankind), and of the self (meaning the fulfillment of human nature).

2 Cf. Max Weber, « Le savant et le Politique », 1919.

3 Formerly called the World Transhumanist Association, created in 1998 by philosophers Nick Bostrom and David Pearce, the WTA is a global NGO which works for the acknowledgment of transhumanism by scientists and public authorities.

4 Contraction of « cybernetic organism », half-man half-machine.

Michel Besnier, are very reserved about this new ideology<sup>5</sup>, not hesitating to describe it as a "mortifying ambition". In technological circles, they denounce the "principle of non-control", defined as "a mode of operation in research where complex structures or organizations are first created or organizations before exploring and being surprised by their properties". One can notably fear a fracture which would oppose two distinct biological groups, the most evolved one ending up considering the other one as non-human and alienable. The feasibility of increasing the operational capacities of personnel (or even their optimization) and its consequences constitute a research axis around a certain number of questions. In a state governed by the rule of law, the fascination for technology must not make us forget the respect for human beings, in this case the military or the police. As René Frydman, the gynecologist behind the first "test-tube baby", reminded us in January 2015, in any inventive process, the question of "how? " should always be considered after the question of "why?"

## What are the goals for Defense and Homeland Security?

A whole series of applications resulting from NBIC<sup>6</sup> and mechatronics<sup>7</sup> are already available to increase the operational capacity of combatants. The devices and solutions that are supposed to increase the operational capabilities of law enforcement personnel are very disparate. The desire to use artificial means to improve the performance of law enforcement officers during high-intensity engagements (e.g.: GIGN, PI2G, or Police Intervention Force...), constitutes in itself a legitimate aim which aims at limiting and exposure to dangers. However, in this field as in others, one should keep in mind the adage that the best intentions can lead to the worst results. In other words, what is the threshold of possibility or acceptability? Thus, the mechatronic means developed by the Defense industrialists answer a priori to basic purposes which aim, while relieving the physical efforts of a human agent, to make him more efficient and enduring. Among these means, we can quote the exoskeleton, both very visible and obvious in its function of increasing the muscular force. This concept, which already exists in the medical field, is to link a robotic device to a human body. This external skeleton multiplies the physical capacities of the person. With such a system, a human being instantly increases his capacity to move and carry loads. In France, the military exoskeleton is taking shape through the Hercule<sup>8</sup> project. The goal of its designers is that the user can carry a load of 100 kg but also that this device can be equipped with an integral protection shield for intervention forces.

As far as life sciences are concerned, things are more complex, the possibilities of science colliding with bioethical norms. ICT implants open up prospects for improving physical and mental capacities. In its report on the "ethical aspects of ICT implants in the human body", adopted on 16 March 2005, the European Group on Ethics in Science and New Technologies (EGE) to the European Commission draws the attention of national authorities to the harmful effects of electronic implants intended to improve physical and mental capacities. According to this body, the use of this type of implants should be prohibited if they intended to "modify identity, memory, self-perception and the perception of others; to improve functional capacities for the purpose of domination or even to exercise coercion on people who do not have them".

## Ethical and legal issues raised

This non-exhaustive panorama of the potentialities offered by technologies for increasing operational capabilities immediately raises ethical and legal questions that are difficult to ignore before any application. There is no legislation or regulation concerning the implementation of applications related to the augmented human being. Only the laws of bioethics rigorously frame the field of activity of the scientific community in terms of medical research. For the EGE, it is necessary to develop "an awareness and a questioning on the ethical dilemmas posed by a series of ICT implants". This is only very recently that a parliamentary question<sup>9</sup>

5 [www.liberation.fr/evenements-libe/2013/11/09/le-transhumanisme-ambition-mortifere\\_945833](http://www.liberation.fr/evenements-libe/2013/11/09/le-transhumanisme-ambition-mortifere_945833)

[www.lemonde.fr/pixels/article/2014/12/03/hawking-l-intelligence-artificielle-pourrait-mettre-fin-a-l-umanite\\_4533135\\_4408996.html](http://www.lemonde.fr/pixels/article/2014/12/03/hawking-l-intelligence-artificielle-pourrait-mettre-fin-a-l-umanite_4533135_4408996.html)

6 Nanotechnologies, Biotechnologies, Computer and Cognitive Sciences.

7 Mechatronics: approach aiming at the integration in synergy of mechanics, electronics, automation and computer science in the design and manufacture of a product in order to increase and/or optimize its functionality. (extract from the norm NF E 01-010).

8 [www.industrie-techno.com/eurosatory-2014-rb3d-expose-la-version-militaire-de-son-exosquelette-hercule.30651](http://www.industrie-techno.com/eurosatory-2014-rb3d-expose-la-version-militaire-de-son-exosquelette-hercule.30651)

9 Ref Question published in the Official Journal on the 30/06/2015 p. 4808 – <http://questions.assemblee-nationale.fr/q14/14-82658QE.htm>. When released, there was no official response from the minister published on the website of the National Assembly.

put to the Minister of Social Affairs, Health and Women's Rights has discreetly opened the public debate on the subject of transhumanism. In substance, this question referred to an event organized from June 6 to 7, 2015 by the Gaieté Lyrique (Paris III), entitled "Implants parties". It was proposed to the voluntary public, for a cost of 200 euros, to be implanted with an NFC<sup>10</sup> chip. The integration of this device in the body made it possible to unlocking one's phone, opening a door or interacting with many electronic devices. The parliamentary question emphasizes that "the marriage of human biology and technology is extremely dangerous", concluding with "[...] a request for a strict ban on these implants in France to protect public health". As highlighted in the Foundation's latest Watchbook devoted to "augmented man, our humanity in search of meaning"<sup>11</sup>, transhumanism introduces four major challenges: legal, technical, ethical and collective. Since the purpose of implants is to improve physical and mental capacities, they are likely to create a two-tier society. This risk of a fracture between, on the one hand, people with augmented capacities (on a physical and/or mental level) and, on the other hand, those coming from the "natural" fringe, free of any "improvement", also exists within the components of the police force. The latest reflections on this issue have highlighted the legal and ethical challenges that could arise. On the legal side, a US Supreme Court decision has strengthened the scope of the 4th Amendment<sup>12</sup> to the Constitution regarding search and seizure. By declaring unconstitutional the validity of an unannounced search of a cell phone by police officers<sup>13</sup>, the federal Supreme Court considered that this object, which is omnipresent in the daily life of an individual becomes a kind of extension of his or her anatomy. The judges now consider that the search of cell phones "brings into play far more interests for individual privacy than a brief body search". This decision, at first glance, seems far from the issues of the Augmented Human. And yet, the Man, cyborg in the making, through his connection to a network of objects through which an exponential amount of data passes, is intimately linked to them. The Human will be in turn creator and recipient of large masses of data. In the long run, being interested in the behavior of a machine will also mean being interested in the behavior of its owner or user. In its June 2015 watchbook, the Fondation Télécom considers that "the current laws on intelligence contain the seeds of future hybrid human rights". At this stage of the analysis, it is indisputable that human-machine integration places ethics at the heart of the reflections. Ethics remains that part of humanity that cannot be delegated to machines. A reflection could lead to consider the creation of an ethical advisory body concerning the regalian activities accomplished by the elements of the public force. This body would be able to give advice to the responsible ministers (Interior and Defense), following the example of other structures such as the Ethics Committee of the National Center for Scientific Research or the National Consultative Council on Ethics (CCNE). As the *Club de réflexion et de recherche stratégique de l'Irsem* already pointed out in March 2010 in its final report, "these questions can be addressed all the more serenely, given the significant foreseeable delays that separate us from eventual availability in operation. Such entities should thus bring together, in a framework of open reflections, military personnel from the different armies, scientists, jurists, doctors, civilians, and soldiers."

## Conclusion<sup>14</sup>

The concept of augmented human, underlying the ideology of transhumanism, is no longer a mere view of the mind nor a fantasy of science fiction enthusiasts. The augmented law enforcement officer is at our doorstep. If we can draw a parallel, the law on intelligence<sup>15</sup> has given, under the pressure of international treaties and more

10 Near field communication.

11 [www.fondation-telecom.org/media/fondation/Documents/2015%20cahierdeveille-hommeaugmente-fondationtelecom-v02062015-finale-hautedef.pdf](http://www.fondation-telecom.org/media/fondation/Documents/2015%20cahierdeveille-hommeaugmente-fondationtelecom-v02062015-finale-hautedef.pdf)

12 « The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized. »

13 [www.liberation.fr/monde/2014/06/25/aux-etats-unis-fouiller-un-telephone-est-plus-grave-qu-une-fouille-corporelle\\_1050546](http://www.liberation.fr/monde/2014/06/25/aux-etats-unis-fouiller-un-telephone-est-plus-grave-qu-une-fouille-corporelle_1050546). Decision taken on 25 June 2014. Cf. [www.supremecourt.gov/opinions/13pdf/13-132\\_8l9c.pdf](http://www.supremecourt.gov/opinions/13pdf/13-132_8l9c.pdf)

14 The reader has the possibility to go into the issues dealt with in this note by reading the following documents : <http://iatranshumanisme.com/2015/03/07/augmentation-des-performances-humaines-avec-les-nouvelles-technologies-queles-implications-pour-la-defense-et-la-securite/>  
<http://www.stoppuce.be/docs/avis20fr.pdf>

15 Cf. Note n° 13 of the CREOGN « Comprendre la loi sur le renseignement ». <http://www.gendarmerie.interieur.gouv.fr/crgn/Publications/Notes-du-CREOGN/La-loi-sur-le-renseignement>

particularly the judgments of the European Court of Human Rights (ECHR), a legal framework for the benefit of agents of specialized services, even granting them the right of whistleblowing. It would not be pointless to define an ethical and legal framework concerning the questions related to the operational improvement of the agents of the police force. Otherwise, the chain of command is exposed, in certain circumstances, to having to explain themselves in court for endangering the lives of others. The ethical and legal issues of the augmented human being are a major challenge for the governing bodies of armies and security forces. The recently allowed national professional associations of military personnel (APNM)<sup>16</sup> are free to seize upon this societal evolution as part of their mission to preserve and promote the status of military personnel.

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<sup>16</sup> Cf. law 2015-917 of 28 July 2015, Official Journal of the 29/07/2015, Text n°1, Chapt III, Art 11 et s – Codified in articles L4126-1 et s. from the Defense Code.