



Le soldat augmenté - Les cahiers de la revue défense nationale

The needs and prospects for increasing the capabilities of the combatant

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Scientific and technical progress and the current convergence of nanotechnologies, biotechnologies, informatics and cognitive sciences (NBIC) are opening up unprecedented opportunities for building human capacities, both physical and intellectual. Civil society is well aware of this, as it sees the new perspectives that this revolution can bring about for humanity, enabling it to become an actor in its own condition, and thus try to overcome its physical and physiological limits.

The fact remains that man is deeply linked to his being inherited from nature and that any surpassing of himself must not go against his essence, at the risk of distorting it and forgetting the fragility that makes up his dignity. Therefore, while being aware of the dangers presented by transhumanist theses in search of a bioperfectibility that forgets the limits of our physical constitution, and which are the symptom of a deep anthropological depression, we should ask ourselves how these new technologies can compensate for the possible human deficiencies of the soldier on the battlefield.

This is why the Saint-Cyr Coëtquidan School Research Centre (CREC) launched a reflection on this question in 2015 as part of its research programme on the augmented soldier, a major step of which was the holding of a study day on 19 June 2017 at the Ministry of Defence. A major step was the holding of a study day on 19 June 2017 at the Ministry of the Armed Forces in Balard, organised with the support of the Institut de recherche biomédical des armées (IRBA) and the Direction générale de l'armement (DGA), on the needs and prospects for increasing combatant capabilities with the aim of being more efficient in operations.

This issue of the Revue Défense Nationale reviews the results of the work and reflections carried out by three working groups that targeted the major issues and identified three types of stakes:

A. Increasing the cognitive capacities and psychological support of the future combatant.

- B. Increases in the physical capacities and physiological support of the future combatant.
- C. Force augmentation management policies.

This stage of our programme presents the precise definitions of the concepts exchanged, including a semantic clarification of the very definition of what is meant by "augmentation". Next, as any study starts from a clearly expressed need, it seemed necessary to ask operational staff recently engaged in operations to describe the augmentation solutions they wished to see proposed for the combatant in the more or less near future. This expression of need was enriched by the contributions from the Gendarmerie and Police, which presented the specific features of their missions and the framework in which an "increase" in the number of internal security forces officers could be envisaged.

This Special Notebook also presents possible augmentation functions and possible solutions, all of which have been developed by the working groups A, B and C described above according to their various applications depending on the field, the mission and the characteristics of each individual. Similarly, the study takes into account the sociological, ethical and legal issues arising from these new perspectives. More specifically, it addresses the question of the "increases" applied, the nature of their effects, their implementation and control procedures, their acceptability, as well as the reversibility or not of their impacts.

We would therefore like to thank the many players involved in the reflection carried out since 2015 on the needs and challenges of increasing combatant performance, in particular the DGA, IRBA and the defence industry, who have been involved in the reflection. We are particularly pleased with the recent opening by SAFRAN ELECTRONICS & DEFENSE of a private sponsorship chair in Defence Sciences.engineering in partnership with the CREC, designed to work on the theme of the "augmented soldier in the digital battle space".

To conclude our remarks, and before leaving the reader the pleasure of discovering the various contributions to this work, it is clear that the hypothesis of a possible reinforcement of these physical and cognitive capacities of combatants cannot leave anyone indifferent insofar as these could lead to an overall improvement in the level of performance of our armed forces and their effectiveness. The strength of this RDN Notebook is that it approaches the debate from a multidisciplinary angle and places the reflection in the context of the significant evolution of the environment in which the armed forces are developing. The strength of this RDN Notebook is to approach the debate from a multidisciplinary angle and to place the reflection in the context of the significant changes in the environment in which our fighters are deployed, at the crossroads of the civilian and military worlds, and at a time when these "increases" are likely to change the modus operandi of defence and security missions.

Consequently, it is essential for armies to address the sociological, ethical and legal issues raised by the prospects for increased soldier performance, without leaving it to others to define orientations that they would not want or that would ignore their needs. It is then up to the military institution to refrain from certain practices and to set red lines, provided that its own combatants do not become more exposed than the opposing combatants to the dangers of military action.

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