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Soft and Hard Mind-Brain Enhancement and the Problem of Human Nature

Geist-Gehirn-Enhancement und das Problem der menschlichen Natur

Zusammenfassung

In diesem Artikel untersuche ich, wie Phänomene aus dem Bereich der Neurowissenschaft in der Lage sind, unsere Identität und unser Selbstverständnis zu verändern. Ich lege klassische und moderne Konzepte dar bezüglich Hintergrund und Terminologie für das, was man als menschliche Natur bezeichnen kann. Ich analysiere ferner ethische Aspekte solcher radikaler Einflussnahmen auf Geist und Gehirn, welche ich in diesem Zusammenhang als „hartes Enhancement“ definiere. In meiner Schlussfolgerung kritisiere ich die solipsistische Interpretation mentaler Phänomene und die Idee der instrumentalisierten Rationalität. Nach meiner Meinung können beide zu einem großflächigen und unverantwortlichen Umgang mit Kenntnissen und Technologien führen.

Schlüsselwörter: Gehirn-Enhancement, kosmetische Psychopharmakologie, menschliche Natur, Selbstverständnis, Identitätswechsel

Abstract

In this paper, I examine how phenomena associated with the neurosciences can cause our identity and “self-understanding” to change. In order to do this, I explore classical and contemporary conceptions of background, the term being understood to be what supposedly underlies human nature. I also conduct an ethical analysis of the consequences of such radical modification of the mind and brain, which I define in this context as hard enhancement. In my conclusions, I criticize the solipsistic interpretation of mental phenomena and the idea of instrumental rationality. In my opinion, both lead to the irresponsible dissemination and use of knowledge and technology.

Keywords: Brain Enhancement, Cosmetic Psychopharmacology, Human Nature, Self-Understanding, Changes of Identity

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Medicine has always tried to improve the living conditions of human beings, at least as far as their organic dimension is concerned. This desire is not only reflected in the avoidance of disease and the preservation of health, but also in the more efficient exploitation and optimization of body functions. Neither are our attempts as patients to use health professionals as a means to resolve problems a recent development, particularly in relation to the urge to improve ourselves, and to the infinite and natural human desire for progress, whatever the understanding of this term might be. As early as the second century there is evidence of the existence of physicians who were dedicated to the training of athletes. Galeno de Peragamo personally worked to improve the exercises employed to train gladiators.¹ However, whether the promise proffered by medicine in the search for human perfection has had any real impact, apart from the fraudulent enrichment of some individuals and the harm done to others, is a different matter.² Up until now that has been.

For over fifty years the neurosciences have been offering ever more effective treatments for disorders that used to be impossible to treat. Moreover, during their spectacular development, certain techniques to manipulate neurons have been discovered that may also be beneficial to healthy patients. These so-called *universal enhancers* have opened a new and promising field, that of cosmetic neurology. Nowadays, research on psychodrugs, neuro-implants and the recent *non-invasive brain stimulation techniques* receives millions of dollars in funding, with a view to obtaining products that can improve our attention, the way we process data and our ability to plan actions. Such products could also be used to control our memory and emotions at will, to handle extraordinarily complex machines (originally for warfare purposes), and to detect whether a testimony is true or false.³ But what is novel about this situation is that the provisional results are quite promising, a circumstance that paradoxically has aroused deep concern about the limits of technology.

1. Schmocters and Hard Enhancement

If technological development drives progress and if progress is always desirable, why take precautions against achievements that potentiate our ability to get given objectives? Martha Farah identifies five questions which are pivotal to this concern: safety, equality, the *medicalization* of normality, coercion and the modification of human nature. She considers the last question to be the least relevant of all of these issues because, according to the author, it is a mistake to talk of a stable identity or essence in human beings. It is our nature to seek improvement and the possibility to better adapt to new circumstances, to the point even where we are capable of completely reinventing ourselves.⁴ From Farah's point of view, proof that it is meaningless to use static terms such as "human nature" lies in the fact that our bodies are not equipped to fly, yet we build aeroplanes, or to live on other planets but that nevertheless, we are determined to conquer space. For the same reason there is no sense in being afraid that technology will transform us into "post-humans" either. According to the author, only the concept *transhuman* can reflect the dynamism which is inherent to our species. In other words, Farah's concept of identity is utilitarian. "*Rather than ask whether someone or something is a person, we should ask how much capacity exists for enjoying the kinds of psychological traits which have been previously discussed (e. g. intelligence, self-awareness) and what are the consequent interests of that being*".⁵

There may be various objections to Farah's approach, starting with the concept of human nature itself that is adopted. As this article is devoted to this subject, here I will avoid the other four problems that are related to enhancement. In other words, I will focus my discussion on the hypothetical scenario defined by Sandel: one in which neuro-technology is sufficiently safe and in which its equitable distribution is possible, such that all who want to be able to enjoy its advantages without any form of coercion.⁶ In addition, to avoid any controversy as to what the aims of medicine should

or should not be, I will also introduce Erik Parens' supposition: it will not be doctors who will investigate and prescribe cosmetic technologies, but rather *schmocters*, a new type of professional specialized in *cosmetic neuropsychology*.⁷ Of course, this does not mean that such matters are not relevant or that there is no connection between them and the issues which are addressed here, rather, they will not be taken into consideration in order to simplify the ideas presented. A third element that I wish to introduce, before beginning to argue my case, is the distinction between *soft enhancement* and *hard enhancement*. I define the first as a type of manipulation of the body which does not significantly affect the background that sustains the identity of an individual, namely, that which determines what an individual is and why it is that he manifests specific and general characteristics, which we could refer to generically as *nature*. The latter, on the other hand, does imply radical changes in such traits.

It is not always easy to distinguish when a modification might produce soft or hard enhancement, which does not mean that in the majority of cases we are unable to make reliable predictions. In addition, it is a characteristic feature of network systems that there is no borderline region in which there are intermediate cases but instead a critical point that triggers drastic changes once it is reached. We might think of this in terms of the membrane potential of a cell or, to take a simpler example, of a cobweb. Its capacity for adjustment so that it can assimilate changes will depend not only on its complexity, but also on the intensity and localization of stimuli. However, the question arises as to whether it is possible to define an "all or nothing" law for brain-mind enhancement, whether we are capable of predicting when a particular modification or the combination of a series of modifications will prompt a significant change in an enormously complex and unique network systems. We must not forget that, with respect to the latter, the central nervous system of every individual is endowed with a plasticity that enables

it to be visibly moulded by stimuli, such as those related to education, society, personal habits, etc.

2. The Linguistic Community as a Natural Boundary

Recognising the difficulty of establishing the dividing line between minor and radical modifications of the brain encourages prudence when considering brain-mind enhancement, which does not necessarily mean it should be rejected. Arthur Caplan is in part correct when he responds to those who are most critical of neuro-enhancement by formulating the following questions: "*Have we become less human because we ride instead of walk to work? Is there a natural limit beyond which our nature is clearly defiled by change? Surely not, is it not the essence of humanness to try to improve the world and oneself?*"⁸ In effect, neither horse riding nor other more extraordinary technological changes (look at the social diffusion of the Internet, on which there are already research studies concerning its influence on synaptic structure and activity⁹) violate human nature. Quite the opposite, they appear to be a manifestation of it, precisely because they improve our environment and the people who are part of it. This does not mean, however, that there are no limits. Here we need to qualify the position of Caplan because, is it possible to cross a limit in which we will no longer regard such a Brave New World as *ours*, a world in which we would be unable to recognize ourselves, to continue to be what Caplan refers to as "oneself"?

But even accepting there is a *natural boundary* that differentiates soft from hard enhancement, why fear the latter? Why cling to an "essence of humanness" if it means nothing more than the continual pursuit of goals by rational and autonomous beings? To respond to this question we need to return to the idea of background. I will begin by alluding to the sense in which John R. Searle uses this term which, as we will see later, I share with certain qualifications. This philosopher from Denver refers to background as the non-represent-

tational abilities, practices and attitudes that are conditions of satisfaction of any intentional (mental) states.¹⁰ This *background* exhibits the typical properties of network systems, which implies that the appearance of mental events does not depend on a single part of the network, but on the structure and dynamism of all its nodes. Donald Davidson refers to this same background when he asserts that *“there is no assigning beliefs a person one by one on the basis of his verbal behavior, his choices or other local signs, no matter how plain and evident, for we make sense of particular beliefs only as they cohere with other beliefs, with preferences, with intention, hopes, fears, expectation and the rest.”*¹¹ Parallel to this, and not by chance, this same holistic dynamism is attributed to the central nervous system in one of the most promising models to explain higher cognitive functions: the connectionism approach. It is not a specific group of neurons but the interconnection of all of them, processing information in parallel and distributively, in other words simultaneously, which seems to be responsible for these special functional processes.¹²

Background cannot be conceived as being restricted to the mind of each individual since many of our mental states require combined intentionalities for their existence. Marriage and money are two types of *institutional facts* that, according to Searle, are phenomena that are not the sum of individual intentions but of a single collective intentionality. This type of fact is distinguishable from *raw facts*, such as tides, the phases of the moon, etc., which do not require human institutions. Nevertheless, the latter also require the creation of language for being formulated, a consideration which enables the true framework of our background to be set in the linguistic community, given that all mental content, whether it is dependent on or independent of the observer, demands, in order to be thought, the social practices that are most specific to humans. Proof of this, as Davidson reasons, is the fact that as a rule, it is the routine application of a word or thought which determines its correct meaning

(content). First of all, we learn to do things with propositional attitudes, and only later do we start to recognize words and mental states as being separate from their function. Research on the problems of identity that are typical of autism¹³ and disorders related to social isolation in childhood¹⁴ appear to support such a hypothesis. Indeed, the genesis of the concept of identity seems to occur only after we have managed to learn *what* is possible to do with other human beings.

3. Accessing Background

With the ideas on background that we have just presented we manage, on the one hand, to avoid thinking of a human being as a brain in a vat and, on the other hand, we come to realize how the meaning of a word or mental state, including those related to intentions to act, do not depend entirely on the will of the agent. If thoughts and words do not always mean what one thinks or wants them to mean, in other words, when they do not always impinge on reality as expected, neither do our desires depend entirely on our understanding of what we believe we want. To quote Davidson, *“propositional attitudes are partly identified by how we relate to society and the rest of our environment, and the way in which the mind, society and the rest of the environment are interrelated may in some respects not be known to the person in these states.”*¹⁵ There are numerous instances in daily life that serve as examples of how the majority of our associations between words, thoughts, and the world, many of them acquired in childhood, are not always learnt as linguistic habits in an entirely conscious manner. For example, sometimes we know how to do things with words without really knowing how – not all declarations of love work well and there is always something mysterious about those which do. Furthermore, we do not always perceive the full effect of our propositional attitudes in the world or the role that this effect plays in our relationship with our environment – *“Oh, you aren’t even ripe yet! I don’t need any sour grapes”* the fox said to the grapes with an attitude which today some would call a

manifestation of the psychological phenomenon of *cognitive dissonance*. Finally, often the best way of knowing what my intentions or beliefs are is to observe what I do or say – for the same reason an observer may be aware before the agent himself is of the fact that, for instance, he is in love.

A third important consequence that emerges from the idea of background is its intangibility, in the sense that what underlies human nature cannot and should not be tampered with. We cannot do this because the consequences of such a radical modification of neuronal and meaning networks are unpredictable. At best we can speculate that, since both systems are so complex and unknown, there is a high probability of discouraging future outcomes. Yet if no neurologist in his right mind is presumptuous enough to want to radically change neuronal structures (at least until we learn what is essential about them, which we are a long way from knowing), in the mental sphere the perception of danger is much less. However, why do we want to modify the harmonious dynamism constituted by the abilities, practices and attitudes which are typical of a linguistic community? This is the main problem addressed by Jürgen Habermas in his book “The Future of Human Nature”. Habermas defends the view that the *intersubjective habitat we share should not be regarded as the private property of anybody*. No single participant “*can control the structure or even the course of processes by which we reach understanding and self-understanding*”.¹⁶ First of all, the recognition of the existence of an underlying background to human nature implies recognizing that we do not *have* a nature but rather we *are* nature. This represents a big difference, as recognizing our nature as “something we own” means affirming that we can transform it into something else in order to satisfy our desires. By contrast, to be a nature is related to an endowment (organic equipment, social environment, etc.) that determines our propositional attitudes and our personal identity. And this is the paradox of *the keyless door*, as I call it reminding one of the most famous Mi-

chael Ende’s passages. What is the point of wanting to open a door if it requires us to forget the reason for which we intend to walk through it? Why try to change that which forms the basis of our desires and aims? In sum, how can we prove that the agent will continue to view the radical transformation positively once it has occurred?

4. Personality Beyond Homeostasis

The externalist interpretation of the mind-brain-world connection, the theories concerning the heteronomy of the will, and the issue of intangibility, are three questions about background which provide basic keys to discuss the cosmetic manipulation of the central nervous system. All of them make it patently obvious that this subject has little to do with what might appear to be similar issues, such as, for example, cosmetic surgery. Such singularities of the mind-brain phenomena frame what I have defined as *hard enhancement* and the problem of human nature.

The question of addressing the modification of background networks deserves to be subjected to ethical analysis on various levels. I am not going to stress the most well-known and evident of these levels, the one associated with the alteration of the neuropsychological balance. The immense majority of studies on the improvement of cognitive functions such as memory, attention, data processing, etc. take into account the fact that the optimization of a specific faculty can impair the activity of others. In fact, if as is well-known, a particular deficit in a sensory organ can promote hypersensitivity in another, then there are reasons to suspect that this phenomenon can also occur in reverse. In this regard, cognitive homeostasis would work against hard enhancement with the aim of preserving a biologically preconfigured state of balance, at least if it is perceived as a significant modification in terms of dynamics since the body does not distinguish between beneficial and detrimental changes. Consequently, we can label all allowed changes as soft enhancement. Consequently, none of them need to

prompt any controversy about supposed changes in our nature. Of course, the ability of the central nervous system to cushion the impact of certain changes is limited, but every good scientist tries not to reach such extremes unless therapeutic motives demand that the risk should be run. However, it is not therapeutic but cosmetic medicine that we are analyzing in this article.

Modifications of personality or character, or what are also known as changes of identity, are a different matter. This is a classic problem in psychosurgical literature but, as David Allen Karp notes, it is in the field of psychopharmacology that is revealing itself to be a serious social issue. Indeed, while in the former any such modification is conceived as a consequence of radical surgical interventions for a few types of neuronal or mental disorders with extremely severe symptoms, the latter is the result of the consumption of widely used drugs such as antidepressants, which are prescribed for conditions with more than significant morbidity rates¹⁷. We need to add to this the fact that the phenomenon known as the medicalization of normality, and the new cosmetic use of psychodrugs, have further extended their use.¹⁸ In short, personality modifications are not a hypothetical or a merely marginal problem.

A change of personality is not a change of mood, a fluctuation in the way we feel, as if we were dealing with minor plastic surgery to improve the appearance of our nose. None of these two kinds, psychical or physical, prevent us from identifying the subject who has undergone an intervention. On the contrary, we are talking about a change as global as, for instance, a face transplant: the substitution of dynamic structure as a whole (albeit physical or semantic). The difference between a face transplant and a personality change is that in the former the replacement is total, whilst in the latter only certain modifications to the background of the subject's mind are involved, still enough for a radical transformation. The problem is that such modifications barely raise an eyebrow, especially

in cultures as own, in which it is widely accepted and valuable the idiosyncrasy of every individual and the richness of a heterogeneous society. The personality of X, his nature, has been changed and so what? This means that more than regarding personality as a tool to enable us to adapt to our environment, we see it as the imprint of the subject, as his footprint. And in fact in our culture, homeostatic criteria have only referential value in a pathological context. For this very reason there is no research into the *cosmetics of personality* and only on personality traits. Another proof of this is the fact that the majority of human beings do not wish to relinquish being themselves at any price. The possibility that our desires and actions involuntarily prompt such changes is a different matter, a danger that is not such a distant prospect in the context of cosmetic neurology which appears to ignore the three characteristics of background that we have discussed in this article.

5. Authenticity Argument

One of the great ethical debates about personality changes is concerned with the identity of the person who undergoes such a change. This problem can already be expressed at the therapeutic level: to what extent is a medical procedure that changes the personality of the patient legitimate? Indeed, as a result, is he by any chance still the same patient? If the answer is no, then in fact, *he* has not been treated, and thus, any ethical analysis should continue along the lines of a discussion that would better resemble a debate on the advantages and disadvantages of euthanasia. In this context we can analyze four possible hypotheses: a) that humans are simply part of nature, so if we change the latter we change the former, which leads us to the afore mentioned conclusion; b) that human nature has a background (that there is a subject) and that this has not been changed by the medical intervention (soft enhancement), which would legitimize the intervention; c) that we recognize the human condition of the subject but also the capac-

ity of psychodrugs to change the background (hard enhancement), a thesis which would again return us to our first conclusion; d) that background is a transcendental reality and therefore, human identity cannot be modified. In both the case of the first and the third alternative, the patient's identity is at stake, while in the second case the argument is concerned with the problem of authenticity, which is closely linked to discussions about enhancement. The fourth hypothesis will be discussed in the last two epigraphs below.

Paradoxically, the experience of alienation or of estrangement that is related to changes in personality is lived as superficial if the background change effected is total. Regardless, the individual still perceives that his memories of who he was do not apply to his present, that the people around him do not recognize him, that his daily activities and the way he interacted with the world up until that time no longer coincide with his current desires and aims.¹⁹ All of this usually leads to the greatest existential question of them all: who is man? It is the natural tendency of man to believe himself to be a subject, to think that only one of the two personalities is the true one, which leads most people to question the authenticity of their present life, and the most philosophical amongst us to question the reality of the past as well. I regard this experience of alienation as superficial in comparison with other deeper and more contradictory experiences. Such last experiences are typical of some forms of schizophrenia and dissociative disorders that are not related to the other who I was and that I remember, and with the people who remind me about, but to who I am now.²⁰ This latter existential state does not usually emerge in discussions about brain enhancement, for logical reasons, given that everybody seems to agree that the presence of two networks of meaning that are in confrontation is always accompanied by suffering and consequently, and for that reason it is something that is to be avoided. On the other hand and as supported by the first transhumanist hypothesis, a real change in personality, one in

which a new background has replaced entirely the old one, barely causes controversy, given that even when it is not desired from an ethical point of view, it is regarded as ethically neutral, like, for example, a change in hair colour.

To play down the importance of the personality changes that the therapeutic or cosmetic consumption of certain psychotropic drugs can cause is to ignore the fact that our mental content depends on a background that extends beyond the brain and the consciousness of the individual. The dislocation between the new personality and the social niche that accommodated the individual (family, work, projects) not only induces effects similar to the so-called Ulysses syndrome, which is typical of people who emigrate, but it also transforms the subject's perception of his self image and self-understanding. Again, we are faced with the paradox of *the keyless door*. In short, what Alfred Adler called "perfect schizophrenia", the hypothetical case of modifications that do not give rise to state different to our current state, does not appear to be possible.²¹ For this to happen, it would be necessary to achieve the harmonious modification of the whole of society, as well as the relationships the individual maintains with it. Witnessing the serious problems nowadays that many immigrants experience in our theoretically open and hospitable culture, it is not difficult to predict the reaction to a new phenomenon for which society, and in particular the family, is not prepared. The reason is simple as it is more difficult to respect and love someone we believed we knew, to reconstitute bonds, than to create them. After all, if I am no longer the person I was, which compels me to maintain the ties I had in the past? From a transhumanist perspective, that would certainly not be an authentic mode of action.

6. The Inter-generational Pact

"I am an other" complains Rimbaud in his most famous poem. In effect, the fact is that we not only need the community to develop as people and to meet our goals but also, part of our identity is

founded in it. This explains the intimate responsibility of each of its members towards the rest of the community, which is not limited to actions but also to beliefs. This is also what Emmanuel Lévinas refers to when he says that access to the face, to the eyes of another, is an ethical matter.²² There is a private sphere which belongs to us and which we govern, but there is also a public sphere that is equally intimate but inviolable. This final reflection about the relationship between social beliefs and identity enables me to introduce a second type of radical modification of background, not caused this time by drugs or surgery but rather, by the idea of man that is reflected and promoted by certain brain-mind enhancement projects. The first of these is related to the use of psychodrugs to increase the educational performance of our progeny, or to improve or change their character.²³ Here I am not going to consider the majority of the controversies that currently surround the subject of paediatric and cosmetic prescription, for instance, of methylphenidate. I will only discuss one such issue that I believe to be truly related to hard enhancement.

One of the basic premises of moral conscience that unites us is, according to Habermas, *“the conditions, that is, of nature-like growth, which allow us to conceive of ourselves as the authors of our own lives as equal members of the moral community”*. In other words, it is the natural environment in which our communicative practices are developed and in which we manage *“to see ourselves as ethically free and morally equal beings guided by norms and reasons.”* This is possible because from childhood to adulthood, human beings learn how to be free and to critically take control of their lives, including their own past. And the fact is that, even though during childhood guardians make important decisions about their charges, these are reversible. Thus, concludes Habermas, human beings can *“retrospectively restore the balance to the asymmetrical responsibility that parents have for their children’s upbringing”*.²⁴ We must, after all, qualify Rimbaud’s poem: we are not completely “an other”. Human beings need an

environment which is not entirely determined for them. And this is why Habermas is right in declaring that any positive eugenic plans designed to increase the mental abilities or character of our children are irreversible interventions that break mutual and symmetrical inter-generational recognition. Not only would equality between human beings be damaged but also, our concept of equality, the contents of which would be altered by new forms of social interaction. Consequently, the main fear of Habermas is not only that we would create a society consisting of men who fail to regard themselves as mutually equal but, primarily, that they would not be able to understand the actual concept of equality itself.

Habermas censures the duplicitous reasoning of a society which, on the one hand, preaches respect and the value of diversity, but that, on the other, does not hesitate to enhance specific physical and psychic roles and stereotypes by means of eugenic procedures. And, if this is regrettable when we are dealing with such superficial traits as eye colour, height or skin tone, it becomes a real drama when the aim is to select such intrinsic and global characteristics of the individual as their sex or personality.²⁵ In the latter case, individuals are not even conceded the possibility of voicing any criticism. How can one evaluate an alternative, never mind that it might not be a possibility, if it means agreeing to become another person? The ultimate consequences of this alienating experience of not regarding oneself as the sole architect of one’s own life, of not being able to incorporate the background of past generations into our own, will lead us to attitudes of fatalism and resentment, according to Habermas.

It is not only the successes of paediatric brain enhancement, which are still beyond our reach, but our own developing projects that may cause a radical modification of our nature by affecting one of the neuralgic points of our self-understanding, the network of meaning from which we interpret human reality. This thesis is not contradictory with

thinking that all actions related to the encouragement of a better education, better quality of life, and the highest aspirations in our children are admirable. Since all such actions can be considered as soft enhancement, as long as the natural conditioning derived from the nurturing of our children is not definitive, that means, an inheritance that is insurmountable and incapacitating in terms of permitting the subject to exercise critical judgement of the legacy received. Correctly understood, Caplan is right when he claims that *“the answer is not to prohibit the improvement of human capacities but to ensure that this is always done by one’s own choice and not dictated by others”*²⁶. In short, knowing how to contemplate the face of new generations, to make them feel that they are or were seen correctly as part of a community of free and equal agents, is to understand and respect the concept of “natality”, which according to Habermas, implies that *“the power of the past over the future is shuttered”*.

7. Behavioural Psychologism

Other networks of meaning that are central to our continuing to be what we are, are being removed for certain purposes assigned to the new neurotechnologies. The first of these is related to certain forms of behavioural psychologism which, already with us for some time, promote the trend to consume drugs that modify behaviour.²⁷ To accustom oneself to eliminating the negative emotions associated with a compromising situation in our lives often causes us to modify the way we interact with the world at the most intimate level. Why leave my job or an abusive husband if I can simply resort to benzodiazepines? Proof of this is the attitude of passivity which is progressively associated with addictions, a phenomenon which does not always have a direct physiological cause.²⁸ Indeed, the question of why change reality and not ourselves requires an explanatory framework that is more ontological than experimental. The possibilities offered by the new generations of psychodrugs not only confront the individual with this question but

also invert the congenital tendency of every human being to conserve and develop his own dynamism, which realizes itself through action and at the cost of transforming our environment.

The greatest obstacle when it comes to explaining the importance of this point is the fact that it is often considered a subjective problem, associated with particular beliefs about the value of effort or the importance of pain in our lives. For transhumanists such as James Hughes, Ilina Singh or Malcolm Gladwell, the rejection of technologies that facilitate tasks or eliminate pain would merely be expressions of fear of being undervalued, simply because we need or accept extra help rather than relying on our own efforts.²⁹ On the other hand, for religious groups such as the Amish communities or certain Hindu factions, technology can offer man little with respect to what really matters. On the contrary, it may even lead him to lose the way in his search for happiness. However, both are not generalized positions. It is reasonable to think that if a particular task is made easier this does not mean that all effort or merit will be eliminated. Indeed, the scope of our goals and approaches can always be extended, subsequently increasing the effort required and the possibility of experiencing personal triumph. The problem is that, broaching enhancement problem in terms of this three approaches, we tend to gear our discussions towards the question of living together in multicultural societies. In a certain sense this is how things stand and the question is not irrelevant. However, I think there is a more important underlying question that is not related to what we think about existence and society but rather, to what the manipulation of the brain can make us think about both of them. Psychodrugs could impel their consumers, no matter what their beliefs might be, in an existential direction which is the same but altogether new.

It would be a mistake to identify this new place for man in the universe as yet another version of hedonism or emotivism, given that both positions, just like deontological positions, imply action as a

human way of existing in the world. Action is not only a means but also an ultimate aim associated with that which at times makes demands on our emotions and other times our reason, respectively. For both cases, to fulfill irrational desires for revenge or to comply with a sense of justice in which one believes, entails the transformation of the world. As with deontologism, hedonism does not understand the desire for vengeance other than in terms of its realization. On the contrary, the behavioural psychologism induced by certain drugs can imply action, but only as a means that is contingent on the neutralization of desire. The consumption of psychodugs is one route to make impulses disappear, although such action is not a condition of satisfaction, just as rain is a criterion of bad weather but not the weather forecast. Likewise, what is desired is the disappearance of the desire for revenge, not the means to achieve it. It is not therefore the fulfilment of emotions which is sought but their dissolution. Ultimately, the attitude encouraged from the perspective of cosmetic psychopharmacology implies the removal of all teleological keynotes in the new human mode of existence in the world, a world which, to use the terminology of Elizabeth Anscombe, no longer requires reasons – meaning – or motives – emotion.³⁰ Even the pretension itself of dissolving all finality would only be a transitory and circumstantial motive in the end, a means to attain this perfect state of conscience, one that is characterized by total indifference and inactivity.

It is significant that *athymia* is one of the symptoms most strongly associated with the abuse of narcotics, and psychiatrists know the disastrous consequences that it can cause, in the long run, on the personality of the patient, becoming a true mood disorder. But cosmetic psychopharmacology is not the only product of Neuroscience that is causing the concept of finality to lose its meaning. For years a powerful philosophical movement, eliminative materialism, has been gaining ground amongst researchers. This theory argues in favour of reducing every explanation of human affairs

to neurophysiological assertions. This school of thought has not confined itself to the scientific arena, and taking advantage of the authority and influence of scientists in the field of experimentation, it is having considerable impact on public opinion. As I have already mentioned, the ideas of this neurophilosophy do not need to be true or be put into practice. It is sufficient that they are believed to reinforce, from the theoretical point of view, the lifestyles of the so-called *Prozac Nation*. In such a new world it is no longer the face of man that arouses our attention but rather his brain, a reality which is governed not by rules of coherence and rationality but by blind laws of cause and effect, leaving no room for responsibility, love or beauty.

8. The Transcendental Interpretation of Background

From the perspective of eliminativism, rationality is purely instrumental. It is able to impact on human nature without undermining its ability to achieve objective knowledge. We have already seen how the theory of background raises strong objections to these arguments and that from a purely epistemological point of view, it is difficult to understand how strictly physical relationships can really explain the value of any assertion. It might, as a result, seem as if to recognize the existence of background would lead us to accept opposing theses: that our knowledge is not objective and that the modification of nature is a territory in which the actions of man are taboo. In fact, many of the authors mentioned in this article remain in two minds regarding realism. For Searle, for example, the social reality constituted by linguistic communities is not the result of any convention, but then neither is gall bladder function, although they both contribute to its autonomy. In other words, background is not a social construct and cannot ever become one. However, the basis of all objectivity is at the same time its rational boundary. Davidson goes further with this approach and would defend the view that as our world depends on the concep-

tual background or stance we adopt, what is valid or real in a particular theoretical framework might not be in another. From this standpoint, Davidson is not indicating that we should deny the importance of the value of the truth of our claims, nor that we should adopt relativist attitudes. This is why he prefers to talk of the existence of various realities rather than the irrationality of all worlds. Similarly, for Habermas, the modification of what judgements of truth are founded on is beyond all rationality. Trying hard enhancement would be as absurd as trying to win a game of chess by changing the rules. But is human knowledge merely a set of games that depend on what Wittgenstein was to call “forms of life”, something beyond what is right and wrong, and that will depend on the circumstances and activities of people? Is the problem of hard enhancement ultimately more a problem of logic than a moral one?

It is interesting at this point in the discussion, and as a way of concluding this article, to focus on a broader meaning for the term background, one used in Aristotelian philosophy to refer to rational choice (*proairesis*): something that in terms of conduct is specific to human beings. As José Manuel Giménez Amaya and José Ignacio Murillo point out, in contrast with the modern autonomist approach, Aristotle underlines the fact that “*the rational agent not only acts with a view to achieving a particular good, he also does so against the background of a global concept of his life. The specific action of man is not rational merely because it is based on calculation but because it compromises the agent as such*”.³¹ This notion of background might identify with those mentioned above were it not for the fact that for the philosopher from Stagira, what is essential, most intimate and global for every living creature is its teleological condition. Also, in this context, we need to understand what characterizes human intelligence: its capacity to appropriate the purpose underlying all things, be it one’s own (*entelecheia*: possession of the *telos*) or that of others. In other words, rationality is above all, and as Ana Marta

González points out, “*the capacity to be one with what is known, to penetrate it, to discover its intimate nature. From this perspective, to be rational means to possess the capacity to take responsibility for the dynamism of beings and this is precisely why one is able to look after them*”.³²

9. Saving Identity

Various consequences derive from recognizing that finality is one of the characteristics that constitute our nature, more concretely, from affirming the transcendental dimension of background, and of linking rationality to its existence. First of all, and as their name indicates, human inclinations are not a social construct, although they were a social reality, the origin of which is as uncertain as the origin of language itself. Secondly, nature is not irrational or solipsistic, this being a premise which is bereft of meaning, self-contained and impermeable to reality. Quite the opposite, it is from nature that culture emerges, in the original sense of its being the cultivation of nature. In short, background is no longer taboo in terms of knowledge or action. Finally, and here we return to the fourth of the previously proposed hypotheses about background, there is no material modification that can change the most intimate aspect of man, his finality. The knowledge and functional expression of this teleology is available to us, but finality, in other words natural identity, does not disappear if we ignore or change these functions. This is why we speak, for example, of a diseased tree or a broken ashtray. It is certain that we can assign new purposes, but we cannot destroy or displace previous purposes, amongst other reasons because finality, like love, is immaterial. The pronouncement “I am going to extinguish the love I once felt for you” has no meaning, nor does any proposal related to changing the identity of a natural being, in terms of an Aristotelian interpretation of reality.³³ The danger of hard enhancement really has to do with altering the human body and society so that it is impossible for the individual to recognize his natural finality.

Firstly, because the natural signs that exist about such a profound reality are erased, and secondly, because we will have clouded the intelligence we need to understand them. The second question merits some additional thought.

The problem of objectivity is not alien to the problem of the radical modification of conscience. What would affect our self-understanding as much as a world without truth and purpose? For Aristotle it is the same problem since nothing demands a greater degree of objectivity than the knowledge of finality that is inherent to being, and to the good of the universe as a whole. It is curious that the Aristotelian solution, later developed by St. Thomas Aquinas, entails overlapping both questions. Man overcomes his own finitude and that of the beings which surround him, reaching an understanding of himself and them, thanks to the fact that all realities share the same order, the same universal finality. It is in this unity that the knower and the known can meet and surmount, in the rational act, that which their respective imperfections separate.³⁴ To accept theories that deny the purpose of nature or that use technologies which progressively eliminate human aspirations (even those associated with our most basic emotions, our survival instinct for example), leads not only the violent behaviour of treating everything as passive objects, but also spiritual blindness. In other words, it implies the death of moral conscience and the inability to recognize the horror of such actions.

In conclusion, the paradox of the keyless door persists, not at the level of human identity but at the level of personality. This does not make the phenomenon of hard enhancement less immoral as a result. On the contrary, not only can I become the person I do not wish to be but moreover, the person I ought not to be: a monster who, not by chance, we associate with wicked actions. Inversely, any process which can change one's character, the personality of the patient, is justified if it can restore an iota of his humanity. In this case he continues to be himself, in the most intimate part of his being

because his identity is beyond all possible harm or improvement.

10. Conclusion

As William James wrote, we have to try to make our nervous system "*our ally rather than our enemy*".³⁵ In my opinion, the main way to do this is to reject the solipsistic interpretation of mental phenomena and the idea of instrumental rationality, not least because both lead to the irresponsible dissemination and use of knowledge and/or technology. We should make an effort to find out to what extent our beliefs and intentions are closely dependent on the way we relate to the world and how such relations also configure the mental states of the rest of the members of our community. Only in this way will we be able to avoid three common mistakes: first, the *keyless door paradox*: to believe that we can continue to be who we are in a radically different set of circumstances; second, trying to educate our progeny in concepts that are related to fundamental rights, on the one hand, but that on the other, lack the referential content that only actions and not merely words can confer; and finally, to think that one's own theories and beliefs that make us contemplate man in an entirely radical way are innocuous to the people we communicate with.

Neuroscience may have a powerful influence. Handled prudently it can help us to reach levels of progress that were previously unthinkable, such as agricultural advances, electric lighting, penicillin and any number of similar inventions did in their time. However, the danger it poses - the dehumanization of our species - is not a trivial matter. The line that divides soft and hard enhancement is, in short, the boundary that every community requires for its constitution, and it is the means by which its members can mutually reaffirm themselves. Man has never had so much power to cross that thin red dividing line. Thus, will future generations be able to recognize themselves in our faces as we do in the faces of our ancestors?

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