

Enlightenment and culture industry: some reflections about the neuroculture

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Abstract: Neuroscience innovations and their repercussions have made the brain not only an organ, but a relevant social actor in contemporary times. Such conjuncture led to the advent of neuroasceticism – that is, practices and discourses of direct action on the brain in order to enhance its performance – which, in turn, resulted in a brain culture (neuroculture). Given this scenario, this study aimed at analyzing some elements of neuroculture in the light of conceptual references of the Critical Theory of Society, particularly the notions of Enlightenment (Aufklärung) and culture industry. In conclusion, the article identifies in neuroscience propaganda a scheme of domination and uniformity that ends up reifying the masses according to criteria that reduce a person to the mere expression of his/her brain activity.

Keywords: neuroculture, enlightenment, culture industry.

A close look at the neuroscience innovations reported in recent decades can lead to a series of thought-provoking impressions at common curiosity. At first glance, the emphasis given to the brain and its potentialities may give the impression that every human being has a “super organ”, which depicts all the qualities of the species. In each new discovery there is apparently an implicit message: everything that was once explained through ethical, religious, and/or metaphysical notions can be given a new significance as an effect of brain activity. Considering that the brain is no longer represented solely as an organ, but also as a very social agent in the contemporary world of a “somatic culture”¹, it seems relevant to investigate what these ideas may add to a debate especially in the humanities field.

In this context the brain takes a leading role in the general perception of the human constitution and reaches neuroculture, which concerns the valorization of brain attributes through the dissemination of neuroasceticism, which include practices and discourses of direct action on the brain in order to maximize its performance, efficiency and potentiality. Such trend have already been arousing international academic interest for some time, and is exemplified by the debate proposed by Ehrenberg (2004/2009), to whom there is a clear division of neuroscience programs and interests: those of “weak” program, aiming only at treating neurological disorders

and discovering neuropathological aspects of mental illnesses – as opposed to “strong” neuroscience programs, aiming at treating neuropathological psychopathologies and thereby intervening more effectively on brain machinery to increase the decision and action capacities of individuals, now considered “brain subjects”.

In recent years the issue of neuroculture has stimulated academic debates also in Brazil. In fact, Ortega (2009a; 2009b), Ortega and Vidal (2007), Ortega and Bezerra Jr. (2006) and Vidal (2011) have presented studies on neuroscience, neuroculture and brain subjects from a historical-sociological perspective. It deals with the mapping of the brain subjects both in contemporary times and in the development of neuroasceticism, whose roots can be found in the philosophy of the 17th century’s personal identity.

In this context we aim to characterize some of the elements that constitute neuroculture and qualify it as a dominant trend to conduct life in contemporary times. We analyze some psychosociological implications arising from the interpenetration between rationality and irrationality, which are present in neuroascetic practices which, while appear to be progressive and/or liberating, and enhanced by the label “scientific”, in reality come close to both self-help literature and other “neuroeducational” theories and exercises – such as those related to phrenology and the double brain –, which emerged and spread in the 19th century. We employed two specific notions linked to the thinking of Max Horkheimer and Theodor Adorno – namely Enlightenment and the culture industry. It is worth adding, following the *modus operandi* of the Critical Theory of Society, that we are not reducing or freezing the phenomenon of neuroculture with the aforementioned concepts, but rather of using them as engines for reflection to keep both the phenomenon

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1 Somatic culture can be defined as a set of statements propagated by the common effort of the scientific communities and the mass media, to which the very idea of collectivity is built according to health, body performance and longevity criteria, among others (Ortega, 2009b). Its direct effect can be measured in the growing demand for products such as vitamins and dietary supplements, which supposedly favors exercise practice and other considered healthy behaviors.



and the conceptual tools in motion, within the limits and possibilities offered by the writing of an article.

We subdivided our work into three main sections. In the first, we sought to present a genealogy of neuroasceticism, establishing some correspondences between asceticism once guided by notions coming from phrenology and which now claims to obey the advances of neuroscience. In the second, as mentioned earlier, we will introduce some elements of Critical Theory, whose conceptual framework we adopt to examine the action and propagation of neuroculture phenomenon. In particular, we mobilize notions such as Enlightenment and reification for an examination of such “brain worship” as a circumscribed component in the larger scheme of the culture industry. Finally, attempting to better approach the two previous moments, we seek, to rethink neuroasceticism from the (dis)paths of enlightened logic – that is, from its dietetically inherent (dis)reason – by using the content analysis of a book that is representative of the above mentioned neuroscience trend, which obtained a few years ago considerable diffusion and success in the Brazilian publishing market.

Neuroasceticism and brain subject: historical and conceptual aspects

Neuroasceticism is conceived here as the set of practices and discourses of direct action on the brain in order to maximize and maximize its performance. However, it is necessary to circumscribe neuroasceticism practices in even broader sociocultural contexts. Thus, we cannot forget that neuroasceticism tends to be one of the manifestations conditioned by the presence of a somatic culture that organizes the collectivity according to health and body performance criteria.

In fact, beliefs that previously belonged to the realms of morality, religion and other areas related to human life began to acquire a measured value according to their distance or proximity to the notion of “quality of life”. It is not, however, a break with old traditions, but a retranslation of values for a scientist view of life. Thus, if in the past practices sought to develop moral and spiritual qualities were close to a more metaphysical level, today the search for longevity, health, and quality of life has been secularized, being linked to the daily lives of subjects who approach such ascetic practices to achieve goals as “mundane” as improving their ability to concentrate, work and produce (Costa, 2005).

It is precisely in this context that we see the increasing presence of neuroasceticism in the daily lives of the masses as a substitute for the sociocultural impact of neuroscientific innovations. This is accomplished through repeated action of mass media advertising and dissemination. Through such practices, the subjects aim control their brain themselves, responding affirmatively to the advertising exhortation that promotes neuroscientific knowledge as a direct contributor to individual success and well-being.

The emergence of a current of neuroscience interested in imparting new nuances to beliefs and notions that previously belonged to other fields of academic inquiry is undoubtedly an important milestone for the consolidation of neuroculture. There is a spreading that, through the use of technologies that provide increasingly accurate images of brain activity, it would be possible to identify in real time the brain processes occurring in various situations of human life, such as grief, purchasing decisions, situations related to love and violence etc. The search for the neurofunctional foundations of phenomena traditionally discussed in the field of the human sciences is one of the main tasks of this neuroscience chain (Vidal, 2011).

Thus, interest in the brain is no longer limited to the narrow spaces of medical offices and scientific laboratories, but is progressively widespread by mass media in the wider social imaginary. Neuroascetic discourses and practices acquire the function of giving new significance to the language in which human attitudes, thoughts and emotions are represented, and neurochemical vocabulary tends to take the place of linguistic representations once related to ethical, moral and ontological notions. As a byproduct of this discourse and information network, the search for a self-construction aimed at reaching the “brain subject”, expression coined by Ehrenberg (2004/2009) and referring to the target-subject of the neuroscientific discourse spread in the social imaginary, elevates the brain to the position of headquarters and foundation of its structuring subjectivity. Neuroasceticism, therefore, would be a structuring factor of cerebral subjectivity.

Although its relevance intensifies in conjunction with the recent boom in neuroscience advances, neuroscience was a solidifying practice in the 19th century. In this sense, Ortega (2009a), through thorough historical reconstruction, pointed out how neuroscience was common in 19th century Europe. Phrenology and the double brain theories were then current discourses on the mental faculties, figuring as disciplines capable of realizing the “neuroeducation” necessary for the good coexistence in society and the satisfactory use of mental resources through cultivation practices that allow the optimization of the cerebral hemispheres². In such a context, the attainment of mental health would be by a daily training of the brain, with phrenological asceticism allowing at the same time to cultivate socially accepted virtues and to inhibit personality’s evil inclinations.

Through this brief history, we can see that there is a correspondence between the 19th century neuroscience, when the prevailing paradigm was phrenology, and the practices guided by contemporary neuroscience, an approach previously pointed out by Ortega (2009a). In this sense, we are intrigued that knowledge from the phrenology and double brain age, supposedly condemned to obsolescence, may reappear in present time, driven precisely

2 The former preached that each aspect of human character was based on a specific region of the skull, while the latter stated that each individual “had two conscious brains, independent of each other” (Ortega, 2009a, p. 623).

by neuroscientific “discoveries” that, at least in theory, should reinforce its lack of academic validity. This is what leads us to the following problem: Would there be points of ambivalence and indistinction between what is now scientifically accepted as neuroscience and the supposed phrenological mistake, considering that both tendencies would converge to the field of practices of neuroasceticism, promoting the good use of the brain and therefore of life?

Such a dilemma also seems to derive from the increasing influence of mass media as vehicles for promoting a market for brain-maximizing practices, with the ever-increasing number of self-help books, software, magazines, and other types of products. So, it is for the mass media to play the role of popularizing and disseminating such products, as well as making the neurochemical vocabulary familiar to the consumer and arousing interest in maintaining a brain education routine.

While we gladly acknowledge the framework that the existing scholarly production has provided so far (let us reaffirm the importance of works such as those by Ehrenberg, 2009; Ortega, 2009a; 2009b; Ortega & Bezerra Jr., 2006; Ortega & Vidal, 2007; Vidal, 2011), we cannot avoid identifying the insufficiency of more specific investigations, for example, about the role of mass media in the spread of neuroculture. It is because we understand that this and other aspects are also important for this debate that we will now draw on some conceptual contributions from the Critical Theory of Society, expressed, for example, in notions such as Enlightenment and culture industry. The purpose here is to settle the ground for a more appropriate understanding of the relations that we propose between the diffusion and the practice of neuroasceticism and the reification process that is established from the ideal of a scientifically built subjectivity.

Critical Theory, Enlightenment and the culture industry: some (brief) comments

Critical Theory can be characterized as an interdisciplinary “social philosophy” referring to the joint work done by members of the Institute for Social Research founded in Frankfurt, Germany in 1924. Within the scope of Critical Theory, we highlight here the intellectual partnership of Max Horkheimer and Theodor W. Adorno, which resulted in one of the most important works for both Critical Theory and western thought in the 20th century: the set of essays called *Dialectic of Enlightenment: Philosophical Fragments* (1947), focused on reflection on the veiled dangers of the Enlightenment program as a knowing spirit that would emancipate humanity from mythical immaturity by developing reason and the domination of nature.

The first text of the collection, entitled “The Concept of Enlightenment”, begins in an alarming and prophetic tone, emphasizing that the Enlightenment (*Aufklärung*), which aimed to replace imagination by knowledge through the dissolution of myths and from

the disenchantment of the world, would be leading the course of humanity to barbarism and self-destruction (Horkheimer & Adorno, 1947b/1985). In other words, the progress proclaimed by Enlightenment would not become a path that leads only to freedom and adulthood, radically frustrating the proposition previously advocated by the famous text of Kant (1784/2009)³. For Horkheimer and Adorno (1947a/1985), both the horror of totalitarian regimes and the fetishization of relations and the ideological decay of the entertainment industry in the so-called liberal societies would attest to the regressive germ that *Aufklärung* brings with it. In either case, the masses would not only be objects of domination perpetrated by the illusion of progress, but rather the very vehicle of that domination.

In this context, Horkheimer and Adorno (1947b/1985) assert that the paths taken by the Enlightenment would result in refining its impetus of domination and improvement of a culture industry, for example, as a fundamental step for an a priori determination of the masses on the perception on the objects. It is in this context that Horkheimer and Adorno (1947a/1985) point out that such a logic of domination is greatly imprinted on contemporary culture, giving everything similarity and equivalence, something largely motivated by the specialization of an industry responsible for mass production of cultural goods in a cohesive system composed of the mass media and the holders of political and economic power.

Still according to Horkheimer and Adorno (1947a/1985), by engendering supposedly tailor-made products, the culture industry fallaciously insinuates that the masses are its main object and motivation when, in fact, the masses are the very ideology of the culture industry. The mindset to become engrained on them is the ultimate purpose of standardizing all goods in a process of transformation from banal to commodity and the monetization of the monotonous. As stated in the previous paragraph, here everything can become homogeneous and marketable, including the subjects (Adorno, 1963/1986). Consequently, any spontaneity that arises within the mass tends to be rapidly commodified, with the culture industry always looking for new slogans for old stereotypes – like the new summer hit, the new superhero movie, and so on.

Then, from an excellent management of the Enlightenment’s categorizing impulse with regard to the objects of nature, the culture industry brings the totalitarian, predatory mind of enlightened reason to its paroxysm, treating all individuals as equivalent and imposing on them standardized needs and yearnings,

3 In general terms, for Kant (1784/2009) the philosophy of Enlightenment appears as the output of a minority for which man himself would be responsible, resulting not from a lack of understanding, but a lack of daring to know (*Sapere aude*) by using reason itself. In this sense, one who does not dare to know would be content to live a narrow life, ruled by laziness and cowardice, carrying the burden of being an individual without freedom and autonomy, because of being dependent on the intellectual tutelage of others.

making them look forward to the happy ending of the lives of Mickey Mouse and movie stars in their daily lives. In fact, according to Horkheimer and Adorno (1947a/1985), different prices and values are now attributed to distinct cultural products not because of ululating differences in artistic quality, but for their utility in selecting and classifying the consuming public. A hierarchy of qualities is then established to serve a complete quantification of consumers, so that each person can behave according to their statistical range of consumption and also aspire to a rise to the upper layers. Therefore, it is not at all absurd to state that, after all, the subject is more and more treated as an object or thing. In a single word, he/she is reified.

Well, but what does all this discussion have to do with neuroasceticism and neuroculture? Or, put differently, can such a process of reifying the subject also not be thought of in neuroscience/neuroculture? This is what we will discuss next.

The (dis)paths of Enlightenment: neuroscience under the lens of Critical Theory

The discussion of the intertwining of neuroculture, Enlightenment, and culture industry could lead to a mere demonstration of the subsumption of neuroculture scheme to the project of *Aufklärung* and culture industry. However, such a discussion would have little benefit in terms of critical depth, since to say that something works according to the scheme of the culture industry is a truism: the contemporaneity increasingly emphasizes the prediction of Horkheimer and Adorno (1947a/1985) that nothing escapes the culture industry filter.

We understand that the whole theoretical path previously exposed ends up converging to an attempt of answering the following question: What are the continuities and ruptures present in the specific relationship among neuroculture, Enlightenment and culture industry? Although we intend to propose a line of argument about this problem, we must first acknowledge that some “commonplaces” end up constituting the basic premises of the research that follows. For example, the claim that neuroculture can be conceived as a very current manifestation of *Aufklärung*, being disseminated and reiterated through its penetration of contemporary culture industry. The mere admission of such a premise, however, would bring no great news.

An investigation about this issue thus has the innovative challenge of collating and presenting specific elements inherent in neuroculture/neuroasceticism, which can be gauged in some material examples of this trend and that appear available in mass media, such as books, newspaper articles, e-books, audiobooks, websites etc. Thus, we articulated the concepts here exposed with objects available in social reality, which represents a complementary effort between theory and practice that

is quite expensive to the studies of Critical Theory and, therefore, justifies this article more properly.

Thus, we will use, in the next paragraphs, the content analysis of excerpts from Garcia’s book (2013b), entitled *O cérebro de alta performance* (The high performance brain), available on a large scale both on the Internet and in several bookstores throughout Brazil. In the process of selecting this work, something that caught our attention was the fact that it appears in the list of 20 bestselling books of the self-help genre in 2013 according to the site PublishNews⁴, being the only one on the list to directly address brain issues and its potentialities. In addition, the book in question has also been widely disseminated beyond the more restricted bookstore space, being discussed by its author in lectures and interviews in radio stations (Jung, 2015).

We were intrigued by the fact that The High Performance Brain was written by someone who is not “from the field” of neuroscience. In this sense, Garcia (2013a) presents himself on his website as a “business administrator, psychologist and psychoanalyst in formation with over 40,000 hours of work transforming entrepreneurial minds”. His professional performance is marked by lectures and training dealing with entrepreneurship, whose target audience is focused on companies, and executive training courses. So, we were intrigued by how someone with such a trajectory would approach this theme.

However, before we go any further, we believe it is important to reiterate how much, in the neuroculture product here analyzed, it is possible to observe the impetus of *Aufklärung*’s typical instrumental technique or rationality, now even more widely devoted to the domination of an inside “nature” – in this case, represented by the brain. As we have seen before, the advance of studies about this organ and its potentialities led not only to a new range of scientific data, but also to the propagation of the brain subjectivity. However, although the interest of neuroascetic knowledge “retreats” to goes inside the subjects, the rites and procedures employed by them suggest that there is no great difference between what, in terms of application, derives from the supposed “novelties” of neuroscience and the older knowledge of the natural sciences. In these terms, it still prevail the inclination to obtain patterns and stereotypes that can be transformed into techniques and practices, a movement previously denounced by Horkheimer and Adorno (1947b/1985).

Let’s see, then, how neuroasceticism, in its own way, reiterates such emphasis on the repetition of procedures and techniques from the following excerpt, in which Garcia (2013b) presents his proposal about what he considers to be a “high performance brain”:

4 Retrieved from <https://www.publishnews.com.br/>

After years of working with groups of entrepreneurs and training professionals, I was able to prove how this process of perceptions is the basis for achieving concrete results. This requires mental exercises, establishing priorities to the brain, visualizing scenarios in order to prepare you to learn techniques to be able to predict not only our possible reactions to difficult situations, but other people's perception of us, something that can decide our destiny in milliseconds. (p. 15)

The above excerpt leaves no doubt about the value placed on brain training according to priorities driven by "concrete results." Moreover, it greatly praises how much that same brain must be capable of high predictive power. Now, the emphasis on prediction and control is one of the pillars of the traditional scientific method. Thus one might object that there is nothing much in advocating such notions. But it is precisely here that, once again, a return to Horkheimer and Adorno (1947b/1985) turns out to be interesting to our purposes, in particular the emphasis placed by the authors on how much this search for prediction, control, and enhancement of nature supposedly A "progressive" and rational demand was already present in millennial mythical narratives as a reaction to man's hostage to his destiny. In this way, by accommodating a new fact to old scientific categories, the Enlightenment also re-enacts the inevitability of the mythical "destiny" it claims to avoid.

Returning to Garcia's text (2013b), the author does not skimp on the comparisons he weaves between the brain and a supercomputer, adding that, through the use of certain exercises available in his book, the organ would eventually agree to fulfill its "destiny" of being a machine. But what is the motivation of wanting to have something like a powerful supercomputer inside – motivation, reminds us Rüdiger (1996), directly associated with the promise to "unlock" and develop powers that make a subject become what he always wanted to be, one of the biggest commonplaces of traditional self-help? Would only rational demands give rise to such a desire?

As we saw in Horkheimer and Adorno (1947b/1985), there seems to be yet another demonstration of the dialectic between rationality and irrationality present in both myth and 'enlightened reason'. After all, although with varnishes of scientificity, Garcia's (2013b) line of argument does not shy away from appealing to deep psychological desires and needs – such as those concerning love, security, and/or social acceptance – to lead the reader to understand. , for example, as the prefrontal cortex is "our judge of executive decisions" (p. 18) who, if exercised, would act as the primary responsible for developing entrepreneurial and success-generating skills to which the brain could "get used" to:

Succeeding. . . is knowing where you want to go and getting into that situation. It is having the sense of

conquest built into the mind. So we get our brains to act on this circumstance, the more we can visualize and put ourselves in that position, the closer and more natural the conquest situation seems to us. (Garcia, 2013b, p. 79)

This excerpt shows how, in the wake of the *Aufklärung*, neuroscience, supposedly founded on the pillars of technical-scientific discourse and derived from neuroscience data, can indeed encompass a considerable range of irrationality, which is manifested when Garcia (2013b) sweetens with "scientific" clothing some of the most traditional elements of self-help that cling to the unconscious side of its reader. Examples include direct appeal to emotion, exercises to visualize desired situations, and rhetoric of success (Pereira & Souza, 2018).

In fact, considering the content of our discussion so far, it becomes noteworthy that something of the irrationality just mentioned is acknowledged by Garcia (2013b) himself when, referring to situations in which a stimulus can arouse the memory of past trauma, explicitly speaks of this stimulus in terms of the "Freudian unconscious". It turns out that the latter is purposely hindered in its "threatening" or "explosive" power, as it is quickly translated into neurophysiological vocabulary. After all, in the above mentioned path "there is also a neural path. It (the unconscious) was sued by the limbic system" (p. 61). And with that – this is what we are trying to demonstrate – any more critical assessment of the evident interpenetration between instrumental reason and irrationality that is present in the text is left aside by its author.

Returning, however, to the last part of Garcia's book (2013b) that we highlight above, we are also interested in highlighting the considerable implications of the author's statement that, in order to be successful in life, its readers support brains used to acting on a previously mentored success scene. And what implications are these? In particular, there seems to us to be a movement of decline in autonomy in the name of heteronomous servitude to the designs of a hypersufficient organ in relation to its bearer. Hence our suspicion that the "brain subject" of neuroculture is, in fact, a reified subject.

Of course, it is possible to object that Garcia's (2013b) recommendation goes in the sense that it is the subject himself, in a commanding position, who must (re) direct his brain positively, "accustoming" it to more affirmative actions in pursuit of well-being and satisfaction. However, given the enormous value given to the brain itself throughout the book (noticeably to the detriment of both its bearer and the set of other organs that also characterize him/her), it does not seem possible to dispel the impression that the subject of neuroculture at which Garcia (2013b) addresses is someone who, above all, becomes the object of the designs of an almost autonomous brain, who is portrayed as a true transformative social actor. And if this is the case, we

must extend what Adorno (1955/2015) previously observed about psychologism into the context of neuroculture, since “precisely the science in which they hope to find themselves as subjects transforms them, in its own way, into objects” (p. 87).

However, we deduce from this that the discourse of neuroculture deepens the fallacy of the individual as a monad independent of the social environment because it uses the scientist rubric to proclaim the brain as a “small universe” capable of unilaterally determining the way reality is perceived and possibly, transformed. Add to this the observation made by Ortega (2009b) that such devices become seductive in their rhetoric, whose promises and exhortations are directed to the prospect of shaping the brain of the consumer of the neuroculture industry in a similar way to the brain of artists and/or big business owners. And in doing so, they reproduce “the logic of the brain subject and the traditional self-help with scientific guise” (Ortega, 2009a, p. 635), something expressed *ipsis litteris* in a passage from Garcia’s book (2013b) in which we learn that “the D4DR gene is found in frank artists, researchers and entrepreneurs (ie the entrepreneurial personalities we talked about)” (p. 49).

In the end, as stated in Garcia’s book (2013b), the brain seems comparable not only to a supercomputer and its parts, as we have previously pointed out, but also to a company and its division of labor, eluting the importance of particularities in name of a “whole” that can be measured only in terms of concrete actions and results, which demonstrates an interesting continuity of the neuroscience discourse in relation to the categorizing and homogenizing Aufklärung proposed by Horkheimer and Adorno (1947b/1985). If not, let us see, still in the company of Garcia (2013b), how much brain functioning would have to gain by adapting to stereotypes provided by advertising slogans and television shows:

Do not think just do it. Remember the slogan of the sports brand Nike? It’s brilliant: Just do it, just do what needs to be done. . . . Do you remember that the brain responds to new situations and experiences by making connections and building synapses? Instead of focusing on the problem, we should always look at what we will gain from it and thus focus on the solution. . . . Faced with the difficulty of “saying no” to a party, or not buying clothes – to save money for travel – or not eating that piece of cheesecake to lose weight, we should always remember the intention of that moment, treating ourselves like kids on the Supernanny show. (p. 165)

Just do it (or, more precisely, “don’t think, just act [without asking]”). For Garcia (2013b), a more than fair recommendation, however, considering how much in his book thought is taken as a veil that would only hinder the natural action of a brain whose high performance is built by repeating standardized actions

until such movement becomes automated in the face of new situations. But we ask, is not this commandment composed of a disturbing paradox? For why do we need a machine as sophisticated as the brain if its function is merely to obey the stimuli of the environment and respond to them through repetitive actions?

Ah, but this is exactly where, as we have suggested above, that the use of the ideas of Horkheimer and Adorno (1947b/1985) offers us an open field of interesting possibilities for reflection. And why? Well, because one precious lesson left by such authors is that the apparent contradiction in Garcia’s (2013b) text between the simultaneous adoption of an image of the brain as an organ of reflection and medullary repetition need not be read as “yes” or “no”, as a mutual exclusion between “truth” and “lie”, “rationality” and “irrationality”, as it reveals the defining traits of Enlightenment itself. After all,

with the abandonment of thought — which in its “thingified” figure, such as math, machine, organization, they all take revenge on their forgotten men — the Enlightenment has abdicated its own realization. By disciplining all that is unique and individual, it has allowed the misunderstood whole to turn, as the domination of things, against the being and the conscience of men. (Horkheimer & Adorno, 1947b/1985, p. 45)

That is, from the Critical Theory of Horkheimer and Adorno (1947b/1985), it becomes possible to glimpse how in the apparent contradiction contained in Garcia’s proposal (2013b) lies one of the central points of the dialectic of Enlightenment, dialectic expressed when in the incomplete course of the attempt to achieve domination of external and internal nature, instrumental reason turns its force against its subjects, while making them masters and servants of a nature now reduced to number, to the manipulable biological process, and to the calculation. In terms of our main interest here – namely, to identify and analyze the interpenetration between rationality and irrationality contained in the “liberating” fallacy present in the pseudoscientific discourse of neuroculture – this is reflected when, in the eagerness to master oneself and the world by via an “effective” brain management, the practitioner of contemporary neuroscience becomes his servant (read: servant of industry that propagates all the value and exceptionality of this organ) and thus a mere expression of the same nature as one day intended to dominate.

In the present case, the dialectic that operates between “lord” and “servant” is not that celebratedly proposed by Hegel (1807/1992), but another, which does not lead directly to a synthesis between mutually denying records (Buck-Morss, 1977). Both interpenetrate, keep a continuous tension between them, mutilated by the illusion of dominating nature by the repetition of formulas, an illusion that allows the subject to make his feast with

crumbs. With the simple repetition of exercises, he thinks he is dominating his brain when, unwary, he has already become an object in the warp of advanced capitalism.

In a complementary way, how to understand Garcia's (2013b) reference to the television program *Supernanny*, also present in the excerpt we highlighted earlier? Well, here we have another interesting paradox – or rather, another dialectic between rationality and irrationality present in both the Enlightenment and the culture industry that celebrates it – because, soon after asserting that, before what “needs to be done”, the subject must act To the slogan – that is, to act without question, supposedly thus benefiting himself and a brain that responds to new situations through the construction of synapses – the author incites his reader to a thoughtful and analytical thought that, as we saw, “instead of focusing on the problem, we should always look at what we have gained from it and thus orient ourselves towards the solution” (Garcia, 2013b, p. 165). It is exactly here that the reference to the *Supernanny* appears, which, in light of the above, can be interpreted as follows: if the “rationality” of the brain order defended by Garcia (2013b) must be fulfilled by way of thoughtless action, thus approaching , the reader of an eminently childish(ized) trait, this does not mean that it is any child, but rather a specific and purposely taken as similar to those spread by the *Supernanny*: reeducated, policed and, importantly, hindered.

In a single paragraph, Garcia (2013b) uses two examples from the culture industry to encourage readers to develop (in their brains) antinomic capacities, extolling the Enlightenment status quo by proposing an “illustrated” brain that must now be able to act automatically, sometimes it should analyze situations well, restrain impulses and thus resemble a child faced with the limits of culture. In both cases, however, the ultimate result turns out to be the same: the exaltation of a conformism to the existing order, an exaltation that has been problematized by Horkheimer and Adorno (1947a/1985) for over 70 years:

The culture industry tends to become a set of protocol propositions and, just because of that, in the irrefutable prophet of the existing order. It sneaks with mastery between the blunders of ostensibly false information and manifest truth, faithfully reproducing the phenomenon whose opacity blocks discernment and builds the ideal of the omnipresent phenomenon. Ideology is split between the photograph of a stupidly monotonous life and the naked and crude lie about its meaning, which is not uttered, it is true, but only suggested and inculcated in people. To demonstrate the deity of the real, the culture industry just repeats it cynically. (p. 122)

Before we conclude this analysis, which, given the limit imposed by the space of an article, has necessarily

meant to be brief, it is worth noting how much, in the system of the culture industry, both what is shamelessly false and what can be taken as “true” may coexist and manifest in the products marketed. And this is how Garcia (2013b) takes up and insists on self-help clichés, whose repeated formulas are now praised as virtues based on the label of “science”. As products of the culture industry, however, the greater or lesser scientific precision of such formulas is not so significant compared to the subjective appeal that the content of the book discussed here may arouse. In fact, it aroused, since, by strictly following the motto “catch up or die”, adding explanations about the role of the brain and the importance of training this organ, Garcia (2013b) entered the authors’ hall that According to Ortega (2009b), they migrated from traditional self-help to the neuroascetic lode, establishing their name as one of the highest rated in the Brazilian publishing market.

Conclusions

In conclusion, we briefly reiterate the discussion proposed, which was subdivided into three distinct parts. Firstly, we sought to better define the neuroculture, rescuing some of its historical elements, unfolding it in its ascetic and subjective aspects and investigating the correspondences among themselves, elements of self-help and other theories about the brain characteristic of the nineteenth century, such as phrenology and double brain. Secondly we focused more specifically on the exposition of the conceptual instruments exposition used in this work, and made some particular considerations about the Critical Theory of Society as well as the notions of Enlightenment and culture industry, so dear to the thought of Horkheimer and Adorno. And thirdly we finally intended to combine and as well as, “embody” the two previous moments through the analysis of a book such as Garcia's (2013b), markedly belonging to the “brain self-help” market segment.

After that, we highlight two concluding remarks. The first is that, unlike an idea regularly held in common sense, the “discoveries” of neuroculture – and with it the dizzying profusion of new brain products, diets, and services – are not only grounded in rational and calculated motivations for personal and professional development, which are pretensely positive, as they are also “liberating” from a series of latent inner potentials. But there are also some unconscious psychological motions, such as love, visibility and social acceptance needs, which are usually associated with the submission to standardized Ego-ideals previously established by the same market of symbolic goods, which are used by it for the sedimentation of stereotyped models of thought and conduct that represent the primacy of a rejection to particularities and differences that has an intimate and imbricated relationship with the “enlightened” barbarism.

In this sense, we emphasize a second and last point, which is how much neuroculture ends up promoting an

objectified subject before the actions of his/her brain, thus removing his/her spontaneity, turning him/her into a merchantable object alienated from reality. In such a context, the ideology promoted by the same neuroculture triumphs on the traditional way paved by the culture industry, judging the “high” or “low” performance of the brain, disentangling it from any deeper consideration

concerning the complexity and importance of mediation to the human formation, being reduced to the conformity of an immediate social experience represented by the consumption of specific products. Finally, once again, enlightened reason leads to myth. In this case, it seems, to contemporary, ascetic, “brain” versions of the old King Pygmalion.

Esclarecimento e indústria cultural: algumas reflexões acerca da neurocultura

Resumo: As inovações da neurociência e suas repercussões fizeram do cérebro não apenas um órgão, mas um ator social relevante na contemporaneidade. Tal conjuntura propiciou o advento da neuroascese – isto é, práticas e discursos de ação direta sobre o cérebro no intuito de potencializar seu desempenho –, o que, por sua vez, resultou em uma cultura cerebral (neurocultura). Diante de tal quadro, este estudo adotou como objetivo principal analisar alguns elementos dessa neurocultura por intermédio de referências conceituais advindas da Teoria Crítica da Sociedade, particularmente as noções de Esclarecimento (*Aufklärung*) e indústria cultural. Em termos conclusivos, identifica na propaganda da neuroascese um esquema de dominação e uniformidade que acaba por reificar as massas segundo critérios que reduzem o sujeito à mera expressão da sua atividade cerebral.

Palavras-chave: neurocultura, esclarecimento, indústria cultural.

Les Lumières et l'industrie culturelle: quelques réflexions sur la neuroculture

Résumé: Les innovations de la neuroscience et ses répercussions ont fait du cerveau pas seulement un organe, mais aussi un acteur social important dans notre contemporanéité. Cette conjoncture a rendu possible l'avènement de la neuroascésis – c'est à dire, des pratiques et des discours d'action directe sur le cerveau avec la finalité de potentialiser sa performance – ce qui, d'autre part, a fini dans une culture cérébrale (neuroculture). Devant ce cadre, cet essai a adopté comme but principal l'analyse de quelques éléments de cette neuroculture par des références conceptuelles de la Théorie Critique de la Société, en particulier des notions de Lumières (*Aufklärung*) et de l'industrie culturelle. À la fin, on identifie dans la publicité de la neuroascésis un schéma de domination et uniformité, dont le but c'est de réifier les foules en utilisant des critères qui réduisent le sujet à la simple expression de son activité cérébrale.

Mots-clés: neurocultura, lumières, industrie culturelle.

Iluminismo e industria cultural: algunas reflexiones acerca de la neurocultura

Resumen: Las innovaciones de la neurociencia y su impacto hicieron del cerebro no solo un cuerpo, sino un actor social relevante en el mundo contemporáneo. Esta situación llevó a la llegada de la neuroascésis –es decir, las prácticas de acción directa y discursos sobre el cerebro con el fin de mejorar su rendimiento–, que, a su vez, dio lugar a una cultura del cerebro (neurocultura). Ante esta situación, el presente estudio tiene por objeto examinar algunos elementos de esta neurocultura mediante marcos conceptuales que se derivan de la Teoría Crítica de la Sociedad, especialmente aquellos de Iluminismo (*Aufklärung*) e industria cultural. En términos concluyentes, se identifica en la publicidad de la neuroascésis un esquema de dominación y uniformidad que termina a cosificar las masas de acuerdo con los criterios que reducen el individuo a una mera expresión de su actividad cerebral.

Palabras clave: neurocultura, iluminismo, industria cultural.

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