

FERNANDO GONZÁLEZ CASADO

ERGONOMICS: A TOOL FOR THE LIBERATION OF MAN

1. THE CONTRIBUTION OF ERGONOMICS TO HUMAN ENHANCEMENT

In this section I will reflect on the opportunity for man to fulfill his mission through human enhancement that ergonomics provides. This discipline encompasses several of the contributions made by the humanists, posthumanists, and transhumanists philosophers. For one, man is recognized as the most important living being because of his unique and indivisible genetic endowment and on the other, it helps the human being in the process of improvement to adapt machines to man. In other words, today, ergonomics means the best tool that man has to continue his improvement process without having to direct its action towards himself to preserve the human condition, because, otherwise, we wouldn't be talking about the passage of the human being to man, human enhancement, but a new different nature of the natural provisions.

In short, man created the art to be his partner in the construction of the world and not to be any invasive technique. As the process of human improvement must continue, technics can not be used to separate the human genetic endowment, because, in that case, no longer exists the

essence that encourages humans to improve, to become the man who builds the world for the elevation of humanity.

Then, I will argue my thesis on the variables involved in the process of human enhancement through ergonomics: man, technics, the public sphere and the human action.

1.1 THE INDISPENSABLE ROLE OF MAN

In my reflection, the capital issue is man, therefore, no matter if he is defined as Arendt's *homo faber* or Sloterdijk's *subject*, because what matters is that the human being who is born has the natural provision and the moral obligation to become the man who builds the world on Earth thanks to the genes received. The real miracle is that man is the only living being with this power. His/her ability to create the world, a second nature made to his/her image and likeness, without which human life is not possible, as Arendt tells.¹ If, as Fukuyama notes,² every human being has a genetic endowment that distinguishes him from all other living beings, because it allows him to become a whole human, then it is useless now to consider only this or that property, because each human characteristic can not exist without the others, that is, the human essence comes from the set of all the features that make humans different from other creatures. And this is because the set of our emotions is what gives rise to decision making, creativity or human desires, hence the danger of treating the human being as a mere collection of cells or as an animal.

On the other hand, Heidegger notes that the human essence is forced to fulfill its mission: to save and apply to its being.³ That is, human beings have an obligation to improve and not get stuck in their pet part if human beings want to become men. The human being was born to be a man, to exercise the mandate of his essence, and not to behave more

¹ Hannah Arendt, *La condición humana*, Barcelona: Paidós 2005, p. 147.

² Francis Fukuyama, *El fin del hombre*, Barcelona: Ediciones B 2002, p. 276.

³ Peter Sloterdijk, *Normas para el parque humano*, Madrid: Ediciones Siruela 2008, p. 45.

like an animal that he leaves nothing behind him. To all this, Sloterdijk⁴ adds that man always has to look up, man must be able to exalt him/herself, reaching the highest level of nature that he/she is, because, otherwise, this being who is not able to overcome their limitations and do not crave anything more than to pass the time between his/her arrival at the world and his/her death will be a being who expects only the need to come with entertainment as the only goal and not Being the one who creates his future with the immortality of human excellence (*areté*) as the end goal. Man is not a static but a dynamic one. That is, all men are disabled and therefore none of them will have to stop exercising for the sole purpose of achieving their human capacity.

Arendt, meanwhile, distinguishes between *animal laborans*,⁵ a being who only appropriates to natural means, and *homo faber*,⁶ someone who constructs the world. Her argument seems to me the right one, because it reflects what happened in Greece and Rome. During ancient times, slaves were not considered human beings because they could not decide or choose, capacity reserved for men; today, I think that man is still mixing two activities, labor and work, which must be separated again for the human enhancement, to pursue what makes him human: its enduring action through speech. It seems significant that the British have returned to teach speaking as a curricular subject, which leads me to believe in the hope that humans have finally decided to abandon all labor and become the man who comes to work as the sole source of the human world, the mundane.

Finally, I claim you that without the birth of the human being, he could not have become man and, therefore, freedom in the world wouldn't exist. Therefore, we must preserve the human essence as the key ingredient for the man to get welfare. The good life, one that everyone chooses freely as Sandel says,⁷ depends mainly on two factors: first, respect for the human being as an indivisible and untouchable whole because of its po-

⁴ Peter Sloterdijk, *Has de cambiar tu vida*, Valencia: Editorial Pre-textos 2012, pp. 200-202.

⁵ Hannah Arendt, *La condición humana*, Barcelona: Paidós 2005, p. 110.

⁶ *Ibidem*, p. 141.

⁷ Michael Sandel, *Justicia. ¿Hacemos lo que debemos?*, Barcelona: Editorial Debolsillo 2012, p. 12.

tential for improvement; and second, the crystalline distinction between two spaces: one private, where man lives, and other public where man builds, dealing with others and leaving his work for humanity postrera. This is the improvement that has led man to conquer all the things he/she today enjoys thanks to the art created by him/herself.

1.2 THE KEY ROLE OF ART

Once the human being became man due, among other things, to the mitigation of stress imposed by the natural vicissitudes, he/she was able to create art that allowed him/her to create the human world, the mundane. Hence, the main source of human enhancement has always come through art, through which, according to Ortega,⁸

For his part, Heidegger⁹ says technics is the way of man to participate in the discovery of things. Unmasking the hidden. Thanks to technics, man has been able to create the world where, in the words of Sloterdijk,¹⁰ he/she can develop, exercise in order to become better. Without art, man could not have existed as it had been anchored in animal part enjoying nature. Moreover, Arendt¹¹ insists on that the role of technics is important to build the human world. While for Sloterdijk¹² the most noteworthy aspect is the simple exercise that man must do to the human enhancement.

From the above it follows that man created technics for constructing the world where he/she can improve through action and discourse inherent to it, therefore, man must follow the lead of its essence and make use of technics to not stop improving. I claim that technics is now focusing on robotics. The discovery and development of machines that can labor for man and, in this way, he/she looks relieved of the need to labor in order to focus on his/her work. That's what makes human for

⁸ José Ortega y Gasset, "Meditación de la técnica", en: *Ensimismamiento y alteración: meditación de la técnica*, ed. J. Ortega, Madrid: Editorial Espasa-Calpe 1939, p. 1.

⁹ Martin Heidegger, "La pregunta por la técnica", en: *Conferencias y artículos*, ed. M. Heidegger, Barcelona: Ediciones del Serbal 1994, p. 17.

¹⁰ Peter Sloterdijk, *Has de cambiar tu vida*, Valencia: Editorial Pre-textos 2012, p. 17.

¹¹ Hannah Arendt, *La condición humana*, Barcelona: Paidós 2005, p. 118.

¹² Peter Sloterdijk, *Has de cambiar tu vida*, Valencia: Editorial Pre-textos 2012, p. 84.

what he was born. Today, man should not waste the opportunity presented, because it will be the true human enhancement. Marx and the Young Hegelians dreamed with this human enhancement: the liberation of man.¹³ Therefore, I advocate robots are those who have to labor for man and man, to be free, must focus on building the human world that will ensure the good life.

1.3 THE INDISPENSABLE ROLE OF THE PUBLIC SPHERE FOR HUMAN ACTION

At this point, my argument will focus on the necessary condition that must be met for all this possible: the public sphere. Man, by his genetic endowment and the mandate of his essence, is called to be better every day and that's only possible if man can compete with the rest of his kind. The competition has been frowned upon to the point of eradication from the world during the totalitarian regimes, because it has always been misunderstood by its outcome, in which some win and others lose. But the main thrust of human competition is improving all individuals. Winners and losers swap roles allowing all humanity to be rewarded. The attempt to wipe out the human competition was wrong because it goes against the mandate infused human essence, which is none other than being better every day. Furthermore, the abolition of human excellence (*areté*) whose champions excel others in the public sphere, entails the abolition of the main source of human learning: emulation. If we observe a child, we realize that the child imitates the model to do the same as the model does; in the same way, if we annihilate the man who served as a model for other men, we consummate the annihilation of emulation, imitation, as a source of human improvement.

Both Greece and Rome, knew it was necessary to create a physical space where men could treat human affairs, hence the most important was the public recognition of *areté* or *virtú*, skills that make better men. Man that was not able to achieve, and it insisted on exercising to get it, why Sloterdijk affects the example of athletes or acrobats. Whoever

¹³ Peter Sloterdijk, *Has de cambiar tu vida*, Valencia: Editorial Pre-textos 2012, p. 16.

possessed the excellence needed adequate space to display it and the other men to value it in perspective. Without the admiration of others no man has been, is or will be *aristocrat* or excellent.

The human need to be above the other is due to the importance that man has everything that he/she admires and this importance is not vanity. The man who goes to light, leaving the comfort of his private sphere is exposed to rejection, fame, responsibility and a stressful lifestyle that involves being of service to other men. If in addition to the troubles of public life, he is not rewarded with the admiration and recognition from other men, then that life is not worth being lived and therefore the best men will stay at home enjoying the comfort of their private sphere.

Today, it is no longer necessary that the public sphere is located in a particular space, but at the same time, it is more necessary than ever before in the history of humanity that it exists. When Sloterdijk manifested in the title of his book that *You must change your life*, implicitly and explicitly recognizes that man can not carry on as before. It is necessary to re-take control of his life if he/she does not want to end his existence. It not only endangers the welfare of man, but his/her own existence on Earth. If we renounce virtue, excellence, the world will disappear and therefore man. A clear and current example is the case of post-Soviet Russia; man without hope can't develop his/her vocation due to the lack of a human sphere where man can deal with the rest of his/her kind. After so many years of subjugation to labor, the Russians have lost all reference to individual excellence (*areté*), because the space where human affairs are to be conducted was crushed by the Communists in their obsession to liberate man from all necessity equaling man with animal. All collectivist regimes that occurred during the twentieth century have a common feature: the man is thrown alone and stripped of everything you need-without immunity, in the words of Sloterdijk-to face life. Man is not able to act without plurality, without the rest of humanity, because the power lies in all men, as Arendt said. Cicero, in *On the Republic*, stated clearly that the political greatness of Rome was because it was created by all the Romans, that is, human plurality.¹⁴ In

¹⁴ "What is worthy of praise, and they were, those cities-it is in the nature of things that apply to the superior intelligence knowledge can be a republic that last long-in

other words, it is as if the Sloterdijk's *acrobat* was left with no spectators, network, cable and even the trapeze.

Finally, I want to emphasize that human hegemony is born and dies with human plurality, humanity. I mean that, this hegemony exists because human action is undertaken by all men who build, daily, the world on the surface of the Earth. But there needs to be a public sphere admiring human excellence for this concept to materialize. This concept is the virtue of men capable of acting and delivering a speech that moves the rest of men to support their project, to get involved in the action. In short, this concept is necessary so that the world will never perish.

Then I will focus my reflection on the idea that today, ergonomics is the most effective tool that man has for adapting machines to himself to ensure that machines are to release man from all labor.

1.4 HUMAN ENHANCEMENT THROUGH ERGONOMICS

Today, man has to devote much of his time to labor, ie, to perform an activity that allows him to eat, but that leaves no lasting result behind, it seems a wasted effort. At the same time, man longs to devote that time to something in line with his mission, which meets his expectations, and what the man can't serve because he/she has to labor to eat and eat to labor. Imagine, for a moment, that man has a number of machines that all those functions and free him/her from all of the private sphere own tasks; what man would do during that time, and what action the man would devote the time now consumed in household chores? According to Arendt,¹⁵ *animal laborans* consume time in the same way you eat your food, but *homo faber* would use that time to build the world; according to Sloterdijk,¹⁶ the human being would devote that time to the entertainment while the *exercitant being* or *subject* would take advantage of this to improve through daily exercise.

In my opinion, that man achieves its required improvement through the art as has happened so far, but the technique should not be used on

which, if you count the personalities that each had, it is a crowd of illustrious men!" (Marcus Tullius Cicero, *On the Republic*, Third Book).

¹⁵ Hannah Arendt, *La condición humana*, Barcelona: Paidós 2005, p. 146.

¹⁶ Peter Sloterdijk, *Has de cambiar tu vida*, Valencia: Editorial Pre-textos 2012, p. 205.

itself because man can not be divided into a set of cells, as Fukuyama demonstrated, man can't be treated as being only composed of certain parts, but man must be considered as a whole, because no human no man. The principal point of my reflection is that man will get a faster and lasting improvement if man is focusing his efforts on adapting the machines to himself. Ergonomics is the discipline that directs this process.

If we compare the time required for any improvements implemented in humans to come to fruition with the degree of efficiency achieved by man with the help of a machine, we will be able to see that comparison is not possible. A case that can help us understand this is the path taken by the PC: since the U.S. company *International Business Machines (IBM)* introduced its personal computer in 1981, *IBM PC model 5150* with a memory of 64 KB and 4.77 MHz processor, until the British *Rabsperry Pi* foundation, in the year 2012, distributed the first units of its motherboard *Rabsperry Pi* 512 KB of RAM, including an HDMI port, two USB ports, one Ethernet, RCA video output, another sound and basic last for food all with the size of a lighter and twenty euros. It tells us that, in thirty years!, speed art created by man is not comparable to what you could get in that short term with genetic engineering.

Finally, I would like to highlight the economic impact of the technique adapted to man, other than the implemented technique in man, as a principle of the sustainability of the world. No one is aware of the fast that the huge amount of money invested by the armies of the world's leading countries in *Lethal Autonomous Robots (LAR's)* to create and develop autonomous military robots, will revert to the civil sector for humanity enjoyment advantage of that knowledge as happened, for example, with the Internet.

2. CONCLUSIONS

The first one is the estimation of man as the greatest living being that exists on Earth and respect for their genetic endowment as a whole human.

Second, the assessment of the potential of every human being in himself and moral obligation of man to improve every day.

Third, the human plurality is needed for the recognition of the human enhancement, to compete and to improve, ie, without the assistance of all men it is impossible for human excellence and virtue come to light.

Fourth, the inevitable creation and maintenance of a public sphere where man can treat human affairs, to perform the human action, his/her speech, compete with the rest of their peers and achieve improvement through the flowering of his/her *areté*.

And fifth, ergonomics is, today, a major role. A discipline responsible for adapting machines to release the man from all labor in order to focus all his efforts on the job, the beginning of the creation of the human world.

In this article I have argued about the human essence as the momentum that compels man to be better every day, as an inexhaustible source of human improvement. That is, man was always a creature that is bound to improve, as Jonas¹⁷ said. My reflection has focused on the contributions that the humanist, posthumanist and transhumanist philosophers have done to human enhancement; from Aristotle to Sloterdijk, different authors at different times in history have agreed on the value that man possesses. Although there are certain discrepancies in recognizing the results of human activity over time, the number of links between all positions is decatacable.

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ABSTRACT

Ergonomics: A Tool for the Liberation of Man

Since the creation of the world, man has developed a series of activities that distinguish him from other living beings. Since antiquity, philosophers have pondered about what is man and his role in nature and in the world. My argument is based on the choice of ergonomics as an intermediate and better point in the framework of human enhancement.

Keywords: humanism, posthumanism, transhumanism, ergonomics, human enhancement.

STRESZCZENIE

Ergonomia: narzędzie wyzwolenia człowieka

Od stworzenia świata, człowiek rozwinął szereg umiejętności, które odróżniają go od pozostałych żyjących istot. Od czasów starożytności filozofowie zastanawiali się nad rolą człowieka w świecie. Argumentacja przedstawiona w artykule bazuje na wyborze ergonomii jako lepszego i pośredniego modelu *human enhancement*.

Słowa kluczowe: humanizm, posthumanizm, transhumanizm, ergonomia, *human enhancement*