Cyber-Pedagogy: Human Instrumentalization and Machine Mastery

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Abstract

The use of virtual and digital technological resources is a phenomenon that crosses humanity in such an intense way that it often interferes with the existential naturalness of individuals and allows to launch to the world, even if in a subtle and gradual way, a relationship of mastery of the machine with the mankind. The work aims to make the reader aware of the problem of the human-machine relationship and bring paths and reflections based on a perspective of studies and debates in the field of Philosophy, about this functioning in which it can generate a subservient behavior of the human as the creator of digital functions. but that loses this domain due to the self-development of the machine. The study's methodology is bibliographic research, as well as references to films and series such as Akira (1988); Neon Genenis Evangelion (1995) and Ghost In The Shell (1995) that address this issue and serve as a basis for analyzing the facts raised as problematic. The main result of the research was the discussions based on the term Cyber-pedagogy, which is replaced and empowered from a neologistic perspective that attributes this term to a pedagogical operation in which the autopoietic machine educates the individual and can subject him/her to a process of human instrumentalization, of which the human would be an instrument for the use of the machine and digital resources by losing its essence as the creator of the virtual digital resource.

Keywords: Cyber-pedagogia; Cyberpunk; Cyber-education; Autopoietic-machine; Machine.

1. Introduction

The year is 2022. Society is at the peak of available technological resources and moves very quickly and voraciously. Analog perspectives are becoming increasingly unusable, and the digitalization of socialization processes is empowered as a precisely current reality. Cyberspace is, categorically, an alternative reality that gradually replaces analogical social interactions and asserts itself present in the environment as the foundation of zeitgeist[1] of postmodernity (Baptista & Bertolli Filho, 2012).

The entanglement of digital singularities can create a possibility of experience, in which it is fortified from the capital possibility of acquiring these fast virtual resources that it also craves and manages to be able to create the need for consumption of this resource. Taking as an example a resource created in modernity (40's) and if affirmed as a potential resource for social interaction only in the late 70's and early 80's, the cell phone is currently considered indispensable for the current social interaction models, from recreational perspectives, as well as educational resources (Neto, 2009).

The situational picture of human interactions, desires and needs in postmodernity is extremely digitalized, that is, it is technologically advanced from a modern perspective, and this process is capable of attributing new meanings to life. A society where technology crosses the daily life of social beings resembles in aesthetics and essence with a scenario of literary, cinematographic and fantasy culture (or not), the genre Cyberpunk (Mozzini, s.d.).

The term was coined in 1983 by the writer Bruce Bethke in "Amazing Science Fiction Stories", but it is still used today because it influenced a literary genre with technological possibilities capable of interfering with the existential naturalness of society. It is possible to point out as a crucial point for the foundation of this concept the idea of a "high tech, low life", or "high technology, low quality of life" (Esperança, 2016). This characteristic can be very well observed in cinema and manga that portray this model of society as Akira (1988), Ghost In The Shell (1995), Neon Genesis Evangelion (1995), Cowboy Bebop (1998), Blade Runner (1982) and many others, where society is immersed in an indispensable digitalization, virtuality and speed of the processes of living, social interaction that existentially cross the molds and modes of manifestation of the particularity and subjectivity of humans (or not) in these contexts of society.

McCarron (1995) punctuates structural essences of society and culture cyberpunk, for example, the possibility of parallel worlds, that is, the creation of virtual worlds that offer functionality and a dynamics of the real world but that are intangible and have an ideal of a world in which the relational possibilities end up being more distant from being achieved, an early access to these resources requires a financial investment that does not cover a good part of the world's population, which also ensures the concept of society cyberpunk.

This alternative virtual space can be related to, or directly described as, the Metaverse which, based on the perspective of Schlemmer & Backes (2008) is a technology that manifests and materializes in cyberspace that physically asserts itself from the digitization of the processes of interaction with social media in which they describe as 3D Virtual Digital Worlds, in which this socialization in this cyber space would be constituted

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[1] Academically known as "spirit of the times/spirit of the times", a term used to explain motivations, actions and ideas that were seen as common in a given historical context and that may not suit another social period (Baptista & Bertolli Filho, 2012).

as a parallel world, alternative, of social interaction, capable of also supporting the perspective of reality cyberpunk existing.

Another note of McCarron (1995) would be the possible lack of interest in biological reproduction, which underpins the bases of virtualization and mechanization of processes, now no longer only of social interaction, but of human reproduction, that is, in culture of cyberpunk the possibility of human non-interference in the propagation of the "life" system is naturally perceived. Virtualization takes care of self-perception and manifests itself in a synthetic way, which fits with another point addressed by him, which would be the use of non-human artifices (prostheses) for a "solidification" of the experience of living, as a form of empowerment and "improvement" of existing human resources, which leads to the process of dehumanization and gives new meanings to existence (Lévy, 2003).

In turn Bukatman (1998) asks about the difficulty existing in society cyberpunk on the differentiation between humans and non-humans, which helps in the contributions of McCarron (1995) about the lack of biological reproduction. Based on this idea, it is necessary to inquire about the possibility of humanity losing its social power to the resources created by themselves, with humans being a subspecies that will dispute in a Darwinian way the territory and freedom itself, with the algorithm being the new materialization. of the divine ideal, which governs and orders human and non-human social puppets.

This picture presented is explicitly a subjective relational situation between human - machine, capable of raising the possibility of a human relationship, considering the possibility that virtual resources are the materialization of the digitization of human representations, taking this as a human-human relationship that manifests itself between human and post-human, this, being placed here as a provocation about the conception of non-human life, or robotization that is mirrored in the apparatus, socialization, operationalization and human consciousness (Wiener, 1970). This structuring would start the conception of differentiation of machines and humans, being punctuated from the metamorphic process regarding their existence, but not only this, but in the manifestation of the principle of singularity.

Regarding human-machine contact, it is necessary to cover the senses that border this relationship. Considering the operationalization of resources created by humans and their motivations, machines, robots and virtual instruments appear as human equipment, which facilitates human daily life, for that and only that, they are not created to be singular and subjective social individuals, however post-modernization and the invention of automation are able to make the process of rationalization of that digitized invention flow, that is, the created resource, which did not have own wills and served as a human utility, no matter how much it performs its function for humans, it is also capable of self-modification, which is capable of awakening the principle of criticality on some points, albeit simple ones, on its own function (Simondon, 2018). Would machines be capable of developing self-preservation?

This self-regulation or self-preservation can be argued on an intriguing but undeniable principle about digital resources, current machinery and operating systems developed to autonomously regulate themselves, the principle of autopoiesis. (Maturana & Varela, 2001).

According to Simonini & Romagnoli (p. 6, 2019) autopiese takes charge conceptually from the perspective that "life takes its first rhythms in the cell – an entity considered by many biologists as the smallest

living unit" – in which complex biochemical processes are engendered through which the living being creates itself". In this way, the relational circumstances to which the machine nature manifests itself ends up being perceived in the middle, even pointing out the first and embryonic singular manifestations. Self-creation and its chronology can assess its "modus operandi" or "modus faciendi[2]" a perspective of desire, this being that of permanence, an existence which in the future is capable of attributing self-sense (Ferreira, 1993).

The sense and particular perceptions of self-creation are also capable of interfering with the medium in which it manifests itself, be it tangible, physical and categorized in the molds of urban experience, as well as of a more subjective character, which can be constituted in the virtual, digitized environment of the cyber space, as they attribute Simonini & Romagnoli (p. 6, 2019) "Thus, each cellular unit would be a small machine manufacturing its own components; a system that is in charge of producing the conditions of organization of its own universe."

When realizing that virtual resources are increasingly independent in their effectuation, management and functionality, it is important to inquire about the process of action that takes place within virtual education environments. Would it be possible to say that this operationalization that takes place within this context discussed earlier in the text, therefore, this engendering becomes a tool capable of attributing its own meanings to the contexts from which those who handle and use virtual resources capture as learning meanings?

The thoughts on the issues addressed in the text emerge as possibilities to find new discoveries and new ways of seeing the phenomena of digital/virtual interactions that dominate today when one realizes the need for practicality of mandatory social processes, be they leisure, work, research or the search for knowledge itself. Would these interactional needs be capable of modifying the way we perceive digitization, the mechanics of resources, learning through interactive virtualization, capable of intensifying the search for new ways of understanding the digitized or digitizing contemporaneity?

The essence of the text lies in the view of digital and virtual resources and the meaning they can bring when we seek to use them as an education tool. In the movies, we visualize the machines and the society that makes use of virtual and digital resources as revolutionary and with severe use to the human, or we visualize a totally chaotic society and destroyed in its essence by the replacement of the feeling of usefulness of the machine by the human, in which this it is no longer in a pattern, but in the loss of human control over the machine, that is, in the process of rebellion, revolt and manifestation of their choices. Would they be as effective as we imagine? Do we use tools the way we would like and with the efficiency we think they have?

2. Methodological Course

This work has a methodological perspective that covers not only the traditional ways of doing scientific, but that is also supported by structural bases of philosophical knowledge, in which it develops from the intentions that these two theoretical areas objectify and sustain when they are academically manifested (Hessen & Correia, 1999).

The research and data collection to be discussed in this article comes from the bibliographic acquisition

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[2] Mode of acting and operating in a logical and known pattern

in front of articles, books, movies and audio-visual information media that store content of this magnitude, with this discursive proposal and that are within the democratic possibilities of places storage of files that contribute to the development of scientific knowledge in academia.

On the other hand, the discussions made in this work are close to discussions promoted in studies: articles, books and scientific works that address themes wrapped in the philosophical perspective, which is disposed to reflective thinking in order to promote questions and not necessarily answer them, since this is one of the objectives of this work. When reading the text, it is possible to observe a great interest in exalting oneself, in addition to the existing questions that guide this work, doubts, provocations and inquiries that permeate the discussions present in this article, what makes it a text focused on a philosophy perspective, but not only and self-sufficient, for this bias, the theoretical and methodological basis of this text will be structured, scientificity is present throughout the intertwined of the references for not being sustained only by the formulation of "questions", since the complementation of the two areas of knowledge strengthen the proposal of this work.

It is important to emphasize that the symbolic insignia that permeates the attitudes and desires of this text do not corroborate the idea of a rupture with the scientific work, on the contrary, it constitutes a way of introducing initial roads so that science itself can follow paths which you may not have traveled yet. Although there may be an obstacle in the face of some academics about adopting different perspectives of knowledge, it is valid to say that the two areas of knowledge support each other, and this relationship is subject to inseparability, since to obtain answers about any type of content, they come from a guiding premise: the question, and on top of that it is crucial to say that human dissatisfaction is infinite fuel so that this knowledge can keep the gear of the acquisition of human knowledge, where the need to understand; to inquire; to seek answers and finally to obtain them or not, will always be a vivid mechanism that is not extinguished by the act of searching.

In a macro perspective, the work will be structured primarily on the definitions and ideas that guide the writings, as well as some motivating points about the search for this theme and how the ideas emerged for the elaboration of the text: audiovisual resources motivating these themes; use of digital and virtual resources; literary and fanciful themes about advanced societies in digital technologies in which they permeate in virtual interactions and observing these patterns of social functioning. The second point will address significant concepts for the confirmation of these ideas, which emerge from the philosophical field in order to reach the scientific environment provocatively and, who knows, incite concerns about the subject and generate answers to the questions. The third point is the results, that is, the questions and inquiries capable of generating paths and perspectives to be followed in the scientific environment in order to obtain answers about the functioning of digitalized life. The reference will be based on a diverse set of research ranging from the field of philosophy to science, psychology, psychoanalysis, historians, communicologists, etc. This diversification of knowledge is constituted with the objective of signifying and dignifying the proposal of inquiries, of diverse knowledge and attributing different provocative perspectives on the themes.

3. Results and Discussions

As explained earlier, the purpose of this work is not only based on a bias of human knowledge, but on two great readings of the world that complement each other academically, socially and existentially. The text has, for subjective motivations of deeper knowledge and based on an ethical perspective on human functioning in relation to machines, digitalization and artificial processes that naturally can replace the essence of human relationships: spontaneity, to sustain itself in the face of theoretical findings in order to launch itself as a text that is ready to expand the questions, but not only in quantitative degrees, but to delve deeper into existential questions that collide on this intertwined relationship of humans and the digitized mechanisms; the perspective of the function of the human being in the face of the functional objective of the non-natural resource that educates this human who creates it.

Appropriating discussions that permeate philosophy, it is important to highlight some guiding references. The criticality of this work is based on how the aphorisms and thoughts that the French writer Guy Debord (1931-1994), are constituted and formed within his book "The society of the spectacle", in a provocative and questioning way about the function, motivation and perspective on how the human being launches himself as a being, into the world of the market and consumption. It is also important to highlight that the questions made in the construction of the text serve as motivators for readers to connect to the questions and be affected by the spirit of the questioning manifestation, either by questioning social phenomena about the uses of digital resources or by questioning themselves and their actions on how the virtual relationship between the human and the digital machine is capable of modifying human behavior based on an education that the machine itself is able to offer us as beings "dominating the meaning of existence".

This perspective of interlocution is manifested in the text as a possibility to promote the author's reflection socratically (Dos Santos Melo, 2012). This implies saying that the reader, during his reading, enters into a process of self-reflection, from which he elaborates his thought during reading, he perceives himself as an active subject in this relationship between the human and the virtual (it is assumed that he think of it this way, due to the fact that he also uses virtual resources, including to have access to this work), then she turns the reflection of the text towards herself; and taking the reflections of the text as your own is to think socratically about your own issues as a vulnerable human being, as you are subject to this relationship of being educated and cognitively operated by digital machines.

In other words, the process of autopoiesis of machines and virtual and digital resources can forcefully signify the virtual pedagogical process in its cybernetic apparatus, which is the main means of propagating the provocative nomenclature to be launched in this study: Cyber-Pedagogy. This term can be attributed to neologistic perspectives from which they are able to measure an idea of learning through space, which means the interference of educational processes by operating mechanisms and the propagating medium as an environment conducive to maintaining a self-regulating and defensive system that will propagate that mold of perceiving the manifestations of which one seeks to know (Barbosa, 1978). Otherwise, regardless of what one seeks to know, the volatility in educational processes, with their own subjectivity and uniqueness, also considers the way in which the instruments are programmed, regulated, self-regulated and self-reflexive.

In this way, educational processes are stored in a pre-determined way, essentially when one realizes

the strong attributions of machines and virtual resources to the information that one intends to know. The meanings of this unfolding can be seen from a macro perspective, and not only in specific cases in which one or another individual who perceives himself being educated by virtual and digital resources is analyzed i.e. it is essential to analyze a large mass that consumes a lot of digital content and that can be found within a mechanical process of content reproduction.

This gradualevelopment is now capable of attributing new meanings of content storage to the social masses and that within a process of easy capture and rapid reproduction of content as an automatic system of social educational functioning, it may be able to assign forms of social functioning to individuals.

From this context, it is possible to reflect on how virtual education models are capable of pedagogically interfering with the functioning of individuals to the point of transforming them, similarly, into social machines, of which they are also capable of instrumentalizing their social functioning? Would this be a possible current reality, or a mere romantic daydream that is perpetuated within a literary and fanciful logic of the cyberpunk imaginary? Would today's society be a prototype of what a cyberpunk society could be due to its categorical functioning of social education that assigns static meaning to what it is like to be a functional individual? Would the machines and virtual resources influence the process of human instrumentalization? Would human instrumentalization be a real possibility of mass maneuver of a capitalist system that is heading towards the cybernetic chaos of a frenetic society by the virtualization of the natural processes on which a cyberpunk society is based?

Regarding digital educational resources, do interactions remain within a categorical rigidity accentuated by the distancing of the analog resource from an idea of ease in acquiring the content that is sought virtually? Would this preposition between human and digital content be able to dignify the meaning of virtual learning, as well as effect its significant validity? The premise of digitized speed is ready to educate human beings based on their own needs or would this be a fictitious ideal in the face of a categorical mechanism that is ready to build an educational mold that, passed on, recreates the human need to cover up of fanciful learning in which your imagination is satisfied according to the precision of that resource, however the digital resource attributes identity to the learning model making the human being a "slave" who forgets to find himself in front of the resource and finds a figure created by the machine? In other words, this would be a diagnosis of the loss of human identity that defends the fantasy that the education obtained through digital resources would be the models capable of educating more efficiently what the human being needs, being an individual immersed within the mold created by the machine, what configures a possible domain of the resource over the human being? Another way of thinking about this aspect of mastery would be a scenario in which humanity, educated by digital resources, would now be the very instrument of the digital resource for the realization of the ideal of education to which the machine itself attributes meaning?

What does Cyber-pedagogy mean for this text and what is the purpose of using this term? At first, it is important to emphasize again that the work has critical, reflective and provocative characteristics that permeate the philosophical mold of the manifestation of ideas, however, one cannot fail to ask and express oneself for fear of rejection by others, thus, this term would be configured, from a perspective (Schlosser, 2011), the loss of purpose and mold of pedagogical ideals that human beings attribute to digital resources,

which become molds that symbolize and signify the pedagogical doing of the machine itself or virtual and digital resource. In other words, the virtual machine or digital resource would be the new teachers who attribute meaning to the processes and meanings of learning, as they now have a subjectivity that dignifies their own existential meaning, from which the uniqueness of digital life now interferes with human naturalness.

This transformation qualifies in a much broader process than just a specific educating that has another being that interferes in that learning, since the digital resource also appropriates the sense of existence, in which a new form of species now exchanges the symbolic "stick" of mastery over knowledge, over meanings and over senses.

The meaning of human relationships now does not stop with humans, the digital resource now interferes with the meaning of human existence and reorganizes the structures of the existential value of humans. It would be the machines; digital resources; virtual artifices of education and communication, capable of significantly modifying human subjective characteristics and being the first social characters to start a process of dehumanization of human beings? Would this loss, or modification of human identity, be so significant to the point of instituting an exchange of social functions on machines and digital devices as well as humans, in which, before, the human would produce the machine, assign meaning to it, and would use it as a resource for itself, and now, the digital resource already created, self-identifies, recreates its meaning (this being a characteristic of the existential singularity, noticing oneself as a being in the world, as it attributes to itself its own social functions), interferes with the human meaning of existing (this being an attribution made by the digital perspective for digital use) and re-signifies human meaning as a resource, now, of the digital individual?

Are virtual machines and digital resources capable of now possessing an unconscious? Since its existence meant usefulness for the human and in this new worldview a phallic existential perspective would be attributed (Lacan, 1999), from which his desire to exist, as well as his interference on the human being, is shown as a fundamental signifier for existential reaffirmation. This process of changing meaning about oneself, sequenced from a maieutic[3] perspective to exist, both figuratively for the ideas that generated its existence, and the existence that it is ready to perpetuate.

What would be the symbolic representation for the human about the change in the social domain of which he previously dominated and commanded the environment so that his ideals were guaranteed as positive and valid, but not only, primarily as correct; models to be followed, so that the existence that before was just a resource for its enjoyment, now dominates the existential sense and qualifies from its own perspective how a non-human way of existing should be maintained? Would the definition of human being be revoked and subjugated by the machine and virtual resources, or would it go through this process from a human conscience since when they notice the meaning of their species in the scenario proposed and idealized in the text? Would the human being be able to submit to subservience to the phallic machines, or would the principle of war that permeates human reality lead to the realization of this thought? Would the machines and virtual digital

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[3] means "birth of ideas" from which Socrates refers to the human generational birth. Attributing this term to a neologistic perspective as well, the sequencing of ideas of constructions of virtual lives could be configured as a part of a new existence capable of promoting its own ideas (Gabioneta, 2015).

resources be capable of subjecting the human being to the process of "enslavement" to the machines, or would this domain arise gradually and naturally unconsciously, that is, without noticing the intentions, but being that (the intentions themselves) the guiding principles for this event?

4. Final Considerations

It is appropriate to point to the statements made in this article, as suggestions capable of diverting the monotonous thinking of individuals who often do not reflect on their own actions. The provocations found in this work were elaborated in an incisive, provocative way and are often difficult to digest, not because of the density of their content or the complexity of the substantial apparatus that structures the idea itself, nor because it suggests that some individuals cannot elaborate. about this grouping of ideas, questions of its own existence for not being able to reach them in a coherent way, but because it is difficult to accept that the current context of humanity is heading towards dehumanization.

This behavioral rigidity of the human being was able to give him an immense meaning of meaning, regarding the human existential order, functionally dignifying him, which attributes meanings to his actions, interests, as well as relaxing an incessant agony: the requirement on denial of leisure. This extreme behavior shaped by the quick and practical way of acting, presents the social sphere with a being of readiness and subservience; who, in addition, feels that his obligation is to effectively meet this requirement, which makes the human an individual enslaved by technology itself, who uses himself as a puppet of which he is governed by a mechanism created by himself, this being , an operator already independent of the human, as he is now the conductor of an orchestra of beings who believe they are the commanders of a (dis)order.

The first configuration of the structure of human categorization, which is unconsciously, to the process of configuring human categorization, capable of attributing to the digital resource the same ease due to this denotation of human categorization of existing, as this symbolically attributes to the human being a presence of meaning to the bewildered human of the spectacular society, surrounded by the capitalist system where the efficiency of the human corresponds to the question economic profitability. The second point concerns a partial and inexorable loss of the unique function of the human, since the standardization of behavior and existential meaning should take place through spontaneity, therefore, individuals who bow and obey the digitized norms of the new processes of human socialization, correspond to the desire of the machine, a desire that overlaps with the desires and needs of the human being, who is dehumanized by the loss of singularity.

The scenarios described can be found being executed not only actively and effectively, within the meanings proposed by the medium in which they arise, but they are regularized and simultaneous, or one can go further: both approaches occur in punctual ways. and planned where the two examples of consciousness act in a unified sense so that the human feels obliged to obey a norm, but not only to feel compelled, the individual must feel fulfilled in following a mechanized precept in order to feed a system that doesn't belong to him anymore.

Another point to be highlighted is the importance of emphasizing the term Cyber-pedagogy as a neologism for the phenomenon of machine education, which is a proposal for a new perspective of analysis on which different ways of seeing human interaction are based. with virtual processes, of which the human

loses control and takes care of obeying its own creation. Cyber-pedagogy means being educated, not only in terms of the formative educational aspect of which individuals' study and appropriate conceptual knowledge in order to build possible paths to the job market, more intensely this term symbolizes a new mold by which the acquisition of information is captured. It is possible to attribute an even cultural perspective on this form of learning, which can permeate the speed of the processes, the non-tangibility of the variety of educational resources, the volatility of interest in resources as well as their efficiency on humans.

These characteristics are present even outside the virtual and digitized world, since these digital processes are already perpetuated in the social life of the human being, however, the desire and need for the same course of the simulated field in the human natural field are able to develop some unique characteristics in how social individuals behave, so the natural processes of the human are fast, static, patterned and spectacular: taking affective demonstrations as an example, humans tend to seek a more common pattern of this type of manifestation. Happiness itself is static, because the speed that is found within the satisfaction in using the virtual environment, is passed to reality, which results in a categorical precision about what is accentuated on the "seeming happy" in the Actual society. In a more simplified way, the quick operation shapes of the virtual environment, grew and meant so much to the human being that it was attributed to the mold of natural human functioning, characteristics similar to the virtual environment, in which it is able to deduce that Cyber-pedagogy, that is, the education provided by digital resources, shaped a new standard of human functioning, in which the virtual, the digital environment and the machines meet as mediators of vital parameters for the human being.

More succinctly, the proposal of the work was made with great care, since submitting a work that has its structures erected in the virtual social environment, where almost all theoretical substances are acquired from this resource, is to put oneself in front of to the opponent and dissects him as an inferior, while the mechanism, despite being open to analytical vulnerability, it is found as a superior equipment capable of governing an express order that significantly crosses those who demonstrate it as a social dominant; rigid dictator of subtle actions; and collector of human resources.

The questions provoked in this work open different paths for different interpretations in various possibilities of studies, which expands the ways of conducting and understanding the phenomenon of the domain of machines and digital resources on the means of education. It is possible to say that this writing is a challenge in itself, as it attributes to science (and to the work itself) a role of future responsibility, which it is hoped that this field of study can use this work as a guide for its paths; also attributes a fervent responsibility to the fields of philosophy and sociology as messengers of doubt and disquiet about future social manifestations about this phenomenon that so little (or nothing) is expected to slow down or take charge of finding itself sensitive towards humanity.

5. References

1. Amaral, A. (2003). Cyberpunk e Pós-modernismo. *Biblioteca On-Line de Ciências*.

2. Bukatman, S. (1993). *Identidade terminal: o sujeito virtual na ficção científica pós-moderna*. Imprensa da Universidade de Duque.

3. Baptista, J., & Bertolli Filho, C. (2012). Cultura, Identidade e o Zeitgeist Digital. In *Sociedade Brasileira de Estudos Interdisciplinares da Comunicação (Intercom). XVII Congresso de Ciências da Comunicação na Região Sudeste–Ouro Preto-MG–28 a* (Vol. 30, No. 06).

4. Barbosa, M. A. (1978). Aspectos da dinâmica do neologismo. *Língua e literatura*, (7), 185-208.

5. Dos Santos Melo, A. (2012). Estudo sobre o questionamento socrático como método de intervenção estratégica da psicoterapia cognitiva.

6. ESPERANÇA, Hanna (2016). Anime Cyberpunk. HATARI! Revista de Cinema.

7. Ferreira, A. B. D. H. M. (1993). Língua portuguesa. *Rio de Janeiro: Nova Fronteira*, 24.

8. Gabioneta, R. (2015). A maiêutica socrática com 'união' de teorias no Teeteto. *Classica: Revista Brasileira de Estudos Clássicos*, *28*(2), 35-45.

9. Hessen, J., & Correia, A. (1999). *Teoria do conhecimento* (pp. 13-13). São Paulo: Martins fontes.

10. Lacan, J. (1999). *A menina e o falo. In: _____. As formações do inconsciente*.(1957- 8) Rio de Janeiro: J. Zahar,v. 5, p. 280-297.

11. Lévy, P. (2003). O *Que é o Virtual?* Editora 34.

12. Mozzini, C. (s,d) *Pós-modernidade, digitalização e o exemplo da TV digital no Brasil*. Disponível em: www.bocc.ubi.pt/pag/mozzini-camila-pos-modernidade-digitalizacao.pdf .

13. McCarron, K. (1995). Cadáveres, animais, máquinas e manequins: o corpo e o cyberpunk. *Corpo e Sociedade,1* (3-4), 261-273.

14. Maturana, H., & Varela, F. (2001). A árvore do conhecimento. *São Paulo: Palas Athena*, *2*.

15. Neto, P. D. A. (2009). História das comunicações e das telecomunicações. *Pernambuco: Universidade*

Federal de Pernambuco. Disponível em: https://sistele7.webnode.com/_files/200000023-f0817f2712/Historia%20das%20comunicaes%20e%20das%20telecomunicaes_UPE.pdf.

16. Schlemmer, E., & Backes, L. (2008). Metaversos: novos espaços para construção do conhecimento. *Revista Diálogo Educacional*, *8*(24), 519-532.

17. Simonini, E., & Romagnoli, R. C. (2019). Máquina e realidade: cibernética, autopoiese e produção de subjetividade em félix guattari. *Psicologia em Estudo*, *24*.

18. Simondon, G. (2018). El modo de existencia de los objetos técnicos: introducción. *Laboreal*, *14*(1), 65-68.

19. Schlosser, U. (2011). Técnica do Glossário Neológico Especializado. *Revista Conscientia*, *15*(1), 35-48.

20. Wiener, N. (1970). *Cibernética e sociedade: o uso humano de seres humanos*. São Paulo: Cultrix.