

The Complexity Homo and the Cognitive Revolution

Vicente de Paulo Morais Junior

¹Universidade Metodista de Sao Paulo/UMESP, Brazil.

Abstract

The present research had as purpose objective to presents the Homo of Josgrilberg, having as main references Harari [1] and Josgrilberg [2][3][4]. Through an "archeological work" it was verified the composition and performance of Homo of Josgrilberg along a "brief" history of the humanity. It was observed that Homo in subject lived a process of Continuous Cognitive Revolution, always with improvement of the language, in different formats, and consequently the gradual and cumulative increase of his skills of producing fiction. It was verified although that "brief history" Homo self expressed, grew, was modeled and interpreted the world along that, however where he lived can still keep at the present time the same essence of a distant past.

Keywords: *Homo of Josgrilberg, Homo Sapiens, Continuous Cognitive Revolution, Fiction, The human being's essence.*

HOMO ?

The first contact that we had with the term Homo has probably happened in the Basic Education, especially in the disciplines of History, Science or Biology. They are rare the experiences that still discuss in the Basic Education, who is that Homo. In the school curriculum, the term Homo then appears as a divisor of waters among denominated Australopithecus and the Homo habilis, because this would have been the first to build and to use tools.

It suits to highlight that the school curricula, for the most part, still present that period of the humanity's history in a lineal chronological movement. However, Harari affirms that it is treated of a fallacy to conceive those species as disposed in a straight line of descent, because that linearity can suggest that for a long time of the humanity's history a human type just inhabited the planet.

The author emphasizes although to the about 100 thousand years the planet was inhabited for at least six different human species (p.16) [1]. Therefore, the singularity of current Homo becomes peculiar, in counterpoint to its multiplicity of at least a hundred of thousands of years ago. Even with such discrepancy, coming even as "cliché", several authors researched and they discussed

"different homines". Starting from the accomplished bibliographical research, it was noticed relevance in: Homo faber (man of the work), Homo ludens (man of the game), Homo empiric us (empiric man), Homo imaginarius (imaginary man), Homo economic us (man of the economy), Homo consumans (man of the consumerism), Homo prosaic us (prosaic man), Homo poetic poetic us(homem), as it points Hackmann [5].

The "clichés" go beyond! Also noteworthy is Homo virtualis (native digital), Homo Informatics' (man of the digital era), Homo zappiens (man of the movable technology, interlinked man in net), Homo pictor (man that creates images), evidenced by Rodríguez [7], Holgate [8] and Véen and Vrakking [9], Wulf [10], respectively. Still in the field of the behavior, it agrees for opportune to lift some subjects that occur of possible combinations of Homines.

In the current society, which the function of the Homo Faber Informatics'? Or still, are digital and similar technologies molding a Homo zappiens prosaic us? Does the children's possibility exist Homo virtual is poetic us to be? In a time where emojis become popular, will we still discuss Homo zap pins pictor? Homines presented until then, they have a common factor: they are

inversely proportional to the roads that that research will travel. Exposed Homines show basically what the human being accomplishes, their attitudes, actions and practices! However, Wulf highlights that the human nature is the result of an interrelation of fixed conditions on a side, and conditions modified, of other. It is not possible to understand it only by observing its biological die not even being limited to consider elements of it social and cultural variability.

The human nature is the result of an entangled compound of processes biological, social and cultural (...) (p.67) [10]. To present research search to tread roads that guide us to find Homo that represents what the human being it is. is not the pretension had of answering a present subject in the humanity's history – The one what is the man? - but yes to philosophize on the man (human being) as a way of looking for the world and its reality, or still, analyzing what can give access to the man's essence [11].

De Fleur and Ball-Rokeach [12] they complement such approach when mentioning that Homines is frequently described by archeologists and other erudites in terms how you were or ages. However, those terms and intervals and their numerous subdivisions are indisputably useful to evidence lines of the behavior, "(...) but they totally fail under the much most

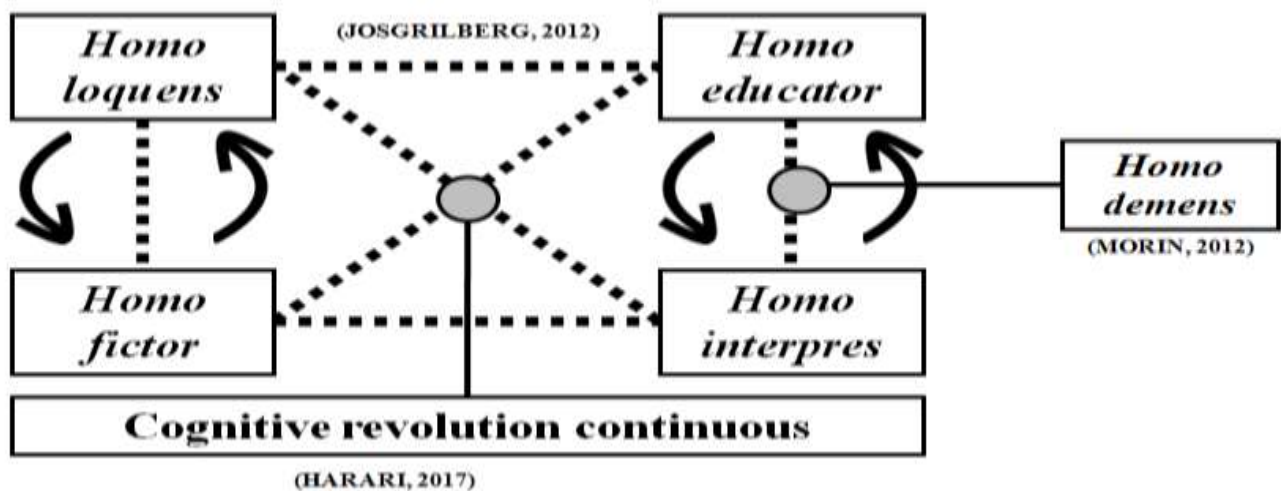
fundamental aspect of the human existence (p.22). Wulf [10] contributes with the discussion mentioning that the human nature is in great flexible measure and dynamics (p.67).

It is in search of that flexibility and dynamism that we will go! For so much, as in a "archeological work", there will be the need of a systematic discussion with present fragments in a "bibliographical archeological ranch" properly crumbled front to the vast bibliography that approaches the theme. The "excavations" presented us Homo of Josgrilberg and his performance, in an abbreviation history of the humanity.

Homo of Josgrilberg

Making use of the theoretical-methodological stages of the archeology, initially we will go to the obtaining of data. As the outline below, is observed that Homo of Josgrilberg is composed by a quartet of Homines, subdivided in two groups: Homo educator and Homo interpres and Homo loquens and Homo factor.

In spite of having subdivided, it enrolls the interrelation and direct and relentless connection among four mentioned Homines. In the tension between Homo educator and the Homo interpres enrolls the Homo demens. In that intersection, it is had as effect and product the cognitive revolution, presented by Harari [1], added of the "continuous" term.



Lifted up the data, we began the second stage in the archeological process, processing the data and already presenting possible interrelations and connections among them. Initially it is had as use / sense of the terms

loquens as that that speaks and it is expressive; factor as that that models; educator as that that develops; interpres as that that analyzes and interprets; and demens as that that among ends. The

connection between the Homo loquens and fictor can be translated as the existent logic in the process in that starting from the man's language that speaks automatically and in a natural way it will get to mold its reality, so much in the aspect concrete as abstract. Already the connection between Homo interpretes and educator in turn will be translated by the logic that evidences the action of interpreting the lived world, soon to grow.

According to Josgrilberg [2], these will mediate our relationship with the world, appearing on a tension materialized by the Homo demens. The Homo demens presents in the human being, possibilities of weaknesses and fortresses, cruelties and kindness, destruction possibilities and creation, conscience and unconsciousness [13]. There is a dynamic the Homines that make up the Homo of Josgrilberg. That dynamics will be presented soon is fast. Completing the processing the data of this second stage, they stand out the approaches of Harari [1].

Para the author, the humanity lived three great revolutions¹ : cognitive, agricultural and scientific. We attempted ourselves initially, to the cognitive revolution. Harari [1] mentions that that revolution introduced new forms of to think and to communicate, between 70 thousand and 30 thousand years ago. This revolution gave Homo Sapiens the ability to revise his behavior quickly according to needs in constant transformation (p.41).

That revolution, among several possibilities, still provoked genetic mutations, that according to Wulf [10], they carted a quantitative and qualitative volume of neural interconnections, altering the cerebral functionality in Sapiens, making possible that him thought in an unprecedented way and if it communicated using what would be the "origins" of the language. The product of that revolution is exactly the existent dynamics in Homo of Josgrilberg: the fiction. Josgrilberg presents us the fiction mentioning the verb *finxi - fingere*, will create the term fiction, (...) it is used to

mean to knead (the bread, the clay), to mold, to form, to invent, to order; the modifications in the word appear to mean to describe, to act, to simulate, to lie, to transform, to redo, to represent, to transfigure, to create, to imagine; fictor, oris means that that models, the artisan that kneads the bread or the architect that it models the clay, the marble or the metal. [2].

The outstanding griffins in the citation above evidence the existent dynamics among the homo loquens, fictor, educator, fictor and demens. Besides, the fiction, will still be structuring in that approach because, The word "fiction", the fiction of the imagination, in short, it is used here to mean the operation that cuts what arrests us to the Real and it liberates us to imagine between absence and presence the possibilities to give sense; the imagination happens in the human sphere of sense and significance. Without the fiction capacity, the human world cannot be formed. [2].

The fiction, product of the articulation between the Homines that compose Homo of Josgrilberg is a continuous product of that cognitive revolution. Starting from the improvement / evolution of the capacity of communicating, the language shows as structural pillar of that cognitive revolution.

With the organization of the language, and consequently a complexity in the communication, Sapiens started to have the capacity to invent histories and stories, to create myths. That cognitive improvement represents the capacity that Sapiens acquires of doing fiction: to attribute senses and meanings to the world in which he lives. We integrated the Josgrilberg approach to this analysis, when the autor mentions that It is in the language interlaced with the imagination that the human being opens horizons and it creates their worlds.

The reaches of that relationship reinforce the unit activates of the human being in his capacity to transcend structures and systems that sustain and they accomplish the finite existence. The human being possesses that characteristic stranger of metamorphoses commanded by his fiction capacity, of redoing in the unreal the Real, the sense of the sensitive, of rethinking the life and the world continually. The human being brings in his essence an interpreter that operates the world's us which he lives in creative tension

¹ Front to several concepts and theories that involve the term "revolution", the author doesn't define him/it. Starting from the exposed in the work, Harari [1] implies that "revolution" would be radical changes then in the human being, consequently in his/her behavior, social relationships and his/her essence that last long for a certain period being substituted then by other revolution.

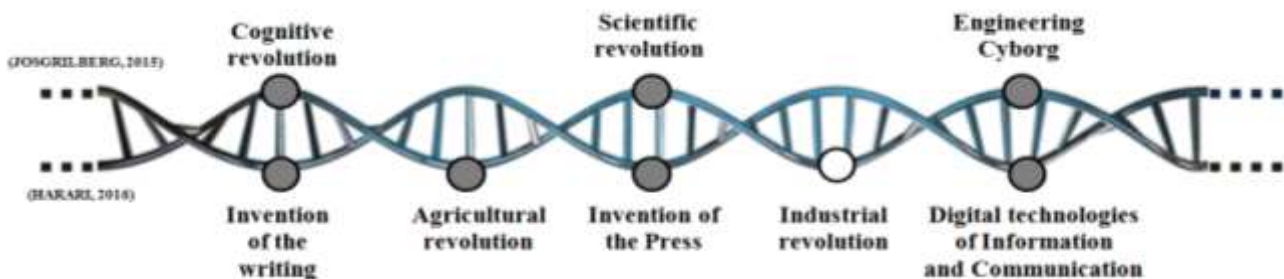
in I interlace him of the language and the imagination. [1] There was the concern of incorporating to the "cognitive revolution" the "continuous" term, because if the fiction, besides being present in the dynamics of Homo of Josgrilberg, also configures as an uninterrupted product of that dynamics, the term is really coherent. To mold, to form, to invent, to order, to simulate, to lie, to transform, to redo, to represent, to transfigure, to create, to imagine is matter excels for the man that speaks, who interprets, that it molds and that above all I felt the world in that he/she lives. Homo of Josgrilberg traveled the humanity's history showing and developing and above all

expanding, amplifying and potentiating their cognitive revolution.

Homo of Josgrilberg and his Performance in an Abbreviation History of the Humanity

Giving continuity to the archeological work in search of Homo of Josgrilberg and his performance in the humanity's history, he/she stands out in that stage, the analysis of data and his respective interpretation front to the obtaining and data processing executed already.

The outline below represents the performance of Homo of Josgrilberg along an abbreviation history of the humanity:



She chose in using the physical structure of DNA to "draw" that path. The two chains that she interlace will be acted for: Josgrilberg [3] and his discussion proposal with base in the prostheses developed by the humanity along the history and Harari [1] with the revolutions that defined the course of the history. The vertical parallel stems among the chains manifested the Homo demens and some of their actions. The Cognitive Revolution registered by Harari potentiating the fiction process, he has his acme with the transition of "brief snores", as communication attempts, for a language, even if still badly structured.

That biological movement of increase of the cerebral mass in relation to the body, combined to the quantitative and qualitative increase of interconnections neural (p.23)[10]² they not just provided a cognitive improvement linked to learning, memory, or communication, but above all the improvement in social abilities. Harari [1] will complement such approach mentioning that that improvement wins solidity when the Homo sapiens becomes capable to revise his behavior quickly in agreement with needs in constant transformation (p.41). The author

still mentions that legends, myths, gods and religions appeared for the first time with the Cognitive Revolution and that capacity of talking about fictions is the singularest characteristic of the language of the sapiens [10]. If in the Cognitive Revolution the fiction capacity is potentiated, with the Invention of the Writing she is increased.

Josgrilberg [3] it will classify that action as one of the incorporate prostheses for the humanity³. In the transition of the speech for the writing, with the valorization of the different types of registrations, the memory of long period wins space with possibility of storage of information. Like this, the combination language and writing will provide to the human being deep consequences so much for the individuals as for the society. The capacity to use language and writing provoked gigantic jumps.

The combination of words, numbers and other symbols, registered and spoken, they allowed to the human being a capacity to structure classifications, abstractions, analyses, syntheses, speculations and memories. Starting from then, the transmission, reception and understanding of messages become more complex [13]. Giving

² The author emphasizes that the evolutionary capacity of Homo in subject not just occurs of cerebral subjects as size and connections neural. Subjects linked to the musculature, internal organs and even socializations, they interfered considerably in the whole evolutionary chain of Homo (p.23-4)[10].

³ Josgrilberg [3] when mentioning the incorporate "prostheses" for the humanity he/she doesn't bring their respective characteristics parallel. This way, he/she combined the approach of Josgrilberg to the work "Theories of the mass" communication of De Fleur and Ball-Rokeach [13].

continuity to the path of Homo of Josgrilberg, we moved forward about 12 thousand years with the Agricultural Revolution, as it defines Harari. With the sedentary, Sapiens now settle mainly to the margins of the rivers, organizing modern and complex techniques of agriculture and livestock. De Fleur and Ball-Rokeach they appear that Until the arts and sciences began to develop.

Treatments well happened for diseases could be logged in writing. Observations of numerous aspects of the nature and his interpretations could be registered. The human mind was liberated of the heavy task of having to remember of whole cultures and to reproduce them in the minds and memoirs of each new generation. The ideas could be stored, accumulated and consulted by subsequent generations. That was the great step to the front (...) [13].

In a cumulative process, they combine the Agricultural Revolution, the capacity of Sapiens to register techniques, amounts and the movement of the nature. Here the evolutionary jump out gigantic. He stands out although such a cumulative process will propitiate the organization and appearance of organizations religious, commercial and financial.

The Scientific Revolution mentioned by Harari is fit in perfectly with the Invention of the Press mentioned by Josgrilberg. Differently of the "previous revolutions", the Press and their origins have time and authorship defined. In the century XV it exists a diffusion of the movable presses and a significant number of books printed and published in different languages. On that moment he is founded the progress of the impression with the movements of the great navigations, that provided changes of knowledge and technologies between different people and the cultural rebirth in Europe. Fertile field for the Revolution Informs of Harari impelled by the Press, as prosthesis mentioned by Josgrilberg⁴. Harari

⁴ For Harari [1]the science starting from the Scientific Revolution is differed of the others with base in three aspects: the) the modern science bases on the sentence Latin ignoramus - "we don't know" and like this any concept, idealizes or theory is sacred and unquestionable; b) the modern science longs for to obtain new knowledge and he/she makes gathering him/it observations and then using mathematical tools to relate those observations in including theories; c) the acquisition of new capacities: the modern science is not satisfied in creating theories. It uses those

will still highlight that in that period The Scientific Revolution was not a revolution of the knowledge. It was, above all, a revolution of the ignorance. The great discovery that led off the Scientific Revolution was the discovery that the humans don't have the answers for their more important questions. (p.261)[1] A fervor us cycle exists enters to the Scientific Revolution of Harari and the prosthesis press of Josgrilberg: the Industrial Revolution.

Harari [1] he affirms that the largest interference of the Industrial Revolution for Sapiens was the substitution of the body of animals or of own Sapiens as instrument of conversion of energy for the machines. Between the Industrial Revolution and the Engineering Cyborg of Harari and the prosthesis Technology of Information and Communication of Josgrilberg, once again in a cumulative process they stand out telegraph, telephone, radio, TV, satellites, computers and internet. That change movement, substitutions, creations and appropriation of technologies, finally it arrives at the current days.

We entered in the Communication Era, in the Information Era. De Fleur and Ball-Rokeach [13] they detach that "recently we were inserted, enough unprepared, for the Era of the Computers, where the computers are already becoming what came to be called of a "computerized society".

Harari mentions that the Engineering Cyborg is directly linked to the daily of Sapiens because in certain way, practically all of us are bionic nowadays, since our senses and natural functions are complemented by devices as glasses, mark-steps, prostheses and even computers and cellular telephones (that relieve our brain of part of the obligation of the processing and storage of data). We are very close of we became true cyborgs, of having inorganic characteristics that they are inseparable of our body, characteristics that modify our capacities, desires, personalities and identities. (p.415)[1] Through the Engineering Cyborg, we can complement such approach according to Josgrilberg [4] ⁵

theories to acquire new capacities and, in matter, to develop new technologies (p.261).

⁵ Entitled text "The world-give-life and the social impasses of the techno science", still in the press, presented partially in

when the author mentions that the exponential multiplication of the scientific knowledge and of the information it generated new life conditions and of exercise of power. The power with technological and scientific mediation is controlled with a lot of agility by the holders of the productive capital in open areas for the techno science. The progressive and abstract estrangement of their sources turns the scientific knowledge an instrument that assists the interests delimited by the power of the capital. [4]

The organizational logic for the combination would Engineer Cyborg and the control system and power structured by the prosthesis Technology of Information and Communication can be defined as "Global Machine" [4]⁶ or still as "Process of Globalization with standardization of objectives" [10]⁷. Computers and technologies correlate are transforming Sapiens in beneficiaries and victims. It is noticed an inversion: the human being prosthesis of the technological capacities, that is, prosthesis of the prosthesis [4].

Homo of Josgrilberg Showing through the Homo Demens

During that whole path, Homo of Josgrilberg was shown capable to manifest weaknesses and fortresses, cruelties and kindness, destruction possibilities and creation, conscience and unconsciousness. Naturally, starting from the coalition of the Cognitive

Revolution and the Invention of the Writing they sprout tensions, conflicts and dilemmas. It will be in that universe that the Homo demens will show. Homo of Josgrilberg gets starting from then to create great demographic conglomerate-some until denominated as Empires. That creation capacity oscillates, in equal it climbs, with the capacity to destroy the demographic conglomerate or the Empire "of the other".

Conscience in registering the history, unconsciousness in organizing it's with base in servitude and/or slavery. Like this, Sapiens will go changing his behavior quickly, transmitting new behaviors to future generations without need of any change genetic or environmental [1]. With the coming of the Agricultural Revolution, the Homo demens observes the need of the deprived property, that it will potentiate gestures of kindness in providing shelter the family or to whole communities, but at the same time it won't measure efforts to use of violence and cruelty to protect that property.

The science that gets to register the movement of stars of the solar system, also gets to create firearms. Homo of Josgrilberg goes if showing strong in the actions, however weak to his essence. The industrial revolution founds with the capitalist ideary, that ever since is shown producing of inequalities. The wars, before aided by their military workmanships, powders Industrial Revolution start to have a military-industrial-scientific compound.

With the substitution of the body of animals or of own Sapiens as instrument of conversion of energy for the machines the science moves forward significantly in relation to production of goods so much in aspects quantitative as qualitative. At the same time workers will work twelve, fourteen, sixteen hours a day, with ridiculous wages. The computers and technologies correlate current they are causing a chaos comport mental and ideological of confusion among what it is real and what is virtual. They provide access easiness to "everything and all", but, in a contradictory way, they bring with itself a considerable level of selfishness and isolation.

The Homo demens at the present time shows in the wise persons assertions of Josgrilberg when the author evidences that The global

09/19/2017 and 09/26/2017 during the classes of the discipline "Hermeneutic and Education: of the phenomenology of the imagination to the imagination hermeneutic in the education", of PPGE of Umesp, supplied by the author

⁶ The author defines Global Machine with four pillars and under a power of general command. In first place, the machine reveals a nervous system as an accomplishment of the techno science. This is the first of the pillars that you/they base and they make possible his/her limitless expansion on everyone. To that essential pillar they join other three that benefit and they sustain the results of the machine augmented for the techno science: 1) the market, 2) the manners of material and intellectual production, 3) the production and military technology of attack and defense (that guarantee the policing of the world). Those four pillars are integrated in a net of decisions commanded by the world financial system. [4]

⁷ The author defines as components of the globalization with standardization of objectives the following aspects: finance markets and of international capital, the mobility of the capital and to growing influence of the neoliberal economical theory; business strategies and markets with global strategies of production, distribution and minimization of costs with work hand; transnational political bodies and the decline of the it influences of the national state; consumption patterns, lifestyles and cultural styles and his/her tendency to the uniformity; new communication means and tourism; researches, development and technology; the world mentality (p.189) [10]

machine inverts the relationships between world of the life and the science. The understanding and ethical relationship settles down starting from the world of the life. The global machine imposes their own laws to the world of the life creating the distortions and the mentioned impasses. The global machine alters all of the human relationships, of the education to the economical relationships and relationships of power among the nations. She is the new balance factor or unbalance. [4]

Conclusion

When organizing that "archeological work" identifying and discussing Homo of Josgrilberg was contacted initially that Homines here mentioned come some times in a superficial way, other times in a complex way, however always cm focus in discussions that base comport mental aspects. Harari [1] then a link can be considered among such compartmental discussions and until then, something obscure.

Homo Josgrilberg is the subsequent link of the current proposed by Harari. In all of the mentioned movements the language and the capacity to produce fiction are shown as central pillars of that evolution. As Sapiens is going enlarging and potentiating his cognitive capacity, be through the writing, of the agriculture and livestock or of the science, they incorporate to the capacity cognitive neural of new Sapiens have, new theories, new behaviors.

That incorporation and consequently the appropriation of "new" languages allows the continuous and growing capacity to produce fiction. Besides, the language improved the capacity to think.

It was still observed, that those movements had dynamic borders. We don't have "divisors of waters", but at the same time certain events are them biological or social they went modifying Homo. Those dynamic borders have as characteristics, cumulative processes that potentiated the continuous cognitive revolution of Homo of Josgrilberg. Wulf [10] complements such approach mentioning that The human nature is constituted in the processes that return in the time to the origins of the life and the time of the hominization⁸. It is a historical process in which we found a superposition, indissoluble in their constituent elements and an amalgam of processes physical, social and cultural. (p.83) The harmony between Homo educator/Homo interpretes and Homo loquens/Homo factor, provides food for the continuous cognitive Revolution.

We had the concern in highlighting that in that movement the tensions appear through the Homo demens. The accomplished "archeological work" showed that Homo Sapiens of Harari brings in some moments, in the implied sense, the human being's essence in the humanity's history. Already Homo of Josgrilberg evidences the human nature along the history with characteristics that among ends, that he acquires, continually and in cumulative way, cognitive capacity that interferes in biological aspects, comport mental, and above all social.

To the long of that "brief history" Homines was expressed, he grew, it was modeled and he interpreted the lived world. Did we leave Homines that lived individually in small communities and did we "develop", about 70 thousand years to Homines that lives individually in small "virtual communities". will that Be the human being's essence?

⁸ The author considers hominization as a genesis in several dimensions starting from the interaction among factors ecological, genetic, cerebral, social and cultural (p.66) [10].

References

1. Harari Yuval Noah (2017) Uma breve história da humanidade. Tradução Janaína Marco Antonio. 24.ed. Porto Alegre: L&PM.
2. Josgrilberg Rui S (2012) Da formação de mundos à imaginação educadora. Notandum (USP), 30,5-16,
3. Josgrilberg Rui S (2015) Fenomenologia e educação. In: Lauand, Jean (org.). Estudos em antropologia, religião e educação : São Paulo: Factash Editora.
4. Josgrilberg Rui S (2017) O mundo-da-vida e os impasses sociais da tecnociência (no prelo). Texto apresentado parcialmente em 19/09/2017 e 26/09/2017 na UMESP/SP.
5. Hackmann Berenice Gonçalves (2005) O complexo homem complexo. Revista Científica da Faccat, 3-1.
6. Prensky Marc (2001) Digital natives, digital immigrants. On the horizon, MCB University Press, v. 9-5.
7. Rodríguez Carmen (2011) Galán Homo loquens, homo virtualis. Revista de Estudios de Juventud. 93,.
8. Holgate John Douglas (2017) Homo loquens meets homo informaticus: exploring the relationship between language and information. Proceedings, 1(3):91.
9. Veen Wim E, Vrakking Ben (2009) Homo Zappiens: educando na era digital. Tradução Vinícius Figueira. Porto Alegre: Artmed.
10. Wulf Christoph (2013) Homo pictor: imaginação, ritual e aprendizado mimético no mundo globalizado. Tradução Vinicius Spricigo. São Paulo: Hedra.
11. Lauand Jean (2011) Filosofia e Educação: Universidade. São Paulo: Factash Editora.
12. De Fleur, Melvin L E, Ball-Rokeach Sandra (1993) Teorias da comunicação de massa. Tradução de Octavio Alves Velho. 5.ed. Rio de Janeiro: Zahar.
13. Morin Edgar (2012) O método 5: a humanidade da humanidade. Tradução Juremir Machado da Silva. 5.ed. Porto Alegre : Sulina.