

Math with capital letters. Re-knowing it and re-knowing ourselves: An urgent re-linking mathematics

MATH WITH CAPITAL LETTERS. RE-KNOWING IT AND RE-KNOWING OURSELVES: AN URGENT RE-LINKING MATHEMATICS¹

MATEMÁTICA COM M MAIÚSCULO. RECONHECÊ-LA E NOS RECONHECER: UMA URGENTE RECONEXÃO

LA MATEMÁTICA CON MAYÚSCULA. RE-CONOCERLA Y RE-CONOCERNOS: UN RE-LIGAR URGENTE



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¹ It belongs to the research area: *transcomplex knowledge transparencies and trans-complex transmethodologies*.

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ABSTRACT: The article analyzed Math with capital letter, as re-knowing it and re-knowing ourselves in it from the interiority of being is urgent. It is a social-cultural-spiritual construct defined in wishes and acknowledgments to shape generations in the awareness of the contributions of science legacy of humanity, as essential in citizenship. The rhizomatic deconstruction was carried out with the transmethod; where the possibility of recognizing ourselves is combined in the complex and transdisciplinary. In conclusion, as a symbolic scenario, mathematics is configured by society according to its convictions and beliefs about what the human being and the world should be.

KEYWORDS: Mathematics. Re-meet it. Re-meet us. Re-link. Capital letter.

RESUMO: Foi analisada uma matemática com M maiúsculo, pois é urgente reconhecê-la e reconhecer-se nela desde a interioridade do ser. É uma construção sociocultural-espiritual definida em anseios e reconhecimentos para formar gerações na consciência das contribuições da ciência, um legado da humanidade, como essenciais na cidadania. A desconstrução rizomática foi realizada com o transmétodo; onde a possibilidade de nos reconhecermos se combina no complexo. Concluindo, como cenário simbólico, a matemática se configura pela sociedade, atendendo às suas convicções e crenças sobre o que o ser humano e o mundo deveriam ser.

PALAVRAS-CHAVE: Matemática. Reencontro. Reconhecer-nos. Reconexão. Letra maiúscula.

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RESUMEN: Se analizó la MATEMÁTICA con mayúscula, en tanto re-conocerla y re-conocernos en ella desde la interioridad del ser es urgente. Es un constructo social-cultural-espiritual definido en anhelos y reconocimientos para conformar a generaciones en la concientización de los aportes de la ciencia legado de la humanidad, como esencial en la ciudadanía. Se realizó con el transmétodo la deconstrucción rizomática; donde la posibilidad de reconocernos se conjuga en lo complejo y transdisciplinar. En conclusión, como escenario simbólico, la matemática es configurada por la sociedad atendiendo a sus convicciones y creencias sobre lo que debe ser el ser humano y el mundo.

PALABRAS CLAVE: Matemática. Re-conocerla. Re-conocernos. Re-ligar. Mayúscula.

Main Rhizome. Complex goal, state of the art, categories and transmethod of research

The processes of knowing ourselves are internal subjective processes of high-level thinking; mathematical science, queen of all knowledge, and deeply transdisciplinary, needs to know itself as a magnificent way of thinking and marking humanity, it's becoming and development; its impossibility of construction without this science. The human being, however, also urges to know himself in mathematics, in his life, in his dialogical processes, in the construction of his body, in the magnificent creation of God in the universe.

The word *rhizome* returns this complex connection of biology with transmethodical constructions, which here is rescued to mark the distinction beyond this syndrome of division ignoring investigations; the rhizome indicates that we go further, that there are no centers in the discursive constructor; they are rhizomatic in the sense that rhizome is used in an engaging way in the present research legends (RODRÍGUEZ, 2020a), as it has a surrounding tip that describes; it validates Deleuze and Guattari (1980) in which one rhizome connects with another, it is an anti-genealogy that breaks with the static dividing structures of presenting investigations in which the parts are inextricably divided into one going without a coming.

In this research, which indicates a transepistemology, beyond what is known, of what it means to know mathematical science and to know ourselves in it, the mathematic is analyzed, to the extent that knowing it and knowing ourselves in it, from the interiority of being, is urgent. This is the objective of the survey located on the line: knowledge transepistemologies and transcomplex transmethodologies. Why hasn't mathematics sufficiently permeated the affectivity and feelings of human beings? Is the progress of civilizations recognized with the contribution of mathematics? We need to reveal, rebuild, live mathematics beyond the mechanical form that is proposed, unattainable and unique to some so-called intelligent people.

To carry out the survey, the transmodern method of rhizomatic deconstruction is used; with transmodern and transcomplex views. What is the purpose of a transmodern method? Why do you go beyond the reductionist modernist methods? They seek to engage in processes of revelation hidden in discourses, practices, actions and printed discourses, in order to break them, inarticulate and reconnect with another meaning in the temporality that concerns us, from a view of the hologrammatic, the whole and its parts, the parts and the whole in a permanent mechanism of recursive loop (MORÍN, 2005).

On the other hand, deconstruction as a transmethodical method of investigation "is free to the maximum, antidogmatic, has no fixed transmethodology, its objective is to weaken Western philosophical thought, to destroy colonizing conceptions in all its forms and meanings"

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(RODRÍGUEZ, 2019b, p.43). Thus, without incisions or colonial debts of how we should study the complex objects of study goes with the research subject gaining prominence in the study, with its subjectivities without incisions. *It is preeminent to know that transmethods give voice to the subject of the investigation, so that the author assumes the preeminence in the crisis and is an agent of change; its subjectivity is a participant in the survey. Reconstruction is subjective, but it does not leave behind objectivity and socio-critical criticism.*

Mathematical science with a capital M creates ways of seeing, and being in the world that translates into symbolic universal verdicts of social actors before the claim of the legacy of science as an indispensable symbol in the development of humanity and in the human being. The subject created by mathematics in their identity is a creator of meanings, meanings that also originate and, at the same time, ways of seeing and being in the world; therefore, it makes it a scenario of knowledge and transformation. Mathematics is created and transfigured by this creation. Richard Feynman, Nobel Prize in Physics in 1965, stated "For those who do not know mathematics, it is difficult to feel the beauty of nature [...] If you want to learn about nature, appreciate nature, you need to learn the language in which you speak" (FEYNMAN, 2015, p. 225). Wonderful conviction of mathematics, urgent need to know it again, to which the author refers.

Mathematics is the recognition of the other, than in modernity-postmodernity-coloniality is not recognized, because the reductionist position of the human being and science itself did not allow this. Moreover, there is no interest in modernity in recognizing the human being as an entity of transformation. This recognition does not imply knowing again if it is schematic in pre-established frameworks, but to know again without prejudice, without labeling the other in its radical differences.

He knows how to differentiate again, not unify it; it knows how to welcome back into fundamental difference, not segregate it; knows how to re-include respect for diversity, not unify it; recognizes to protect, guard and guide, not to alienate; he knows how to rethink, convince, stimulate and not to mechanize or follow blindly; as in modernity - postmodernity - coloniality as a project to avoid the human being.

Mathematical knowledge must grow and rediscover itself with ourselves, with its evolution of love and the interiority of knowing and recognizing that goes beyond the externality of verification, the recognition of some:

Knowledge must come out of the texts, it must be transformed into "something" alive, that changes, that grows, that develops. If we allow

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knowledge to be reduced to the sphere of data, we will be contributing to fuel the restlessness and hopelessness of those who cannot see a future, because they do not know how to create strategies that allow them to understand the inevitable uncertainty (MOTTA, 2008, p. 10, our translation).

Of course, *as we recognize mathematics we turn to its complex creation of its theories; only to think of it as God's creation of greatness in the nature and creation of the human being and this as creation and recreation of his theories*, to recognize mathematics in ancient Greek philosophy; to think of it in Plato's dialogues recreating the teachings of Socrates; to think of it in the Socratic motto: All I know is I don't know! (PLATO, 2012). And if we want to recognize mathematics, in this research, in all its vast history, which is the history of humanity; for example, mathematics is the South, it would be well worth knowing again; as well as mathematics in life.

The research developed the survey on: recognition as a necessary activity, the urgency of knowing ourselves and recognizing mathematics, the recognition of mathematics in its historical complexity of humanity and the final considerations in this reconnection of mathematics. All these rhizomes that follow are reconstructions of the object of study.

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Reconstruction rhizome. Recognition as a necessary and urgent human activity

Currently, it is urgent and necessary to clarify that there are certain limits that must be established between recognizing and recognizing, the first associated more with the verb and the action that is active, of knowing, and the second, recognition, more linked to subjectivity, is passive, of relating; "to recognize how an act expresses a claim ..., to exercise an intellectual domain over the field of meanings ... recognition expresses an expectation that can only be satisfied in terms of mutual recognition" (RICOEUR, 2006, p. 34, our translation).

It is, of course, the act of meeting ourselves subjective, complex and going to "interiority is the possibility that we all have to look inward, to "be" and to grow as people, to be what we are deep within ourselves." It has to do with personal recognition, with the discovery of our most intimate being and with living, the relationship with our entire surroundings" (ALONSO, 2012, p. 55, our translation).

"Recognition not only departs from knowledge, but also paves the way for it" (RICOEUR, 2006, p. 36, our translation). And it paves the way for her because, to the extent that this recognition of this entity gives her a reason for being and doing, it gives her power in people's lives. Recognition is also subjective because it "acquires an increasingly independent

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status with regard to knowledge as simple knowledge" (RICOEUR, 2006, p. 34, our translation). Thus, knowing him and knowing himself indicates with recognizing him again (mathematics, in this case) and knowing himself. This indicates that there is a part in our interiority that has not been well known or is not known, in the same way as recognition with mathematics.

Recognition must be exercised from childhood, education is essential the explicit statement "that we all have a spiritual dimension, and sensitivity to be able to recognize in younger children these characteristics and manifestations of this dimension, of which we have already spoken. This will lead us to be more careful in our observations and to capture children's reactions and attitudes" (ALONSO, 2012, p. 92, our translation).

Thus, knowing it and knowing one's own are acts of reconnection in this refabrication, "reconnecting knowledge implies resignify to reinvent" (FONTALVO, 2017, p. 192, our translation). Reconnection must be transdisciplinary, transdisciplinary reconnection implies a southern, complex and planetary thought, it is a recivilization. Recivilization begins in the South (GONZÁLEZ, 2013); the consideration that we came from the earth and owe it to her. From the southern world emerges the fundamental need to reconnect, that is, to reconnect what was disunited by Western culture.

For this, it is urgent to minimize this abysmal thought, from which a Western mathematics is recreated in superiority to southern mathematics, which was revealed late and not yet recognized in its exceptional beauty, "modern Western thought is an abysmal thought". It consists of a system of visible and invisible distinctions, the invisible ones constituting the basis of the visible ones. Invisible distinctions are established through radical lines that divide social reality into two universes, the universe "on this side of the line" and the universe "on the other side of the line" (SANTOS, 2010, p. 11, our translation).

At the same time, recognizing his mathematical creations in the South means a planetary decoloniality in the case of mathematics; in which mathematical creations are embraced without exclusion, without superiority and revealed, for example, as romantic Greece to be invaded by Rome the strict way of doing mathematics from the interiority of being is lost. Therefore, recognizing is revealing how Socratic, mathematics with maieutic dialogues gives a high-power recognition of mathematics in people's lives.

It is to reconnect the South with the West; recognize us as creators of mathematics, suppressing theories of God's creation; re-finding them in our mathematical being; in our pulsations, in our values, brain; god's magnificent creation with high-level mathematical

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processes; which, by changing some parameter, affects the life of the human being. The recognition of ourselves in mathematics, and the recognition of it as a scientific legacy of humanity, should be an activity of reconnection as an emerging practice of transmodern philosophical thought (RODRÍGUEZ, 2019a).

This reconnection of the South with the West shows a mathematics in the life of human beings with a single surname: humanity; and in this spirit, we have to gain decolonial preeminence by demystifying in the life of human beings the mathematics erroneously called non-scientific, because it comes from secular knowledge, from the popular habitat of intercultural knowledge. They all have mathematical knowledge that is scientific and are recognized in the way human beings recognize mathematics by recognizing themselves released from the oppression that led him to use mathematics as an object of power; when he, as a citizen, the bearer of such power, is also ignored. Thus, from the rich transepistemological positions in mathematics in all its complexity, he destitute from his mechanical and incomplete knowledge of mathematics.

It is then eminent that this recognition of ourselves as human beings with the ability to know is clear that we must recognize ourselves to the extent that what we know is divided, disjunctive of our own being and, as we have said, this has been inherited from Western culture. The deepening of reconnection is not the theme of this study, as it is a study of the same line of research *entitled: transepistemologies of knowledge and transcomplex transmethodologies*.

For him to connect with our essence and to be in transcendental capacity is a problem of essence of being "grasping by thought a unity of meaning" (RICOEUR, 2006, p.55). This is how we will enter into the transepistemological discussion, in addition to knowledge, the urgency of knowing each other and recognizing mathematics with capital M; not as a necessary and urgent important science in the development of the world; but as a primary in us, from our being.

Reconstruction of the rhizome. The urgency of rediscovering ourselves and knowing mathematics with capital M.

Yes, there is a physical space to recognize mathematics with its theories and real positions as it appears in nature; but mathematics is also present in us, in our mathematical, fractal and creative nature. That is why it is essential that we meet again to remove it from the pedestal where it was placed, "the important thing is that the unity of consciousness be produced in the concept in order to recognize itself in it" (RICOEUR, 2006, p. 66, our translation). The human being recognizes himself as a creation in complex mathematical structures coupled, he recognizes himself in mathematical science; from this position, the human being recognizes himself in mathematics and mathematics in him and they become one without one being able to do without the other entity.

Recognition is not only of utility, re-knowing; it is not a recognition only of what mathematics is and of what it has done in humanity, and how the other sciences have brought its development; it is known that:

The development of science and technology has caused a great impetus to the development of certain branches of mathematics and generated new areas of mathematical research and, at the same time, without mathematics, the scientific and technological advances that sustain the information society would not be possible, which contributes to the well-being of its citizens (CAMERO; MARTINEZ; PÉREZ, 2016, p. 115, our translation).

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This link is "to bring together the separated, to link how an emerging practice must incite another way of acting and be formed, in a transmodern citizen, talking, not exclusive, aware of its role in history, especially that of the South (RODRÍGUEZ, 2019a, p.25). And it is necessary to combine mathematics-philosophy, to return to this dyad; recognize us in the mathematics of life, in the common of our doing. Mathematics for the development of deep metacognitive thinking.

Thus, it should be considered that:

Mathematical thought is rooted neither in the fundamentals of mathematics nor in the unique practice of mathematicians, but deals with all possible ways of constructing mathematical ideas, including those that come from everyday life. Therefore, it is assumed that the construction of mathematical knowledge has many levels and depths" (CANTORAL *et al.*, 2008, p. 19, our translation).

Recognition of mathematics in our power of thought, of developing deep thought as part of our human condition that was atrophied in the naked way that mathematics was presented to people's lives, stripped of its: philosophy, history, applicability, dialectical logic; among other

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processes; which led to a mathematical atrophy of illusions, algorithmic atrophy in the search for solution, the final number and distorted the enjoyment of the procedure that leads to a dialogue that is essential.

We are used to a recognition from outside the entity; it is an introjection of ourselves with the language with which humanity was created by God: mathematical language and in this creation, we are human beings; not as preeminence, the whole earth is conceived in the same preeminence. Therefore, if thinking about this survey is complex, we can assume that complex thinking in this integration is considered urgent. It is necessary to balance the "explosion of scientific knowledge and its social inscription with the strengthening and updating of the internal potentialities of the human being and his presence rooted in a creative person, in a collective thought inscribed in turn in a process of democratization of knowledge" (MOTTA, 2008, p. 54, our translation).

This democratization and inculcation of mathematics in our own consciousness and above all in our spirit; that, therefore, would be in our being, would recognize us as creators of science, as translators of their language and vice versa that we are. The human being is not external to mathematical creation is within his creation and is in it; with the creator's mark; Magnificent God who speaks in the language of nature, of the world that is the mathematician. | 9

These positions are not only emotional, to the extent that the writer is knowledgeable of science, legacy of humanity; instead, it encourages every human being to think of himself as a connoisseur of science; in which if I have a little attention to what he speaks to what he does I would recognize, in these acts, mathematics. And, from this interiority, exteriority would be transformed differently into an attitude towards mathematical science and its usefulness; "Mathematics, in particular, is a fundamental tool to face economic challenges, with its mathematical development models provided to interpret and predict dynamics and controls in management decision-making" (CAMERO; MARTINEZ; PÉREZ, 2016, p. 98, our translation). And this is not only true in economic challenges, but in all that man faces; since inspecting details are human challenges.

Asking us: *Where does wisdom come from to understand mathematics?* There is no doubt that from the interiority in communication with the wisdom that comes from the spirit in direct emanation of the creator; God. This is not trivial, it is not religion, it is recognizing that wisdom comes from the maximum development of spiritual intelligence that only emanates from the Holy Spirit. "The philosophy of being in the world is interested in the variety of being for those who concern the things of the world" (RICOEUR, 2006, p. 86, our translation); these

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things of the world are not in an outsourced world before it is internalized. It will be in a conscious human being that he should recognize, not as a duty, but as a completeness of himself. The varied ways in which things in the mathematical world concern him, and vice versa, the variety of applicability of mathematics concern him in the different facets and activities of the human being.

We do not want to run the risk of being demystified by the Orthodox who believe themselves to be masters of mathematics, as creators of the mathematical processes of the world, as if they had the power. Therefore, the reader is invited to interfere in spiritual intelligence as the highest, after mathematical logical intelligence to understand where wisdom comes from:

Spiritual intelligence allows us to give meaning to our lives, to find transcendental, to be creative and to be happy. Educate spiritual intelligence from the transcomplex vision, which calls for the search for new ways of feeling, thinking, valuing and acting of people in order to correct many problems that education faces (CARABALLO, 2019, p. 18, our translation).

We do not want to dwell on the educational issue of mathematics, which is the reason for many studies by the author, because, no doubt, we have been rude about her, since it would be necessary for us to recognize ourselves in it and recognize it in her humanity; this is mathematics. Therefore, it makes it difficult for us to think of it as possessors of this wisdom that has been conceived in us since our creation. From this perspective, the "phenomenology of the capable man" (RICOEUR, 2006, p. 114, our translation) provided that it recognizes it in its interiority. Giving way to the analysis of the capacity I can, of self-recognition and mutual recognition, in whose ways the role of otherness is redeemed "giving reflective value to the self a third is added, constituted by the dialectic between identity and otherness" (RICOEUR, 2006, p. 125, our translation).

The recognition of Math with a capital M is demystified in its own authoritarianism given by some who believe themselves the only ones able to know it; although many of them do not recognize themselves in it, so do not love it and do not share it; instead, they use it as an authoritarian exercise; which encourages a recognition that leads to impossible transdisciplinary relations with the other sciences; "the science-technology-society and mathematics relationship is indispensable and indissoluble for the development of humanity, contributes significantly to the solution of problems" (CAMERO; MARTINEZ; PÉREZ, 2016, p. 105, our translation).

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However, *to what extent have false beliefs and attitudes towards mathematics outlined non-recognition and non-recognition in mathematics?* that "our identity is shaped in part by recognition or its absence or also by the poor perception that others have of it (RICOEUR, 2006, p. 271, our translation). This is the internal problem of every human being; for these beliefs and attitudes minimizing the power of mathematics in us, manifest themselves clearly abroad and in the action of being; but they come from their interiority that minimizes them from knowing and recognizing mathematics.

It is important to recognize mathematics in our everyday language, "it is practically impossible to explain human learning without mediation and participation of language" (RIBES-IÑESTA, 2007, p. 12, our translation); everyday language comes from a culture communicated with interiority loaded with mathematical language. We are used to obtaining mathematical content in everyday language; but we do not think that this everyday language has mathematical language because we are already possessors of this mathematical language that we do not develop as the maximum expression because we ignore that we are carriers of it.

Recognizing, in our language, mathematical language derives from the inner power that this has been given; "knowledge, thus understood, is language; the key to understanding a knowledge, content or even a discipline is to know its language" (MOREIRA, 2003, p. 2-3, our translation). And we are carriers to make it to, it is necessary to make it conscious from the first conception as such.

It is a generous practice of the gift that does not expect reward in return, with which collaboration could be considered as true recognition, symbolic recognition, "the mutuality of the gift is founded on symbolic recognition" (RICOEUR, 2006, p. 278, our translation). And we are bearers of symbols because this language of communication is there to explore, to make it visible and communicative.

The mystical and spiritual of mathematics has been present for many years, and has not become conscious because the power of history and philosophy of mathematics has been demystified; "Pythagoreans are usually attributed as those of the first recognition of the abstract character of mathematics. His most famous idea, perhaps, was to regard numbers as constituent elements of reality. Something like this was the atoms of the world" (RUIZ, 2003, p. 38, our translation). These same atoms of which we are formed; a mystical creative DNA, in addition to the knowledge and heritage of our families.

The mystic has been exploited, but distorted, in that it has shown no interest because it is not regularized and demonstrated; reductionism devalued it; mathematics, par excellence,

had its mark:

In addition to the revolutionary effect on the image of the cosmos, the great merits of new astronomy were twofold: first, the recognition that what was believed since ancient times could be false; second, that proof of scientific truth is the patient compilation of facts, combined with the bold divination of the laws that group these facts together. Neither merit is as fully developed in Copernicus as in his successors, although both are already present in a high degree of his work (RUSSEL, 1971, p. 149, our translation).

It is mathematics, a science par excellence worthy of being recognized, recognizing us in it from the reapplication of its knowledge.

Rhizome reconstruction. Recognizing mathematics in its historical complexity of humanity

To re-understand mathematics in the pre-Socratic Greek world is to return to the Pythagoras school which marked a turning point in history, not the development of "Greek science, both in theory and in practice". From del a, two very different systems of thought emerged. Its most abstract and logical aspects were taken by Parmenides and, mixed with many mystical ingredients, became the basis of platonic idealism (BERNAL, 1981, p. 195, our translation). It is a matter of returning to the passion for knowing, because to do so is to meet again in the great deep mathematical thought to which we can all reach.

To recognize and return to Pythagoras, is to return to the transdisciplinarity of the sciences "it is merit of Pythagoras and his followers to have approached astronomy to the [...] geometry, passing through music" (RIOJA; ORDÓÑEZ, 1999, p. 33, our translation). It is Pythagoras the creator of the monochord, a box with a single string to which associating sounds with fractions creates the first ancient musical scale.

To know mathematics again is to know its infallible connection with philosophy from the beginning.; for the idealist Plato, "the truth of the propositions of mathematics, that is: the epistemological problem, is given, or rather, is solved, by ontology. The objects and laws of mathematics were eternal, immutable and constituted the essence of reality" (RUIZ, 2003, p. 463, our translation), to the point that Plato allowed to explain was based on philosophy and mathematics; incorporating it into the dialogues of his master Socrates; and for those who then Aristotle with his particular realistic vision then leaves a legacy; where politics, ethics and mathematics convulsed the world of the time.

In this quest to know and to meet again in mathematics, it is highly advisable to consider

the initial Socratic motto par excellence in the great analyses of humanity: *All I know is that I know nothing*; which implies above all the immense desire to attain wisdom, in the recognition of our great potential, which in the image of God as Jesus Christ our Savior and brother have as inheritance of the throne. However, the vices of knowing prevent us from seeing the light of such a magnificent opportunity.

The reader realizes that, under these complex thoughts, the opportunity to get to know each other again is infinite. We do not close ourselves to the delirium of I am; in exchange for: I exist and seek to be. They are necessary reconstructions that encourage the rethinking, first of all, the untying of preconceived ideas that in Socrates' time in any dialogue, either from the irony with his philosopher friends, or from the popular habitat in friendly conversations seeking from the premise: I only know that I know nothing! to debut with a metacognitive thought of high emotional level, with body-mind-his-and-spirit. Socrates intended that to obtain a valid knowledge is to examine one another, "to know one another; is a means of discovering general ideas [...] This method causes the interlocutor, based on reflection and reasoning, to fall into a contradiction, and to feel the need to learn and investigate" (PLATO, 2012, p. X, our translation).

It should be remembered that Plato's influence on mathematics is so important that he is regarded by some historians as a creator of mathematicians. Two well-known phrases reflect the high concept that the Platonic school had about this science: "the phrase that appears in the canopy of the Academy is "no one who ignores geometry penetrates under my roof"; the other is the answer he gives when asked what is the occupation of God: "He constantly geometrize" (RODRÍGUEZ, 2011, p. 137, our translation).

The beauty of mathematicians of ancient Greek philosophy is reflected by Plato's disciple, being the last conversationalist of mathematics, and knowledgeable of it with Pythagoras, who also uses Socratic dialogues. Pythagoras also leaves as a legacy, the Pythagorean philosophical doctrine, among which are Philolaus, Timaeus, Eurito; "Pythoril philosophers devoted themselves to the cultivation of mathematics and were the first to make them progress; being absorbed in their study they believed that the principles of mathematics were the principles of all things" (ARISTOTELES, 1997, p. 985b, our translation).

Of course, the reader will see how the teaching of mathematics is not that of mathematics alive with mind, body and heart (RODRÍGUEZ, 2011), but that cut in a colonial exercise of authoritarianism and criticism, with the plot of his teaching exercise untouchable. Of course, teaching such a magnificent science is not the object of study for the time being; in the research

line in question.

Now we want to refer to the South, to the mathematics of the Maya; because we do not believe that we should know again the colonial superiorities that are imposed on history. Unfortunately, they are civilizations considered inferior, delayed or deficient by Western culture. The Mayans, now Central America, in their evolution, boasted a cosmos of knowledge so extensive, mathematical, mystical, capable of discovering the notion and benefit of number zero; still debated in its credibility. The importance of number zero for mathematics is exceptional.

The Mayan astronomical calendar was exceptionally accurate. They had a year of only 365 days to measure an astronomical phenomenon that, like modern illustrations, requires 365.2422 days to be realized. The correction formula conceived by Mayan astronomers, approximately between the 6th and 7th centuries, was more precise than our own Gregorian correction of the leap year, which was only framed in 1582 (MORLEY, 1972). To know history again, to fill with it to be impregnated with the South, of what has been forbidden and that, in reconnection, can return before our being and claim us before mathematics as a living science, with mind, body and heart.

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Mayan culture stood out in many areas of science, such as medicine, engineering and other applied sciences; but probably mathematical – astronomical knowledge has achieved the greatest achievements, so we maintain that Mayan Mathematics has its foundations in astronomy, that is, the Mayans were great archometers, people who profess astronomy or have special knowledge in it (YOJCOM, 2013, p. 69, our translation).

The knowledge of Mayan mathematics is perfected through everyday practices that unravel everyday life and society; problems faced by the Mayans. *There is much to reveal, and recognize from Mayan mathematics, in general from the South; to speak of Mayan mathematics is "to refer to the cultural and social meanings and practices that distinguish a community from other cultures. The different ways of understanding reality are linked to the worldview and to the social and cultural contexts of communities"* (YOJCOM; CANTORL, 2011, p. 5). It is worth mentioning that mathematics in life, for life, for mathematics and for culture, among others, are forms of reimbursement of mathematics and recognize themselves as a producer of it.

To finalize this structure, briefly; I would like to know again the mathematics of our Aboriginal, the geometry that arises from the survival needs of the people, in the forms of organization and construction of their homes, as well as in obtaining products that meet their

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needs, such as textile designs, dances, crops, the construction of their homes and games. *Wayuu Indians, Venezuelan Aboriginal people who share a region with Colombia*, traditionally use their own ways of measuring, counting and weighing, influenced by sociocultural factors studied by cultural anthropology.

In many mathematical measures and in geometric use, it is observed that the Wayuu take environmental references, little known and devalued by the new generations of indigenous peoples. The Wayuu Indians have, among their cultural heritages, a series of drawings or *kanasü* (drawings), which are typical of their culture, whose meaning is unknown to the new generations of Wayuu Indians. These symbols are mechanically woven into their clothes and accessories such as: handbags (*susu*), *chinchorros*, straps, ribbons for hats, bracelet and others; these Aboriginals are unaware that they are social representations linked to nature, animals, plants, constellations, or with elements of man and home.

Wayuu's *fabrics, called kaanás*, the art of weaving drawing; they use ancient techniques from the pre-Columbian period and are used in the elaboration of pieces that for their great beauty and color are the most appreciated among the Wayuu. The traditional motifs of the *Kaanás* are the most authentic expression of the way the Wayuu deciphers and dismembered elements of their everyday lives, to create elegant figures of great symbolism.

The fact of knowing again the mathematics of Aboriginals is not to ignore technology, for example, the design of such weavings with the GeoGebra package to teach mathematics, especially geometry with algebra. All this is possible, as long as we do not demystify knowledge. This interculturality on the scene as decoloniality is necessary in this reunion of mathematics in order to encourage the recognition of the like; without exclusions, for knowing ourselves is recognizing the other in terms of its value and contribution to humanity. Thus, to know mathematics again in all its complexity is to recognize neglected civilizations; the demystified knowledge of our lives.

In the following, the research closes with an opening to know it again and to recognize us in science that is the legacy of humanity.

Final rhizome. Considerations about the openings in this reconnection when we know ourselves and by knowing mathematics with a capital M.

Mathematics with capital M is constant mobility and transformation that is energized in the context of the transformations of the social, economic, political and spiritual being expressed in social agreements about what is mathematics, who can learn it, those who have the right to this knowledge, benefit from the applications of theories in humanity; the interiority of the human being sets the tone.

The line of research where the research is located: transepistemologies democracies of transcomplex knowledge and transmethodologies; proposes consultations in the middle of the technological era to demystify the scarce value that human beings give to mathematics and promotes transcomplex studies, for example, in biopolitics, in future research technologies.

To recognize to differentiate the intellectual task of knowing from imposition, that it is impossible to know mathematics or that it is the task of the few, or that it is accessible to all; not to unify the knowledge of human beings. Recognize to embrace the fundamental difference in the way human beings know each other, to the extent that spiritual complexity marks the difference in sensitivity, emotionality and cognition; not to segregate as has been the case; nor to plot the way of recognizing mathematics only for a logical-mathematical intelligence.

It recognizes the inclusion in respecting the diversity of each of the cultures, because not only because the interiority of being allows to get back to know in mathematics does not indicate with it that culture cannot permeate; not unify the various as a mark of impossibility to recognize mathematics; as it has been happening in Southern Thought, where the West has gained preeminence as a connoisseur of mathematics.

It recognizes protecting, protecting and guiding the human being, mathematics as a preservation of it and the same being: the human being and mathematics unite if one is created from the other, in a dependency that does not gain autonomy, not to alienate; to know how to reconsider, to convince in a space of openness where spiritual intelligence and learn to relate to the spirit of God and his Holy Spirit with wisdom that allows us to give meaning to our lives, to find transcendence in it, to be creative, and to be happy, to have as its maximum expression the transformation of our existence and the recognition of our immense inner power.

Mathematics with a capital M, as it is written, indicates the rebinding in the human being, the recognition that we are bearers of the legacy science of humanity, which was conceived to us, like nature and the rest of the universe, their knowledge to explore to the extent that we recognize ourselves in it. Because if the human being and the universe are one, then

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capitalized Mathematics carries this greatness with the ultimate expression of humanity's legacy. Thus, with the band urgent notion of God I say goodbye, issuing my great aspiration for the reform of thought and the recognition of mathematics: "*Finally, brethren, consider well all that is true, all that is respectable, all that is just, all that is pure, all that is kind, all that is worthy of admiration, in a like, all that is excellent or deserves praise*" (Philippians 4: 8) and so we will act.

REFERENCES

AGUIAR, A. **Avaliação da microbiota bucal em pacientes sob uso crônico de penicilina e benzatina**. 2009. 135 f. Tese (Doutorado em Cardiologia) – Faculdade de Medicina, Universidade de São Paulo, São Paulo, 2009.

ALONSO, A. **Pedagogía de la interioridad**. Aprender a «ser» desde uno mismo. Madrid: Narcea, 2012.

ARISTÓTELES. **Metafísica**. Madrid: Editorial Gredos, 1997.

BERNAL, J. **La Ciencia en la Historia**. México: Editorial Nueva Imagen, 1981.

CAMERO, Y.; MARTÍNEZ, L.; PÉREZ, V. El desarrollo de la Matemática y su relación con la tecnología y la sociedad. Caso típico. **Revista Universidad y Sociedad**, Cienfuegos, v. 8, n. 1, p. 97-105, 2016.

CANTORAL, R. *et al.* **Desarrollo del Pensamiento Matemático**. México: Trillas, 2008.

CARABALLO, M. La inteligencia espiritual: un desafío para la Educación Inclusiva Ecosófica. **Sinergias educativas**, Quito, v. 4, n. 2, p.17-42, jul./dez. 2019.

DELEUZE, G.; GUATTARI, F. **Mille plateaux, Capitalisme et schizophrénie**. Francia: Minuit, 1980.

FEYNMAN, R. **La física de las palabras**. Edición de Michelle Feynman. Barcelona: Editorial Planeta, 2015.

FONTALVO, R. Religar saberes y sentires para reinventar la convivencialidad. En: Ligia Muñoz de Rueda y Yolanda Rosa Morales Castro Compiladoras. **Reinventando saberes para la intervención social**. Barranquilla: Ediciones Universidad Simón Bolívar, 2017.

GONZÁLEZ, J. **Aula mente social**. Pensamiento transcomplejo Tomo III. Barranquilla: Universidad Simón Bolívar, 2013.

MOREIRA, M. Artículo científico Lenguaje y aprendizaje significativo. *In*: ENCUESTRO INTERNACIONAL SOBRE APRENDIZAJE SIGNIFICATIVO, 4., 2003. **Actas [...]**. 2013.

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- MORÍN, E. **Introducción al Pensamiento Complejo**. París: Editorial Esfera, 2005.
- MORLEY, S. **La civilización Maya**. México: Fondo de Cultura Económica, 1972.
- MOTTA, R. **Filosofía, complejidad y educación en la era planetaria**. Monterrey: Universidad Autónoma de Nuevo León, 2008.
- PLATÓN. **Diálogos**. México: Porrúa, 2012.
- RIBES-IÑESTA, E. Lenguaje, aprendizaje y conocimiento. **Revista Mexicana de Psicología, Ciudad de México**, 2007, v. 24, n. 1, p. 7-14, 2007.
- RICOEUR, P. **Caminos del reconocimiento**. Tres estudios. México: Fondo de Cultura Económica, 2006.
- RIOJA, A.; ORDÓÑEZ, J. **Teorías del universo**. Volumen I. De los pitagóricos a Galileo. España: Editorial Síntesis, 1999.
- RODRÍGUEZ, M. E. **Matemática, Cotidianidad y Pedagogía Integral**: Elementos Epistemológicos en la Relación Ciencia-Vida, en el Clima Cultural del Presente. Alemania: Editorial Académica Española, 2011.
- RODRÍGUEZ, M. E. Re-ligar como práctica emergente del pensamiento filosófico transmoderno. **Orinoco, pensamiento y praxis**, Ciudad Bolívar, v. 7, n. 11, p. 13-35, 2019a. | 18
- RODRÍGUEZ, M. E. Deconstrucción: un transmétodo rizomático transcomplejo en la transmodernidad. **Sinergias educativas**, Ecuador, v.4, n.2, p.1-13, 2019b.
- RUIZ, Á. **Historia y filosofía de las matemáticas**. Costa Rica: UNED Press, 2003.
- RUSSELL, B. **Historia de la filosofía occidental**. Madrid: Espasa-Calpe, 1971.
- SANTOS, B. **Para descolonizar Occidente**. Más allá del pensamiento abismal. Buenos Aires: UBA Sociales Publicaciones, 2010.
- YOJCOM, D. **La epistemología de la Matemática Maya**: una construcción de conocimientos y saberes a través de prácticas. (Ciudad de México, México). 2013. 380 f. (Tesis de doctorado). Ciencias en Matemática Educativa, Centro de Investigación y de Estudios Avanzados del Instituto Politécnico Nacional, México, 2013.
- YOJCOM, D; CANTORAL, R. La Construcción del Conocimiento Matemático desde una Perspectiva Social y Cultural. *In*: CONFERENCIA INTERAMERICANA DE EDUCACIÓN MATEMÁTICA, 13., 2011, Recife. **Anais [...]**. Recife, 2011.

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