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## THE UNIVERSE WITHOUT WALLS: UNIVERSE, EARTHLY SOCIETIES AND THEIR INFLUENCE ON TODAY'S EDUCATION

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**Abstract.** This reflection article aims to establish multiple connections between the Cosmic and Terrestrial planes, involving life, society, and Education. Having as a general objective, to demonstrate the connections between Cosmic and Terrestrial mobilities interconnected by operational junctions and highlighting the numerous existing similarities. In this way, the main purpose of the study is to propose measures, aimed at introducing some improvements in social and educational life, in face of the changes currently taking place in the social and educational environment. This study starts from the connection between the concepts that establish scientific bases in the field of astrophysics and education, thus highlighting the numerous similarities, which add multiple links in the educational field. The referential framework is based on the reading of scientific and bibliographic texts, as well as other publications related to the theme. For the methodology we used the systematic analysis with a descriptive approach of scientific articles related to contents that show the proximities between the relationships about the whole of cosmic life and terrestrial societies, and their connection in the educational field. In conclusion, we can point out that there is a need to structure a new education with innovative future perspectives and, above all, aiming at renewing the educational practices among the comprehension of the innumerable facets about the human being, the universe, society, and their influence on education.

**Keywords:** universe, cosmos, education, future, innovations, planets.

## O UNIVERSO SEM MURALHAS: UNIVERSO, SOCIEDADES TERRESTRES E SUA INFLUÊNCIA NA EDUCAÇÃO ATUAL

**Resumen.** Este artículo de reflexión visa establecer múltiples conexões entre os planos Cósmico e Terrestre, envolvendo a vida, a sociedade e a Educação. Tendo como objetivo geral, demonstrar as vinculações entre as mobilidades Cósmicas e Terrestres interligadas por junções operacionais e destacando as inúmeras semelhanças existentes. Dessa forma, a principal finalidade do estudo é propor medidas, visando a introduzir algumas melhorias

na vida social e educativa, frente às mudanças atualmente em curso no ambiente social e educacional. Este estudo parte da conexão entre os conceitos que estabelece bases científicas no campo da astrofísica e a educação, destacando assim, as inúmeras similaridades, às quais acrescentam múltiplas vinculações no campo educativo. O marco referencial se fundamenta em leituras de textos científicos, bibliográficos, além de outras publicações relacionadas com a temática. Para a metodologia utilizamos o análise sistemático com enfoque descritivo de artigos científicos relacionados a conteúdos que evidenciam as proximidades entre os relacionamentos sobre o conjunto da vida cósmica e das sociedades terrestres, e sua ligação no campo educativo. Em conclusão podemos destacar que à necessidade de estruturar uma nova educação com perspectivas futuras inovadoras e sobretudo, visando a renovar as práticas educativas entre as compreensões das inúmeras facetas sobre ser humano, universo, sociedade e sua influência na educação.

**Palavras clave:** universo, cosmo, educação, futuro, inovações, planetas.

## **EL UNIVERSO SIN MUROS: UNIVERSO, SOCIEDADES TERRESTRES Y SU INFLUENCIA EN LA EDUCACIÓN ACTUAL**

**Resumen.** Este artículo de reflexión pretende establecer múltiples conexiones entre los planos Cósmico y Terrestre, involucrando la vida, la sociedad y la Educación. Con el objetivo general, demostrar los vínculos entre las moviidades Cósmica y Terrestre interconectadas por cruces operacionales y destacando las numerosas similitudes existentes. Así, el objetivo principal del estudio es proponer medidas, con el objetivo de introducir algunas mejoras en la vida social y educativa, en vista de los cambios que se están produciendo actualmente en el entorno social y educativo. Este estudio parte de la conexión entre los conceptos que sientan bases científicas en el campo de la astrofísica y la educación, destacando así las numerosas similitudes, a las que se suman múltiples vínculos en el campo educativo. El marco de referencia se basa en lecturas de textos científicos y bibliográficos, además de otras publicaciones relacionadas con el tema. Para la metodología se utilizó el análisis sistemático con enfoque descriptivo de artículos científicos relacionados con contenidos que muestran las proximidades entre las relaciones en el conjunto de la vida cósmica y las sociedades terrestres, y su conexión en el campo educativo. En conclusión, podemos destacar la necesidad de estructurar una nueva educación con perspectivas de futuro innovadoras y, sobre todo, con el objetivo de renovar las prácticas educativas en la comprensión de las múltiples facetas sobre el ser humano, el universo, la sociedad y su influencia en la educación.

**Palabras clave:** universo, cosmos, educación, futuro, innovaciones, planetas.

## **Introduction**

"(...) The infinity of the universe begins to be demonstrated, and the first argument is presented, taken from the fact that those who by means of fantasy want to build walls around it do not know where the world ends" (Giordano Bruno, 1998).

This study intends to constitute a descriptive and interpretative vision about the relationships that are verified between the movements of the universe, the dynamics that center the terrestrial collectivities, and education. It intends to show how the human being is a cosmic creature through his relationships with the universe, as Edgar Morin alludes to in his book on the Education of the future, "To know the human being is, above all, to situate him in the universe and not separate him from it." To which he adds, "We are at the same time cosmic and terrestrial beings." In other words, the author inquires about the human condition, whose complexity is disregarded in education and whose unity must be found in the diversity of knowledge and human beings as well as in the terrestrial identity, which must be at the level of the planetary destiny of the human race (Morin, p 46, 2001).

Morin (2001) approaches the education of the future as a means of teaching directed to the knowledge of the human being as part of the universe, thus coinciding with astrophysics that allows us to understand some questions about our existence, or where we are, and where we are going. This quest for understanding, inherent to the human species to understand the universe, allows us to have the basic knowledge to discover the technologies and services that are essential in our daily lives.

According to Morin (2001, p. 42), the human being is part of the Cosmos, whose relationship must be rescued, which was only generically referred to by him. Therefore, based on these statements, the research that gave rise to this work aims to demonstrate in greater detail how the human being is also cosmic. In this sense, the author tries to clarify the existing relationships between humans and their societies, highlighting the aspect that they are linked to the astral plane, conclusions that are reached from permanent functional similarities. In another aspect, the author states that when studying the affinities between the proximities of the Earth, with societies and the cosmos, numerous connections were found with the need to clarify this dynamic tuning as well as, in agreement with Morin, a new path must be taken to find support for the statements that humans are also linked to the Universe, of which they are inseparable.

However, the current literature on this subject addresses these contexts in a very scarce manner, not being the subject of extensive discussions, not even offering further clarifications, giving rise to debates as stated by López et al (2022, p.257). Thus, the motive of the study is justified, aiming to establish a continuous relationship of the human being with the Universe, expanding the links with Education to understand society in the scope of the mobilities that accompany the terrestrial and cosmic dynamics. In this sense, from the observations of Edgar Morin, who indicates that human beings are true cosmic beings, it begins then to establish close interpretative junctures with the universality of life, indicating reorientations also through the collaboration of the educational path.

The astral panorama is not dispersive but depends entirely on numerous cohesive activities, complemented by dynamics arranged in apparent relationships between societies on Earth and, probably, with other celestial bodies. In this sense, it focuses, evaluates, and reflects on living, social, and material terrestrial realizations in consonance with the dynamics of the Universe, acting with them in clear unison. It also examines the interpersonal relationships present in the functioning of societies while reflecting on many characteristics referring to astral mobilities, all interconnected, encompassing the Cosmos and the Earth. Explanations arising from the facts examined are further used to compare the concrete, virtual, and material relationships between these realms.

In the face of the progress of astral knowledge, changes in customs are expected in relation to the new postural orientations incorporated by terrestrial communities and brought about by the introduction of more perfected experiences in the spatial realm. Transitions in the behavior of groups originating in relations with space will gradually alter the course of human, social life, especially economic and relational due to new uses of technologies applied in innumerable sectors of terrestrial social life.

Therefore, other differentiated collective positions are expected so that they can interact with the Universe in spite of situations never experienced before. More complex connections in dealing with cohabitations coming from other patterns of contacts between human beings, social groups, and astral circles.

With all this, we highlight some of the great thinkers who also sought the same understanding as René Descartes (1596-1650), one of the great thinkers of the first half of the seventeenth century, who in his work, "The World," tries to explain his theory of the earth and scientific thought. On the other hand, we have Descartes' model of cosmogony, which had an enormous success in the 17th century.

These findings lead to the involvement of different circles linked to Education when proposing future measures in order to meet the expectations of the new social positions before the possible rapprochement of humans with the astral environment. Thus, we can establish the probability of humanity in the not-too-distant future, which makes us reflect that we need new educational standards. It is estimated that it is a necessary initiative to conduct the eventual relations between human groups, the advances in space research, and with other probable interplanetary existences, imputing consequences in the terrestrial social life.

In the mid-19th century, social changes brought about educational innovations. Since society is in constant transformation due to productive, political, scientific, and cultural changes, these influences were also reflected in the ways of teaching. They even changed the curricula and the forms of the teaching-learning relationship. In this way, we can better understand the interferences by interconnecting them with the proximities referred to the current technological and social moments.

According to these social transformations, educational methodologies have modified them, reconfiguring them to modern ways of teaching, making their practices freer and more participative. They are observed as consequences of the progress of science, of technological scenarios, and of the evolutionary orientations reflected on the subjects they cover. Thus, it is

proposed to support the postural reorientations envisaged in the social environments. These activities are centered on the new scenarios to which individuals, students and society will probably be exposed in view of the new intellectual molds under way as a consequence of the effects of the results of the space conquests. Thus, pointing out other roles that will be assigned to both society and education in the sense of creating sets of interactions by approaching the Universe with broad original visions. Therefore, we hope to contribute to raise the degree of understanding of the new destinies of humanity with the proclaimed cosmic connections in which terrestrial social life could be evolutionarily re-dimensioned with the help of Education.

Thus, this study describes analogous circumstances in which unusual relationships linked to schooling could also emerge. They would be the harbinger of new behaviors and orienting postures that we highlight in this study as a quest to understand the processes of different cultures, developmental stages, distances, pacifisms, and others. Likewise, we reflect on the new operating characteristics, reworking experiences originated by significant social changes, introducing new teaching methodologies, moving from the old to the modern.

According to some bibliography, we can point out that, in a fairly ancient school past, around the Middle Ages, students studied the disciplines of the Trivium (literary studies) and the Quadrivium (scientific studies) as part of their propaedeutic formation, indispensable to enter the higher courses of Theology. As well as Astronomy, according to some studies of the Quadrivium, a fact that was not regularly verified in the basic courses, at least in Brazil. Therefore, studies on the Universe are the exclusive responsibility of higher degrees, such as Physics, Astronomy, Astrophysics, Astrobiology, and others. Due to the fact that it would be interesting to have these subjects available for current students, it indicates that it would be feasible to investigate appropriate curricula for their insertion in the middle school levels, if allowed and possible.

We emphasize that, in the vast majority of the literature reviewed in this study, we found that a greater involvement of research teachers at different educational levels is necessary as well as the participation of families and school administrations. In the sense of approaching this topic through interviews, questionnaires, and discussions, in order to create conditions for a better application of the objectives and contents related to this topic in a probable implementation of educational improvements. In principle, it would help to understand the usefulness of this subject for students, not only to understand the Cosmos but also in order to help better understand many aspects of social life.

Therefore, an important aspect of this study is to develop the evolution of students in the sense of becoming true cosmic citizens, as intuited by Morin, a theme also referred to by Sagan (2020) when addressing the Universe. Likewise, we can highlight the innovations reported by names such as Comenius, Rousseau, Piaget, Vygotsky, and others, who gave a new sense, in written works, to the reorientations related to the way the school should work when teaching actively in the social, cultural aspect, and also in community life.

Education has always been didactically readapted, mainly in passive and active models. Today, there are prospects of other different changes, presenting visualizations about the destinies of mankind leading to significant surprises with extraordinary discoveries in the field

of space research. And also, significant changes in the educational field, with students being able to become scientists or researchers in astrophysics.

With all of the above, we emphasize the need to train students to acquire competencies to be able to operationalize the new relationships not only terrestrial but also sidereal. Schools would be appropriate fields of study for such initiatives. This work indicates that, from a new specific training, the students of later more advanced times were able to deepen their knowledge of astronomy. Thus, they would have at their disposal technological advances that would make more feasible, for example, a special training to begin preparations in the future to establish relations with other possible extraterrestrial civilizations.

### **Method**

This study is based on a documentary analysis to understand the main changes and perspectives that signify the changes in human social life, based on cosmic and terrestrial relations that have an impact on educational environments. In the Scopus database, we obtained a total of 1,100 articles and books on the subject. With the characteristics of the research, we selected a total of 415 to perform the conceptual characterization.

For the analysis of the data, we used the qualitative analysis software Maxqda for the interpretation and organization of the main concepts, which allowed us to reach conclusions. And, when we had the data, we made a thorough reading of the main concepts of great thinkers and scientists to find the relevant concepts to understand these historical, social, political, educational and cultural studies as well as journalistic texts, adding those published with great prominence on the Internet on which we made some considerations. Mainly, in the sense of reflecting on the subject and, above all, highlighting the need to collaborate to prepare some conditions for possible new social and educational situations that we can highlight today.

### **Discussion and conclusions**

As can be mentioned, as an illustration of what was seen in the previous item, the work mentions situations endowed with complexities, however, clarifying the conclusions of the studies that are the source of this article.

It is quite clear to establish these similarities with stars that present analogous stages of transformation from birth to final decay. Stars are also born, grow, mature, and die in a similar way to planetary life. It has already been scientifically demonstrated that the dust resulting from stellar explosions is subsequently agglutinated by gravity, from which new celestial bodies will originate. Thus, the cycles of life on Earth and in the stars are similar.

Research continues, developing similar reasoning that could also be used to illustrate the attractions that exist both on this planet and in the Cosmos. Here people are often drawn closer together by impulses of approach, which, in this case, can be both physical and psychological. Similarly, in space there are attractions, such as gravitational ones, that bring stars closer together as in the case of the planets and their stars. Here people are also united by

different attractions and by them they reproduce. An analogous situation is verified in the sidereal plane, where the attractions bring the stars closer together. Gravitational attractions also bind cosmic dust, giving rise to the birth of new celestial bodies.

There are also countless other different examples, among which we can illustrate the events of the numerous crises, be they political, economic, religious, or of any other nature that take place on Earth, presenting themselves in connectivity with what is also happening in space.

A well-known example is the stock market crisis of 1929, whose epicenter was in New York City in the United States. This crisis destabilized the world economy, but it was followed by subsequent readjustments in the years following its onset. Everything was then socially rebuilt years after the global imbalances that occurred at that time. There have also been other crises in different areas, such as those mentioned above, some political, religious, or warlike, all of them followed by rearrangements and new settlements.

Similar situations occur constantly in the sidereal environment when stars enter into exhaustion and explode, generating chaos in their environment, events that are always followed by environmental reformulations with the agglutination of residues by gravity for the formation of new stars. Everything is remade, both in the Universe and in terrestrial environments, or from crises originate renewals.

The referenced research also anticipates that the insistent searches for life through space indicate unexpected future discoveries, with the need for new ways of approaching educational issues. The possibilities of constant readaptations to the new environments created make it possible to detect understandings and adaptations to a new sense in which the human being will probably have to live as a cosmic creature, as intuited by Morin. This new environment would be the consequence of new forms of life that would affect society and education.

Possibly well connected to the Cosmos by more concrete relationships, many people could initiate the establishment of contacts with extraterrestrials, given the high possibilities of encountering civilizations through space. Obviously, adaptations would be necessary, which research will demonstrate.

From the observations contained in the study, it is not difficult to foresee these possibilities as technological levels advance at intense speeds. This is where research should focus its attention. It would be a way to foresee the possible changes that could be inserted in school environments in order to prepare, as well as to introduce changes pending readaptations in the educational and social spheres.

The work in reference describes that this is the direction in which the alterations are going, mainly the communicative ones, observing that the interplanetary communications are already in an advanced technological phase. This occurs judging by the artifacts that left Earth and that today transit regions beyond the Solar System.

It is to be expected that in the not-too-distant future this possibility will exist or that communications will be established between terrestrial and planetary civilizations, exchanging

cultures, sciences, images, languages, training, as well as other relational models aided by technological and scientific development.

Living examples are the exchanges of messages carried out here today through social networks, events that could be amplified in the future between interplanetary or cosmic beings. It was Edgar Morin who suggested, in the aforementioned work, the need to rescue cosmic human beings as a way of integrating them into the Universe. Here lie, therefore, the central ideas of the research, by demonstrating how these relationships can be possible, since the Earth and the Universe have always been united by ties of great proximity in similarities and dynamics. The social networks already functioning on Earth have been active for a long time, intensifying the internal relationships between people. Could this activity be the anticipation of an initial training for the establishment of future communicative relationships with outer space, whose concretion would depend on other adjustments?

According to the perspectives of technological development intensively searching for life through space, society will be able to face, in not-so-distant periods, the surprises of establishing direct interactions with other astral civilizations. There is a great possibility that these developments will be concrete achievements since, statistically, the existence of other inhabitants on many planets other than Earth can be considered certain. One of the unknowns at the moment would be to know their levels of development, as well as the necessary adaptations before having to make entanglements with unknown civilizations.

On the other hand, as can be observed, in terrestrial environments many business situations revolve around leadership. These are the cases of company bosses or in the military hierarchy, in sports, politics, among families, schools, and other areas, where we see situations that link people under the command of managerial sectors. There are always groups that are subordinate to one another, often revolving around something larger, such as tasks, discussions, or studies. So also, on the sidereal plane, everything is connected in constant orbital movements under the influence of the dominant stars that generate stronger gravities.

It is known, on the other hand, that even among microparticles these characteristics can be easily found. This is what happens with atoms in which there are elements that orbit in clouds indefinitely. This can be verified with the gravitational theory studied for centuries, these being the great achievements of Newton and Einstein. By studying universal gravitation, the well-known English physicist was able to establish very famous theories, such as Universal Gravitation, while Einstein in his investigations was able to conclude that, by attractions, the major bodies distort space, changing their position in the mechanical regularity of the stars.

On the other hand, the study compares and analyzes astral and terrestrial similarities. There is also the not so well-known dark matter, which, as it is known so far, can integrate a global matter network, influencing the whole Universe, regulating it or changing its movements. In the similarity, in the same way, among terrestrial living beings, there are the networks of brain neurons that may be with dark matter related in the similarities. Likewise, among terrestrial beings, organisms function in networks, such as respiratory, digestive, urinary, lymphatic, circulatory, cerebral, communicative, and others. As in the Universe, there

are also galaxies and planetary systems, cosmic and terrestrial syntonies appear, so the proximities illustrated in this study are quite evident.

From the readings carried out for the development of this study, we can refer to the educational advances, considering the conclusions of the last years in relation to the topic highlighted here. And also, the influence of the curiosities shown by the students in relation to the terrestrial cosmos. In this way, we conceptualize based on the referenced studies and readings, we can highlight the visible associations between cosmic mobility and social dynamics. Mainly, in the sense of terrestrial life, where education can occupy a prominent place, ensuring considerable aspects of the existence of movements that intertwine the earth with the mobilities of the universe and the perceptions of these connections reflected in the current educational field. Therefore, in this paper, we highlight the numerous evidences that confirm this aspect and facilitate the understanding of these perceptions.

According to the material reviewed in this study, we emphasize that a great majority points to an earthly movement, which has cognation with the astral plane, thus showing that there are correlations between these relationships. Therefore, we can affirm that terrestrial beings are not dissociated from the Universe, as it seems to be the desire of some thinkers. However, the proximities may not be exclusive, given the connections pointed out with the analogies. In other words, to think that living beings are centered only on Earth or that they exist as exclusive products of it, may be a mistake, as evidenced by certain literature that states that terrestrial life is marked by birth, development, maturity, old age, and death, thus demarcating the stages of the astral plane that mark the innumerable similarities between the successions of terrestrial and sidereal movements. On the other hand, we would like to point out, as a conclusion, that according to the analysis of the analyzed documents and articles, there is an association between the cosmic movements and the dynamic facts of life and terrestrial societies, from which humanity could draw lessons extended to the educational field. Also, to establish some convictions such as that there is a close connection between the Earth and the Universe, and human beings could be considered as cosmic creatures, as suggested by Morin.

However, on the lines of action and the statements established here, critical observations are admitted. In general, these observations are concepts that give rise to studies related to the subject, and even to related readings that seek the understanding of the dynamics of the Universe and the Earth in the face of human education. Therefore, almost all the mobilities observed on Earth have similarities that are also found in the Cosmos, as well as the great majority of the visible movements in the astral plane; in some way, they are equally associated to the terrestrial nature. This is strong evidence that it is safe to say that there are proximities between these two spatial areas from which lessons can be drawn.

In this way, according to the evidence of the proximities between terrestrial occurrences with the Universe, in addition to the relationships between humans and cosmic mobilities, in clear demonstrations of unequivocal affinities, by adding relational uniquenesses, supporting the inspirations expressed by Morin (2001), we consider that in the future they may be acceptable as possible unions between the innumerable civilizations, thus making their inhabitants and cosmic creatures, as Morin (2001) states to us, that we are true cosmic citizens.

The acceptance of these ideas would be rather a simple contribution to help make the universe without walls, as was in the past the desire of Bruno, commented in the work of White (2003, p. 114), who for his revolutionary ideas about the universe and religion earned him the relentless persecution of the inquisitors of Rome, who tried him and condemned him to death at the stake in the Middle Ages. Another characteristic highlighted by White is Bruno's connection with occult traditions derived from primitive philosophies linked to the iconic figure of Hermes Trismegistus, "he saw the occult as a pattern of ideas, a network of concepts that could be accessed to gain a greater understanding of the universe." Thus, we can consider that there are great possibilities of analogies between the functioning of terrestrial and possibly other space societies, in the sense that there are similarities between them. However, what concerns the issues discussed is that they are linked to the perceived mobility between the universe and terrestrial societies as extensive aspects of education.

However, we can conclude that, according to the concepts contained in this study and performing an analysis, there are incidences that allow the development of links with the subject, articulating with the ideas and considering the descriptive elements of the existing literature. This being an important aspect in today's society and an indispensable factor for the evolution of education, with the objective of achieving a better understanding in the sense of spatial and terrestrial connections.

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