

# Planetary citizenship and the ecology of knowledges in Brazilian universities

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## **Abstract**

This article discusses the formation of a 'planetary citizenship' based on the 'ecology of knowledges' perspective in Brazilian universities. It is informed by the authors' experiences and the partial results from a research project entitled 'Planetary citizenship and the ecology of knowledges: Interdisciplinarity, transdisciplinarity and internationalization in the university curriculum', a follow-up project to a previous study conducted with trainee teachers at the Federal University of Ceará (UFC) between 2008 and 2012. Planetary citizenship is conceived here as a floating signifier to be articulated in concrete projects proposed by different groups that work inter- and transdisciplinarily. It is motivated by the major civilizational and humanitarian crisis in which we find ourselves. The ecology of knowledges, premised upon the epistemological diversity of the world, is a dialogue between official/Western knowledge and those other knowledges that have long been excluded from the scenario. It stands within a paradigm shift, a process whereby a new way of perceiving the world comes into existence. We argue that the university is an ideal context for the development of projects that have planetary citizenship as their transdisciplinary theme and the ecology of knowledges as their basic perspective. We illustrate this with examples of this epistemic and pedagogical experimentation, inside and outside the university, that aim to educate planetary citizens.

**Keywords:** planetary citizenship, ecology of knowledges, higher education paradigm shift, floating signifier

## Introduction

In this paper we discuss the formation of a planetary citizenship based on the ecology of knowledges perspective. The ecology of knowledges is 'premised upon the epistemological diversity of the world, the recognition of a plurality of knowledges beyond scientific knowledge which implies renouncing any general epistemology' (Santos, 2007: 67). Although sometimes not explicitly mentioned, it is present in most initiatives that carry the objective of building planetary citizenship.

The results here presented, still partial, come from the research project 'Planetary citizenship and the ecology of knowledges: Interdisciplinarity, transdisciplinarity and internationalization in the university curriculum', which follows a previous study with trainee teachers at the Federal University of Ceará (UFC) between 2008 and 2012, when the concept of citizenship as a transdisciplinary theme in the curriculum of trainee teachers' courses was analysed. Taking advantage of the variety of areas of knowledge present in the classroom, a project pedagogy was adopted that involved developing thematic, interdisciplinary projects on themes of the students' choices. The themes chosen – evolution, energy, biodiesel, the universe, ethanol, television, industrial waste, Amazonia, hunger around the world, water, global warming, cellular phones, work and consumerism, bullying, and cultural pluralism – were approached in interdisciplinary and transdisciplinary ways, assuming a broader dimension when their scope transcended national borders. The transdisciplinary themes that emerged from these projects, pervading all areas of knowledge as shown in the classroom, were sustainability, economic and cultural injustice, discrimination, disrespect among peers, consumerism, critiques of capitalism, and social injustice. They relate local to global problems, prompting a reflection on what it is to be a citizen in Brazil and in the world today.

To see how other countries deal with the theme of citizenship in their university curricula, Moraes spent the year 2013 on an Estágio Senior (senior internship), supported by the Brazilian government-backed CAPES Foundation, at the University of London Institute of Education, and Freire went to the Centre for Social Studies at the University of Coimbra in Portugal for a doctoral internship. The UK location was chosen for two main reasons: that country's long tradition of scientific institutions, and the adoption of the idea of a 'global dimension' – concerning health, human rights, conflict resolution, values and perceptions, diversity, social justice, interdependence, and global citizenship – as a transdisciplinary theme in British schools and universities. As far as the University of Coimbra is concerned, it offered us the opportunity to become acquainted with Boaventura de Sousa Santos's ecology of knowledges, an attitude of dialogue and coordination between official/Western knowledge (*conhecimento*) and those others that have long been excluded from the scenario (*saber*).<sup>1</sup>

In the UK, the aim was to understand the views and modes of action of academics from universities that host internationalization programmes. The academics were interviewed about their views on global citizenship, what skills a student should acquire in order to be a global citizen, how their institutions supported their projects, and what role they thought science and the university should play in the articulation of this theme (Moraes, 2014).

Different interpretations and possibilities of the term 'global' were expressed by the academics, showing multiple associations – sometimes apparently antagonistic, but actually complementary and interconnected. A global university can be considered exotic, big, contemporary, connected, open-minded, and welcoming, but can also have a colonial, imperial, and traditional subtext. 'Global' connotes cultural and economic dominance, social injustice, and the destruction of natural resources due to excessive consumerism, but it also conveys the idea of internationalism, cosmopolitanism, sustainability, employability, and scientific partnerships (Moraes, 2014).

Two other concepts came up in the language used by the interviewees: internationalism and cosmopolitanism. Internationalism aids the preservation of cultural diversity. In one of the academics' words, 'internationalism gives you a sense of belonging to a community of minds, having a historical link, a kind of continuity of thought, which embraces different countries, a philosophy that includes Western and Eastern'. For internationalists, inclusion is an assumption: it is not necessary to take the initiative to include the Other because, in theory, we are included just by the fact that we all see ourselves as international citizens, 'meaning that you are in line of heritage to a whole body of intellectual traditions' (Moraes, 2014: 32).

In cosmopolitanism, say the interviewees, the main concern is inclusion. It proposes overcoming political boundaries, ignoring the configuration of the world into nation states. It is the view that all groups belong to the same community, opposing nationalism and patriotism, moving from a national perspective to a cosmopolitan perspective on interaction with humans. Cosmopolitans take institutional initiatives to include the Other based on the principles of social justice and peace, values, human rights, democracy, and citizenship (Moraes, 2014).

As the ecology of knowledges became part of our conceptual framework, and our research locus moved back to universities in Brazil, we encountered a certain distrust towards the term 'global', since it implies a division between a Global North and Global South, between *conhecimento* and *saber*, between those 'on this side of the line' and those 'on the other side of the line' (Santos, 2007: 45). This division, the product of an 'abyssal thinking' (Santos, 2007: 45), is replicated in Brazil due to the differences between the rich and poor, educated and uneducated, and north and south.

The fact that Brazilian universities have long followed the modern occidental model, ignoring and excluding the African and Indigenous matrix, shows that underlying our social and economic inequality is an attitude of disdain and disregard for popular/traditional knowledge. However, the recognition of this error has given impulse to public policies of quotas and scholarships. In Rio de Janeiro's state universities, 20 per cent of places are set aside for black students who pass the entrance exam. Another 25 per cent are reserved for a 'social quota' of pupils from state schools whose parents' income is less than twice the minimum wage. A big federal programme awards grants to *pardo*, black, and indigenous students at private universities (*pardo* is a census category to which many Brazilians of mixed ethnic heritage ascribe themselves). It is a major step towards equality and it comes along with initiatives to introduce popular knowledge into the curriculum. The term 'planetary' is therefore more inclusive and more embracing than 'global', both internally – as Brazil tries to confront its own divide – and externally – as Brazil comes to see its place, role, and responsibility in the international context.

The idea of a planetary citizenship has also become stronger since the 1992 Rio Conference on Environment and Development Education (known also as the Rio Earth Summit), an event of paramount importance in the design of educational policies in the country. Since that event, curricular guidelines have spoken of a citizenship arising from the recognition that we all inhabit the same planet that needs to be taken care of, recognized, valued, and loved, regardless of our nationality or the context in which we live. These educational documents also criticize the present development model that is destroying nature, this same nature that has always been respected and celebrated by ancient and contemporary traditional cultures. The National Curricular Parameters (PCN) launched in 1997 (Brasil MEC, 1997) emphasize the role of the school in the construction of democracy, which necessarily involves knowledge, understanding, and the practice of rights and responsibilities in relation to our life on the planet.

Planetary citizenship comprises the meaning of an emerging citizenship where life on the planet stands as the source, background, and aim of university projects. Given its complexity, scope, and subjectivity, planetary citizenship is conceived here as a floating signifier (Laclau, 2007) that is articulated in concrete projects proposed by different groups according to their demands and aspirations. It is their transdisciplinary theme. Projects are the substance of which the university is made. Without concrete projects, neither a planetary citizenship nor the ecology of knowledges can happen: they end up in the territory of good intentions and moving words.

## **A paradigm shift in academic knowledge**

The ecology of knowledges stands within a paradigm shift, 'a process whereby a new way of perceiving the world comes into existence and is accepted by scholars in a given time' (Nuryatno, 2003: 26). It is a breach in what Kuhn (1970: 22) calls 'normal science,' i.e. 'research firmly based upon one or more past scientific achievements, achievements that some particular scientific community acknowledges for a time as supplying the foundation for its further practice.'

Normal science represents a research tradition crowned with scientific successes, which henceforth serve as a standard for subsequent research. A paradigm achieves the status of normal science because it can, better than any other, solve certain problems considered important by the group of experts. When the existing paradigm ceases to function properly in the exploration of an aspect of nature whose research was previously directed by the paradigm, scientific revolutions occur. They are transitions from one paradigm to the next and are called revolutions because of their resemblance to political revolutions, usually initiated by a growing sense that institutions are failing to respond adequately to problems and are in need of change. One of the most important contributions made by Kuhn, says Deblois (1988), was to understand the importance of the sociological dimension of a paradigm; that is, to realize that a scientific paradigm includes a culture, the set of scientific habits or common commitments of a scientific community.

The ecology of knowledges brings light to a crisis in the dominant paradigm, one that has been generating deep epistemological reflections on scientific knowledge. For Santos (1999) this reflection has two facets: first, it is carried out predominantly by the scientists who have acquired competence and interest in problematizing their scientific practice; second, it now covers issues that were previously left to sociologists. The analysis of social and cultural contexts has begun to occupy a prominent role in the epistemological reflection. What constitutes an arbitrary simplification of reality confines us to a minimum horizon beyond which other knowledges remain unknown.

Another element to be considered in this paradigm shift comes from postcolonial theory. Postcolonial theory emphasizes that it is possible to understand the organization of the current globalized world only if we consider the power relations between nations and the various implications of the European colonial adventure, especially for those people who were colonized. From the beginning of the colonizing process, knowledges were deeply tied to power. The colonizers characterized natives as exotic, picturesque in relation to their own reference of civility, thus strengthening their self-perception of superiority. The scientific spirit born at that time was strongly driven by the movement of exploitation and entrepreneurship with which the colonizing activity was imbued. Education and religion were also used to affirm the

white/European/Christian over the 'primitive and barbarian' worldview, replacing and erasing the myths, beliefs, and knowledges of colonized peoples (Moraes and Freire, 2016).

Postcolonial theory analyses to what extent the narratives present in academic curricula continue to propagate the European model to the detriment of local cultural constructions. It helps us to perceive new forms of cultural domination that influence academic projects and configure a neocolonialism. The questions posed by the postcolonial discussion do not suggest that the academic curriculum or any other educational institution can or should be impartial, free from biases; rather it favours the understanding and clarification of the correlation of forces between knowledge, power, ethics, aesthetics, and culture. It demystifies the alleged neutrality that modern scientific knowledge has postulated and which the university needs to unveil by addressing the questions of what and whom its formative project is to serve.

### **The sociology of absences and its respective ecologies<sup>2</sup>**

The ecology of knowledges must be understood in the broader scope of the sociology of absences, the theoretical framework developed by Santos (2006). According to Santos, the sociology of absences aims at bringing to visibility a wide range of cultural, epistemological, experiential possibilities, made invisible by a hegemonic logic that not only disqualifies and delegitimizes these other forms of social actions but makes them absent, stripped of the dignity of being considered as reasonable in comparison to the rational logic in progress.

Santos (2006) points out that there are several forms by which this nonexistence is produced. They all obey the same logic of monoculture, where some experiences are placed outside the borders and therefore not likely to be considered important or relevant. The establishment of such hegemonic spaces is characterized by at least five areas of monoculture: domains of knowledge and rigour of knowledge, of linear time, of the naturalization of differences, of universal and global, and of productivity criteria and capitalist efficiency.

The explicitness of these forms of monoculture extends to the entire social fabric, but for the purpose of our study, the first and most powerful form of all is the monoculture of knowledge and scientific rigour. It refers to the constitution of modern science and culture as the only possible way to truth and beauty. It establishes a canon with its own criteria of legitimacy, which are not impartial and which serve indistinct groups: everything that does not fit into this canon is thrown into a limbo of ignorance and non-culture. All institutions dealing with the issue of knowledge and art are deeply involved in the reproduction or rupturing of this logic, depending on the choices

they make to recognize or to ignore the actors and elements that are present in the heterogeneity of the world.

The second monoculture, linear time, concerns the belief – produced in recent centuries – that history has one sole direction and sense. This belief derives from ideas such as development, modernization, and, more recently, globalization. In consonance with linear time are the so-called developed countries, central to the advancement and modernization process: all those who do not follow this view of time are classified as underdeveloped and backwards. As far as knowledge is concerned, this view can be identified in the movement of scientific advances that linearly and gradually become more complex within this temporal logic. Similarly, the traditional design and organization of the school curriculum is based on just such a Western time perspective.

The third monoculture, the naturalization of differences, is the distribution of the population into arbitrary social classes that obey hierarchies. This categorization finds greater support in racial and sexual classification, the pattern whereby the white man is seen as superior. This classification purports to occur naturally, without intentional construction, and renders invisible all other forms of classification, placing them beneath consideration.

The fourth monoculture dynamic concerns the scales of the universal and global. In this hegemonic logic, those experiences that exist independently of local contexts are considered legitimate, relevant knowledge; universal realities are deemed more credible than specific realities. Similarly, with the phenomenon of globalization, the entities that are given credibility are those able to expand on a global scale, presenting themselves as more credible than other perceptions, local and without resonance, that do not have the same reach.

The fifth monoculture is closely linked to capitalist market logic: it can be termed the monoculture of productivities, wherein both nature and human work must be characterized by capitalist criteria of effectiveness, maximizing the profit potentials in the production cycle. The nonexistence or invisibility produced by this monoculture occurs through the lack of consideration given to other interactive experiences with nature and through the disqualification of human labour in the face of market demands.

The sociology of absences, then, aims to demonstrate in all social spheres, including that which concerns the question of knowledge, that a series of plural possibilities has been left out by a hegemonic perspective that aims to establish itself as unique. The invisibility of all these situations is designated by Santos (2006) as a waste of experience. It is possible to look boldly into the future and propose alternative



emancipatory projects only if there is recognition of these other voices and social experiences that are being silenced.

In this propositional sense, based on various research experiments developed within groups and realities hitherto ignored or wasted, Santos (2006) defines five types of ecology that oppose each monoculture respectively. They are the ecologies of knowledges, temporalities, recognition, trans-scales, and productivities.

To oppose the monoculture of knowledge and scientific rigour, Santos offers the ecology of knowledges, which recognizes that other forms of knowledge permeate social practices, enjoying legitimacy and relevance for those who put them into practice. These are traditional knowledges that may come from religious beliefs, popular wisdom, tacit knowledge; they are sometimes apprehended through oral cultures, but in all cases demonstrate strength and social significance in their communities.

Underneath the disregard for this type of knowledge lies a history of the social exclusion of minority groups, who have been denied the chance to enter this scientific culture but who have developed with their own reasons and signs. Santos points out then that all social injustice also hides a cognitive injustice.

The credibility that these knowledges enjoy among the people who use them should be a sufficient condition for establishing a dialogue with scientific knowledge, without their being considered inferior or subordinate. As Santos (2011) points out, there is no general ignorance or general knowledge, since all ignorance is ignorant of a specific knowledge, and all knowledge is the overcoming of a particular ignorance. This sense of incompleteness makes a dialogic approach possible, especially when addressing certain social situations that are never simple or related to a single type of knowing.

In contrast to the monoculture of linear time, Santos presents the ecology of temporalities, which clarifies that the vision of time practised by Western culture – a linear perception of time that emerges from the secularization of Judaeo-Christian eschatology – is not the only one: several other dynamics of temporality, considered insignificant by the hegemonic approach, do not follow this logic. The ecology of temporalities has great relevance due to the fact that the monoculture of linear time exerts one of the strongest forms of domination, because it considers contemporary experiences that do not obey the same time dynamic as inferior and peripheral. One example is family subsistence economy, which operates another conception of time and offers another point of view.

The ecology of the recognition of differences, the third one, is based on the defence of non-hierarchical differences and opposes the naturalization of differences. It seeks new relationships of reciprocity between the principles of equality and difference,



wherein 'we have the right to be equal whenever difference makes us inferior; we have the right to be different whenever equality decharacterises us' (Santos, 1999: 162).

The ecology of trans-scales, the fourth proposition, aims to confront the monoculture of the universal and global by recognizing local social practices that have not been contemplated in the so-called hegemonic globalization. This ecology has as its main feature the unveiling of the social diversity that has been removed or suppressed by localized globalisms. It is therefore necessary to adopt an attitude of cartographic imagination that will allow us to know, at each representation scale, not only what is perceptible but also what is hidden (Santos, 1995).

Finally, opposing the monoculture of capitalist productivity, the ecology of productivities aims to highlight and enhance the alternative production systems that the development of capitalist economic growth delegitimizes, classifying them as unproductive and sterile.

We emphasize that all five ecologies offer great contributions to our study, especially as we defend a new rationality that is counter-hegemonic to any form of monoculture established by the logic of capital. Regarding the university, the locus of our interest, we develop here some aspects of the ecology of knowledges that can guide us along interesting paths.

The ecology of knowledges can also be understood as a form of action research, since it implies solidarity in the relationship between university and society (Santos, 2011). When an institution chooses to provide such an experience, it enables the education of students for both solidarity and social commitment, as this approach seeks to correct injustices within the social groups that participate in such experiences.

The ecology of knowledges in academic activities encourages the understanding of broader epistemic communities, where sectors of society can and should be co-producers of this knowledge. This has deep implications for our research agenda, since our priorities are to be redirected to the needs of those who will use our results in an emancipatory sense: in Brazil, these excluded groups form the majority of the population, who – through working hard and paying high taxes – finance the research that is conducted in public universities.

### **Articulating a planetary citizenship**

The growing interest in the knowledge and the study of the African and indigenous matrix can be evidenced by the sites of specialized institutions, events, lines of research, disciplines, courses, and programmes throughout the country. Among the initiatives that aim at recognizing the traditional knowledges in order to educate planetary citizens we choose to mention the House of Planetary Citizenship of the

Paulo Freire Institute (Casa da Cidadania Planetária, Instituto Paulo Freire), the Rain Prophets' Encounter (Encontro dos Profetas da Chuva), and the Knowledges Encounter (Encontro de Saberes).

The House of Planetary Citizenship acts through three main programmes:

- i) The Municipality that Educates, which seeks to contribute to the development of municipalities through shared, collaborative municipal management, with an emphasis on the educational dimension of all local actions;
- ii) The Education Programme for a Planetary Citizenship, which aims at building an awareness that this planet is a living organism, and, like us, has a history that is also our history. It implies a reorientation of our view of education to consider it as insertion in a community that is local and global at the same time;
- iii) The Social Mobilization Programme, which is responsible for integrating the various actions of the Paulo Freire Institute regarding the participation and coordination of discussion in regional and world forums and social movements.

The House of Planetary Citizenship recognizes that the survival of the planet depends on an ongoing educational process aimed at forming a global community, conscious of its interdependence, able to recognize what is best in terms of the individual (personal) and the collective (public) and to ensure environmental sustainability. Therefore, it seeks to contribute to the strengthening of social mobilization movements, with an emphasis on education for a planetary citizenship, expanding the dialogue between Freirean pedagogy and the themes of each of these democratic spaces of discussion. Its overall objective is to develop programmes, projects, and actions that promote the formation of planetary citizens committed to education processes for sustainability and participatory environmental management in different learning contexts.

The Rain Prophets Encounter is an initiative of the state of Ceará administration and the FUNCEME (Ceará Foundation of Meteorology). Moraes attended their meeting in January 2016 and it was quite an experience. Nature gives different signals to these rain prophets, men and women of the hinterland, who make forecasts for the rainy season in Ceará (which runs from February to May). Antonio Lima, 75, came to this 20th meeting of the rain prophets in Quixadá, 168 km from the capital, Fortaleza, carrying a house holding a small bird called a *joão-de-barro*. This little bird (*Furnarius rufus*), according to Lima, builds its nest with the opening in the opposite direction from the wind and rain. 'If we are going to have winter, joão-de-barro builds his house with material that no rain destroys,' says the prophet.

Antonio Lino Renato de Souza, 68, was optimistic about the rainy season in 2016. He showed the stem of *embiratanha*, a typical semi-arid plant with thick streaks along its trunk in the dry season. 'This plant grows on stony ground and only lives to give signs that it will rain. These scratches were quite broad, but now they are healing,' he said.

On the morning of 9 January 2016, a Saturday, the skies of Quixadá were cloudy. Antonio Lino looked at the clouds and described them as a thick veil, bringing rain from the south of Ceará to the central hinterland. For Antonio Lino and many others among the 30 prophets gathered at the meeting, the rain of the last days showed that the 'winter' had arrived in Ceará.

However, this was not the opinion of other prophets of rain. João Américo da Costa, 88, showed photos of an anthill in the bed of a dry river: 'It is three years this anthill appears in the river barrier and never ends. The forecast is for a very weak winter.' Paulo Costa de Oliveira, 70, saw beyond the clouds and said, 'We will not have winter this year, we will have isolated and localized rains.' The prophets believed more in the information that nature offered than in meteorological studies. However, nature no longer responds like in the old days, they said sadly. There have been changes in the way nature behaves. Some old signs are not valid anymore. On that day, rain prophets sat side by side with meteorologists who have a lot to learn from them. On the other hand, for larger territories, the rain prophets agree, more advanced instruments are definitely necessary.

Another project that has been very successful is the 'Knowledge Encounter' based at the University of Brasília with the collaboration of Ceará State University and the Federal University of Ouro Preto, among others. The project goal is to provide an educational and epistemic space of experimentation in teaching that puts together the two worlds that are supposed to enter dialogue: the academic, highly literate one that is focused exclusively on knowledge derived from modern Western universities; and traditional knowledge, of indigenous and African origin and associated with other traditional communities. In one of the Knowledge Encounter meetings, the local Indian chief was very worried about what his tribe would think of him sitting side by side with the university dean.

## **Planetary citizenship in the curriculum**

As far as the university is concerned, the inclusion of planetary citizenship and the ecology of knowledges perspective in the curriculum has started. We will mention three initiatives, projects, or modes of action that corroborate our assertion: the UFC Faculty of Education 'Social Movements and Popular Education' research project; the UFC Faculty of Education curriculum research project 'Planetary citizenship and ecology of knowledges: Interdisciplinarity, transdisciplinarity and

internationalization in the university curriculum,' and the international conference 'Knowledges for a Planetary Citizenship,' held in Fortaleza/Ceará from the 24–27 May 2016.

The Social Movements and Popular Education research project at the Faculty of Education University of Ceará has as its main objectives to study the different forms of education that relate to social movements, particularly Paulo Freire's Popular Education. This group's research is situated on the boundary where formal education meets new emerging epistemologies, and considers contemporary themes such as rural education, environmental education, spirituality, cultures of peace, Africanism and Afrodescendance, ethnicity, culture, subjectivity, and gender. The project also offers important insights for contemporary debates involving intercultural studies, coloniality/decoloniality, and dialogues about the new epistemological paradigms and their influence on educational processes.

The research project 'Planetary citizenship and ecology of knowledges: Interdisciplinarity, transdisciplinarity and internationalization in the university curriculum' aims to discuss the inclusion of planetary citizenship as a transdisciplinary theme in the curriculum of Brazilian universities. In order to benefit from the expertise of researchers from different areas of knowledge, we have assembled an interdisciplinary team with members from various departments of the Federal University of Ceará and from national and international institutions. Each participant will analyse/build, in his/her own area of expertise, projects that a) articulate the floating signifier planetary citizenship; b) promote dialogue with non-scientific knowledge, thereby introducing the prospect of the ecology of knowledges; and c) contribute to the internationalization of the university curriculum. So far, the participants' areas of studies are visual arts and design, geography, music, theatre, fashion design, engineering, gastronomy, oceanography, education, ecology, meteorology, and law.

A third initiative towards the inclusion of the notion of a planetary citizenship in the university curriculum was provided by the State University of Ceará, together with the Catholic University of Brasilia and UNESCO. It took the form of the international conference 'Knowledges for a Planetary Citizenship,' held in Fortaleza and Ceará on 24–27 May 2016. At the opening ceremony the president of the conference told us that the great motivation for building a planetary citizenship is undoubtedly the major civilizational and humanitarian crisis in which we find ourselves nowadays. She quoted Leonardo Boff,<sup>3</sup> who expresses our anxieties very well: 'If we do not seek a new civilization the Earth may continue, but without us. We have a common destiny. The crisis forces us to seek alternatives that include all living beings.'

The conference paid tribute to the French philosopher Edgar Morin for his 95 years of life dedicated to the construction of alternatives for the future of humanity. Morin

urges educators to develop a planetary citizenship in every educational institution in order to promote a more cooperative, to defend all existing forms of life, to foster people's interests and traditions, and to promote the integration of cultural diversity.

Among the main goals of the conference were to:

- Reflect and build knowledge that favours the emergence of a planetary civilization, and/or open and support new 'pathways to the future of humanity'.
- Analyse the educational, curricular, and organizational implications of the newly emerging educational paradigm based on complexity and transdisciplinarity and founded on the values of responsibility and individual and social solidarity.
- Identify and analyse the needs of basic education teachers according to the actual situation in which this collective of professionals exercise their skills, with reference to the requirements of the necessary knowledges of education for the future and the desired paradigmatic educational reform, based again on complexity and transdisciplinarity.
- Propose initial and ongoing training strategies for basic education teachers' participation and for the empowerment of both the teachers and the school communities, building on their uniqueness and real needs.
- Reconnect spaces for dialogue and share experiences in different fields of knowledge to enable a fluid exchange of systematized experiences in the world.

The main objective of the conference was to build a new civilizational awareness so that Western science can walk side by side with traditional knowledge, opening up epistemological cages in order to integrate the knowledges that have been left out and to emphasize the role of science for sustainable development. As for modes of action, participants presented basic and high-school projects, showing how they are working in transdisciplinary ways towards a new planetary citizenship. We were also shown successful experiences of cooperative learning and solidarity between young people from local communities. Indigenous and African rituals were presented; however, for future events, we suggested more talking circles where Indigenous and African people would have space to really discuss topics related to their knowledge of nature and their conviviality skills.

### **Formation of a planetary consciousness**

Traditionally, citizenship is a set of political practices that involve specific public rights and duties with respect to a particular political community. It involves and includes political tasks that citizens should undertake to configure and sustain the

collective life of a community. It is an effective mechanism to promote collective interests and encourage political leaders to pursue the public good rather than their own (Bellamy, 2008). We need a stable political framework for regulating social and economic life, along with various political institutions to provide clear and reasonable conditions for the various forms of social interaction.

The condition for existing as a citizen is to be recognized, by him/herself and by others, as someone whose language, gender, culture, place of birth, skin colour, education, and/or appearance do not put her/him on a vulnerable or inferior level. Citizenship is therefore opposed to exclusion. It consists in belonging to a political community in which citizens can determine the terms of social cooperation on equal terms (Bellamy, 2008: 17).

Implicitly and explicitly, the university has as its main objective the development of citizenship in its students, which includes discussing the nature and quality of the benefits and rights associated with membership and participation in social, economic, and political processes. Since the Brazilian Federal Constitution of 1988, education is a right of all and a duty for the state and the family, and it is to be promoted and encouraged with the cooperation of society, aiming at the full development of the person, her/his preparation for the exercise of citizenship, and her/his qualification for work. The National Basic School Curriculum Guidelines (2013) indicate that the goals of the curriculum should be to favour students' understanding of citizenship as social and political participation, the exercise of political rights and duties both civil and social, the adoption of attitudes of solidarity, cooperation and the rejection of injustice, respecting each other and demanding for oneself the same respect.

For Morin (2011: 6-42), in spite of regressions and inconsistencies, a planetary consciousness has been forming since the second half of the twentieth century, as evidenced by the following:

- **The persistence of a global nuclear threat:** The atomic threat was and continues to be a factor in the formation of a planetary consciousness. New conflicts follow old ones and nuclear weapons revive the global fear of a world catastrophe.
- **The formation of a planetary ecological conscience:** The object of ecological science is more and more the biosphere as a whole, because of the proliferation of environmental degradation and pollution in all continents to a point that has, since the 1980s, threatened life on the planet. There has been a progressively increasing awareness on the part of humanity, manifested since the 1992 Rio Earth Summit, of the vital need for the whole of humankind to safeguard the integrity of the Earth.

- **Inclusion of the Third World in the world:** Decolonization in the 1950–60s brought onto the world scene the skills and cultural diversity of 1.5 billion humans from the so called ‘Third World’ previously rejected by the West. Although this part of humanity inspires either fear or compassion, its needs have caused the occidental countries to put their own difficulties, perceptions, and conceptions into new perspectives. In fact, the problems of the Third World (demography, food, development) have become more and more the problems of the whole world.

At the same time, and despite a new ethnocentric isolationism, the planetary era recognizes the unity of humankind and the cultures that diversify this unity. The works of anthropologists such as Lévi-Strauss, Malaurie, Clastres, Jaulin – and of documentaries and films such as *Man of Aran*, *White Shadow*, *Nanook of the North*, or *Dersu Uzala* – have affected the Western-centric vision that considers humans from non-Western societies inferior and backwards. This vision is slowly giving way to a more open perception of the sagacity and abilities, the extraordinary richness and diversity of the world cultures.

- **Development of a civilizational and cultural globalization:** Globalization of culture and civilization provokes a certain ambivalence. On the one hand, it causes irremediable cultural destruction, homogenizing and standardizing customs, habits, and consumption. On the other, it produces habits, customs, ways of living that cross national, ethnic, and religious borders, overcoming barriers of incomprehension among individuals and peoples, favouring partnerships in scientific research and other fields in which engineers, scientists, and businesspersons circulate in international networks of seminars and workshops.

In terms of art, music, literature, and ways of thinking, transnational waves have emerged that favour the expression of national originalities. Translations of novels, essays, and philosophical books have allowed people to have access to the work of other countries, feeding from European culture and at the same time providing access to their own.

- **Formation of a planetary folklore:** Despite having produced a great number of films of questionable quality, the Hollywood ‘dream factory’ has propagated a new world folklore consisting of Western movies, ‘noir’ pictures, thrillers, musical comedies, Walt Disney animations, etc. Eastern and Western nations have produced their own films and cinema has become a globalized art. A planetary folklore has also been produced through music, sometimes bringing people together through a certain type of dance: New Orleans jazz, Argentinian tango, Brazilian samba and bossa nova, Cuban mambo, Viennese waltz, American Elvis Presley rock, British Beatles rock, Spanish flamenco,



Middle Eastern belly dance and music, and others. The development of a cultural globalization is inseparable from the development of world networks.

- **Planetary tele-participation:** In our homes we have daily images of floods, cyclones, lava flows, hunger, killings, terrorist attacks, football matches, and campaigns of solidarity. There is no event that is not captured by a camera and sent to hundreds of thousands of people. 'Strange globalization,' says Morin (2011: 40); 'as spectators, we consume tragedies and horrors of this world but we also participate in the life of others and we are touched by their unhappiness. For a fraction of a second, human emotion erupts and people send clothes and contributions to international aid services and to humanitarian missions.'
- **The Earth seen from the Earth:** Planet Earth has recently revealed itself to the eyes of its inhabitants. In 1969, on TV, we could contemplate the Earth seen from the Moon, and this image penetrated our minds. Despite particularistic, local, ethnocentric fixations, despite the lack of capacity to contextualize problems, despite partial perceptions, unilateral visions, and arbitrary focus, the awareness that there is one entity to which we all belong, whose problems we must solve together – a planetary consciousness – has arisen. 'Intermittent but multiple, a global mind is being developed' (Morin, 2011: 42).

## Conclusions

Despite our chaotic economic and political situation, and as incredible as it might seem, this is the perfect moment for a discussion of how to develop a planetary citizenship in Brazilian universities. The major civilizational and humanitarian crisis in which we are living brings up the opportunity to think of solutions that require the participation and visions of those who have long been left outside. They bring their knowledges, which are slowly gaining credibility in areas such as the protection of biodiversity and the achievement of sustainable development; in medicine, where old remedies are being recovered; and in community life, where they show a strong sense of interconnection and interdependence, to mention just a few examples. Sustainability, global justice, cultural diversity, conflict mediation, and resilience interest both the Western and non-Western world. However, so far the means to look into these issues still carry the staleness of old solutions. Science is supposed to correct science, which implies autocriticism and humility.

As an attitude of dialogue and coordination between the official/Western knowledge and those others that have long been excluded from the scenario, the ecology of knowledges is a means to overcome barriers and prejudices that have precluded a more inclusive and democratic reason. It is part of a paradigm shift, a breach in

'normal science,' showing that the existing paradigm has ceased to function properly in many aspects, that it needs to include other worldviews, other knowledges.

As far as the university is concerned, it has always been the castle of Western scientific revolution. However, old and new social problems – hunger, misery, social injustices, degradation of humanity and nature, pathologies of the individual and the collective that lead to war and death, the dominance of one economically stronger culture over the other – defy the university's high position in society. The ecology of knowledges might be one way the university can correct its major mistake: the disqualification and delegitimization of social actions that do not fit into the canons of the dominant rational logic. The epistemic and pedagogical experimentation in which some Brazilian educational institutions are engaged brings back voices that were once dominant, but have lost their relevance in the scientific world.

The condition of having been colonized by a European country, which suppressed languages, myths, religions, and knowledges, gives Brazil reasons to unregretfully adopt the ecology of knowledges. Miscegenation makes this path towards redemption easier, but long. The projects and curriculum reforms that educational institutions are developing aim to adapt to and adopt this emerging paradigm that treats major themes like planetary citizenship in interdisciplinary and transdisciplinary ways. As researchers, postgraduate supervisors, members of committees and councils, coordinators of graduate and postgraduate courses, course professors, and schoolteachers, we must focus our specialities and expertise on engaging in this fascinating enterprise.

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## **Notes**

<sup>1</sup> In Portuguese, *conhecimento* refers to more formal knowledge, for example the academic sciences, and *saber* is contextualized knowledge related to social demands, to the life-world (Habermas, 1987) where all traditions, culture, and the sciences meet.

<sup>2</sup> This section is based on Freire (2015).

<sup>3</sup> Leonardo Boff is a Brazilian liberation theologian and writer, known for his active support for the rights of the poor and excluded. One of the main lecturers at the 1992 Rio Earth Summit, he currently serves as Professor Emeritus of Ethics, Philosophy of Religion, and Ecology at the Rio de Janeiro State University.

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