The University Curriculum and the Ecology of Knowledges towards building a Planetary Citizenship

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Introduction
This paper presents results of the research project *Global citizenship as an inter/transdisciplinary theme in the university curriculum*. The first part of the study was made with student-teachers at the Federal University of Ceará (UFC) between 2008 and 2012 (Moraes 2005, 2008, 2014; Freire 2011. To broaden Brazil’s perspective on the topic of Global Citizenship (GC), a second part of the project was dedicated to analyse how other countries deal with this issue in their university curricula. For this purpose, the authors of this paper went abroad: Moraes spent the year 2013 in a Estágio Senior – Capes at the Institute of Education, University of London, where the theme was expanded and contextualized in the United Kingdom; Freire went to the Centre of Social Studies at the University of Coimbra for a Doctoral Internship (Capes 2013-2014) on the ecology of knowledges theory.

The United Kingdom (UK) was chosen for two main reasons: its long tradition of scientific institutions and the adoption of ‘Global Dimension’ as a transdisciplinary theme in British schools and universities. Global dimension comprises global citizenship, global health, human rights, conflict resolution, values and perceptions, diversity, social justice, and interdependence. Our aim was to understand the views and modes of action of academics from five UK universities that have adopted Global Dimension in their academic programs, namely the University of London, University College London, Bournemouth University, University of Oxford, and University of Edinburgh.

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 theory. In Portuguese we have two words for knowledge: *conhecimento* and *saber*. *Conhecimento* may refer to a more formal knowledge, as from the academic sciences. *Saber* is more contextualized knowledge, related to social demands, to the life-world (Habermas 1992)) where all traditions, culture, and the sciences meet. Institutions, such as the Federal University of Outro Preto, University of Brasília, State University of Ceará are engaged in what they call an “epistemic and pedagogical experimentation” that promotes a dialogue between the academic world, centered exclusively in the knowledge derived from modern occidental universities, and, in the Brazilian case, the knowledge from indigenous and African matrices.
As we incorporated the Ecology of Knowledges perspective, we figured out we were no longer talking about a global but a planetary citizenship, as it is explained further in this paper. The university stands as a discursive context for building this citizenship and the ecology of knowledges as the main category to support our reflection, since it is an attitude of dialogue and coordination between the official/Western knowledge and those others that have long been excluded from the scenario. This citizenship is conceived as a floating signifier that is articulated in a variety of concrete projects proposed by different groups in accordance with their demands and aspirations. Planetary citizenship is the transdisciplinary theme that gives coherence to those projects; it is their "saber organizador".

**Post-colonialism and university knowledge**

In its broadest sense, post-colonial theory aims to discuss the vast web of power relations interwoven among nations that share a heritage from the European colonization process. The theory emphasizes that it is only possible to understand the organization of the current globalized world if we consider the power relations between nations and the various implications of the European colonial adventure, especially for those people who were colonized (Silva 1999).

Regarding the issue of knowledge, Quijano (2000) points out that modern intellectual rationality is highly connected to the knowledge of colonial, capitalist, Eurocentric domination process, common referred to as Eurocentrism. This category does not involve all the cognitive history throughout Europe, nor in particular in Western Europe. In other words, it does not refer to all modes of knowledge of all Europeans and in all times, but to a specific rationality or perspective that became globally hegemonic, colonizing and overlapping previous or different others, both in Europe and in the rest of the world.

This time, the most scathing criticism postcolonial studies offer is vindication, recognition and inclusion of a range of knowledge, traditions, culture and world views that do not conform to the European canon, being therefore discarded as vulgar, irrelevant, superstitious and primitive. This domination, still rooted and poignant on current relationships, penetrates various spheres of collective and subjective thinking, the evil triad of colonial domination by knowledge, by being and power (Silva, 1999). It also promotes a profound distortion of historical self-image developed by the colonized countries, as Quijano (2000) notes. The Eurocentric perspective of knowledge operates as a mirror that distorts what it reflects, meaning that the image we find in that mirror is not at all chimerical, since we have so many and such important European historical features in so many ways, material and intersubjective. However, at the same time, we are deeply different. Hence, when we look at our Eurocentric mirror, the image we see is necessarily partial and distorted.

Among the important notions to act as a delegitimization instrument of identity and culture of the subjugated nations, one of the central concepts serving their mechanism is the concept of representation. The representation, in this theory, refers to the forms of expression upon which the Other is represented, with the very illustrative example of the arts and literature, able to propagate an image aesthetically caricatured, derogatory and/or superficial of certain people and their culture. Following this bias, the relationship between culture and aesthetics is distorted by a higher power relationship: it is through representation that we build the identity of the Other and at the same time, our own identity. It was by representation that the West, along the path of its colonial expansion, built an "other" supposedly inferior and possessed by a wild and unbridled
sexuality, Seen as a form of knowledge of the Other, the representation is at the heart of the connection knowledge-power (Quijano, 2000).

Since the beginning of colonization process, knowledge was deeply tied to power. The settler, from the beginning, made the colony and its native the object of his research, realizing them from their perspective of domination and exploitation, characterizing them as exotic, picturesque regarding their own civility reference, thus strengthening their self-perception of superiority. The very scientific spirit was strongly driven by the exploration of movement and entrepreneurship that was imbued with the colonizing activity.

Another point to be considered in our analysis is that it was not enough to process the colonial exploitation and physical subjugation of people: it was necessary, through education and religion, the assertion of white culture - European-Christian-patriarchal -over "primitive and barbarian" worldview of colonized peoples.

It is necessary, however, to ratify that this whole process of enculturation did not occur in a one-way street without resistance. Reading the colonial and post-colonial process reveals the presence of miscegenation, of syncretism, of hybridity, revealing the presence not only of cultural domination but also of cultural resistance, "Obviously, the result is favourable to power but never so crystal, never completely, never so definitely as desired. The hybrid bears the marks of power, but also the marks of resistance " (ibid, p.129).

From this colonial legacy is that post-colonial theory proposes an analysis that can shed light on the knowledge and the reason that was born and raised in the university. We seek to understand to what extent the present narratives in academic curricula continue to propagate the European imperial model at the expense of their own cultural constructions, if they do not have this varnish. New forms of cultural consumer society can nowadays impose on academic projects, setting up a neo-colonialism.

The issues raised by post-colonial discussion does not intend to believe that the academic or other educational institution curriculum can or should be impartial, free of bias, but rather to understand that the curriculum is a disputed territory, with a correlation of forces between knowledge, power, aesthetics and culture.

Postcolonial studies demystify the supposed neutrality that modern scientific knowledge has postulated and that the university, supported by its ethical commitment, needs to unveil, assuming the "why" and "who" of its educational project. Postcolonial studies’ main contribution to social and educational thinking is that it creates the conditions for “the possibility of theorizing a non-coercive relationship or dialogue with the excluded ‘Other’ of Western humanism” (Gandhi 1998, 39, in Andreotti 2011). Andreotti asks what aspects of Western/Enlightenment humanism (or other discourses) could stop or prevent a non-coercive relationship or dialogue among different ways of being in the world. The response of postcolonial theory, as presented in Andreotti, is “an examination of the hostility to difference embedded in the normative teleological project of Western/Enlightenment humanism, which is the basis of dominant Western epistemologies” (p. 1).

The Ecology of Knowledge as an alternative to the monoculture of scientific knowledge

The university has long been suffering from a mismatch between the new social practices and the knowledge that is developed within its walls. The analysis of this crisis implies putting side by side conservative issues of academic and scientific culture as
well as a new global culture that simultaneously approximates the global and local, the real and the virtual.

Regarding the Brazilian public university, we identify two discourses in authors who have addressed this issue: the first argument recognizes that the university is going through a crisis of legitimacy facing the new social challenges, but defends its identity, social mission and essential role in the consolidation of a political project for society. The other argument, orchestrated by neo-liberal productivism, accuses the university of an anachronism that does not allow it to adapt to "the pressing needs of the new century."

The Ecology of Knowledge, basilar perspective of the analysis performed in this paper, should be understood in the broader context of the sociology of absences (Santos, 2007). It is an investigation that aims to bring visibility to 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 action, as makes them absent, unworthy of being considered reasonable to the rational logic in progress.

Sousa Santos points out that there are several ways to produce this non-existence, but that they all conform to the same logic of monoculture, where experiences are irrevocably placed outside their borders and therefore not likely to be considered important or relevant.

Within the sociology of absences, we refer to the concept of null curriculum in Eisner (1985). According to Eisner, all schools teach three curricula: the explicit, the implicit, and the null. The explicit curriculum refers to the publicly announced programs of study, the curricular grid. It is clarifying to examine, for instance, how many hours are dedicated to teaching Maths, Science, History, Arts, and other subjects: it says a lot about the importance given to each area of knowledge and what lies underneath those choices. The implicit curriculum refer to values and expectations generally not included in the formal curriculum, but learned by students as part of their school experience. The null curriculum Eisner defines as the decision of what to teach and what not to teach, “… the options students are not afforded, the perspectives they may never know about, much less be able to use, the concepts and skills that are not part of their intellectual repertoire” (1985, p. 107). All three types imply a certain agenda in curriculum design.

In case of academic and traditional knowledge, the null curriculum works in either cases: for example, formal accepted Western knowledge excludes/includes teaching Darwin’s evolution, for religious reasons, or certain History topics that do not fit in the agenda of groups in power. During the military dictatorship (April 1, 1964 to March 15, 1985), Brazilians were not allowed to approach certain topics in their History courses. In fact, History books were rewritten in order to eliminate what militaries considered “subversive”. When developing a curriculum, of course there are notions that we leave out simply because we cannot teach everything. However, the null curriculum is useful to understand what has been left out and why.

It is important to mention the ethical commitment that academic and traditional knowledges must adopt within the university context. This is a territory of dispute, of confrontation between different ideas, worldviews, theories and projects. Both sides carry discourses of exclusion, racism, rejection of cultural expressions and practices, of acceptance of inequality, of disrespect towards people’s rights, including women’s and other vulnerable groups’. Any type of knowledge must therefore pass through the filter of critical analyses that allows the identification of its tacit and implicit meaning, its cosmovision, its contradictions, absences and exclusions. In principle, all visions of
epistemic communities should be accepted but they should also be submitted to a scrutiny from different angles. In Habermas’s opinion (1995), we should be able to question traditions, to decide which situations we want to keep and which ones we want to neglect, thus performing a selective incorporation of traditions. In countries of strong immigration – nowadays practically all countries have multicultural populations – this selectiveness on the sides of immigrants and natives is useful to make conviviality possible.

The establishment of these hegemonic spaces of truth characterizes some forms of monoculture, the most powerful of them all being the monoculture of knowledge and scientific rigor that focuses on the constitution of modern science and high culture as the only possible forms of truth and beauty. From the establishment of a canon, with its own criteria of legitimacy which are not impartial nor serve indistinct groups, everything that does not conform to this canon is thrown into the limbo of ignorance. The sociology of absences then aims to demonstrate, in all social spheres that a series of plural possibilities have been left out by a hegemonic perspective that wants to establish itself as unique.

Sousa Santos refers to various types of ecologies, respectively, that have to face every kind of monoculture. It is therefore necessary to recognize that other forms of knowledge permeate social practices, enjoying legitimacy and relevance to those who put them into practice by means of oral culture, for instance, but who demonstrate strength and social meaning in their communities. They may originate from religious beliefs, popular wisdom, tacit knowledge, which are consolidated regardless of scientific knowledge.

The credibility that these other types of knowledge enjoy among its actors should be sufficient for the establishment of a dialogue with the scientific knowledge, without them being considered inferior or of a subordinate condition. This is a very compelling premise in Sousa Santos’s works: that there is not an ignorance in general, but that all ignorance is ignorant of certain knowledge and all knowledge overcomes a particular ignorance. This sense of incompleteness of knowledge is what makes possible a dialogical approach, especially in regard to responses to given social situations.

With the concept of Ecology of Knowledges, Sousa Santos argues that reality is inaccessible to any single knowledge system. On this ground, in trying to understand and deal with reality, rather than favouring the ‘monoculture’ of a single system, it is more fruitful to recognize the plurality of knowledges that exist and work towards maintaining sustainable and dynamic interactions between them (Sousa Santos 2007). Since the curriculum should reflect the society in which it is inserted and from which it emerges, the existence of such plurality of knowledges in the curriculum itself is fundamental. A corollary of the initial premise of the inaccessibility of reality to a single knowledge system, and a requirement for the coexistence of different systems within the curriculum, is that each one is treated, a priori at least, as equally legitimate.

Through the Ecology of Knowledges within the academic activities, we defend the understanding of broader epistemic communities where sectors of society can and should be co-producers of this knowledge. This should involve itself in the agenda of research priorities and redirect them to the needs of those who will make use of their results in an emancipatory sense, i.e., for excluded groups. In Brazil, it would reach most of its population.

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As far as scientific knowledge is concerned, its weaknesses with regard to ethical issues had been brought up by theorists of the Frankfurt School such as Adorno, Marcuse and Horkheimer, pointing out in the development of modern Western science the presence of a dynamic instrumentalization of reason (Martinazzo, 2005). Instrumental reason promotes a gap between science and ethics, given that its objective is to achieve certain ends, transforming people and objects into instruments to efficiently reach its goals. Deconstruction of this kind of rationality must permeate the new epistemic proposal both with regard to science as to the contributions of traditional knowledge. In this sense, the possibility of integration between science, ethics and traditional knowledge requires a rational change, but also ontological in human society. We are experiencing a paradigm shift that allows us to establish new bases for knowledge also in its ethical dimension.

Race as a denial of citizenship

According to Quijano (2000), in America the idea of race originated in reference to the phenotypic differences between conquerors and conquered. It was built on supposed differential biological structures between those groups. The formation of social relations based on this idea produced historically new social identities - Indians, blacks and mestizos - and redefined others. The terms that until then indicated only geographic origin or country of origin, began to include a racial connotation in new identities. Since social relations that were being configured were relations of domination, such identities were associated with hierarchies, places, and corresponding social roles, as constitutive of them and, therefore, the pattern of colonial domination was imposed. In short, race and racial identity were established as instruments of basic social classification of the population.

Over time, the colonizers codified the phenotypic traits such as color of the colonized and assumed as the emblematic characteristic of racial category. This coding
was probably initially established in the Anglo-American area. Blacks were not only the most important exploited, because the main part of the economy lay in their work. They were, above all, the most important colonized race, since Indians were not part of that colonial society.

The expansion of European colonialism led to the development of the Eurocentric perspective of knowledge and with it the theoretical elaboration of the idea of race as a naturalization of these colonial domination relations between Europeans and non-Europeans. Historically, this meant a new way of legitimizing the already old ideas and practices of relations of superiority / inferiority between dominant and dominated. Since then it has proved itself as the most effective and lasting instrument of universal social domination: the conquered were placed in a natural position of inferiority together with their phenotypic traits as well as their mental and cultural discoveries. Thus, race became the first fundamental criterion for the distribution of the world population in the ranks, places and roles in the power structure of the new society.

Stuart Hall made a contribution to the discussion of race as he approaches it as a floating signifier in a lecture ‘Race: The floating signifier’, given at Goldsmiths College, University of London, in 1997. In our culture, he says, there is an urge to classify humans into different types according to their physical or intellectual characteristics. In a way, this is a positive cultural impulse, because we now understand the importance of all forms of classification to meanings:

What is important for us is when the systems of classification become the objects of the disposition of power. That is to say, when the marking of difference and similarity across a human population becomes a reason why this group is to be treated in that way and get those advantages, and that group should be treated in another (Hall, 1997, p.2).

Once you are classified, a whole range of other things falls into place. Racism as a philosophy holds that there is a natural connection between the appearance (differences of colour, hair, and bones) and what people think and do, how smart they are, whether they are good athletes, good dancers, or even ‘civilized’. Racists believe that these features are the result not of the environment but of our genetics. However, all attempts to substantiate the concept of race scientifically, in biological or genetic terms, have proven unsustainable.

**Situating citizenship: local, global and planetary**

As we mentioned before, the discussion on global citizenship emerged from thematic projects that UFC student-teachers developed in the discipline Didactics I (2009-2012). Themes such as renewable energy, Amazonia, global warming, consumerism, evolution, hunger and pollution were approached interdisciplinarity and assumed an even broader dimension when their scope expanded from a national to a global perspective. The discipline program, within the scope of the National Curricular Guidelines (DCN) for undergraduate courses, states that students at the end of the semester must understand the curriculum as a construction that involves conflicts, interests and power relations, fostering critical thinking and contextualizing contents through interdisciplinary and transversal practices. The projects which addressed the thematic universe (Paulo Freire, 1970) of the participating groups were regarded as one way of promoting such curriculum.

Most of the students of UFC night courses, although geographically and economically far from the "global north", suffer the influences of a globalized world through their mobile phones, IPhone, IPad, Facebooks, Twitter and television programs.
As we went along with our thematic projects, their questions became more and more critical: What is the meaning of citizenship for us? If ethics concerns rules of conviviality, what are our rules? What is the meaning of accepting diversity when one lives in a peripheral excluded world? What are the most pressing environmental issues? What is the relationship between the problems of our peripheral communities and several other communities around the globe? How do these communities relate to the global centers of power? What is the role of science in the discussion of citizenship? In Souza Santos’s words (1999), all natural-scientific knowledge is social-scientific, all knowledge is local and total, all knowledge is self-knowledge.

The inclusion of transversal themes in the Brazilian basic school curriculum - ethics, sexual orientation, environment, health, cultural plurality (PCN-National Curricular Parameters, 1998) – was a major step in the configuration of a more aware citizenry. Transversality combines concepts and ways in which institutions, people, and modes of production, distribution and consumption control and dominate cultural life. The inclusion of transversal themes in the curriculum favors the development of a critical view on issues that affect collective life and distorts man’s view towards nature (Moraes 2005). In the Basic Education Curriculum Guidelines (Brazil, MEC, DCNEB, 2013), we find that citizenship suggests a notion of "access of individuals to goods and services of a modern society," a contemporary discourse of an era in which many Brazilian social movements fought essentially to obtain, from the State, more dignified living conditions, in the dominantly material point of view. This discourse has changed for a citizenship now understood as the active participation of individuals in public decisions in order to ensure better conditions in a civilized life. In the school context, according to DCNEB, the main issue around which the curriculum should be constructed is what kind of education men and women in the next 20 years need in order to participate in the construction of such a diverse world. Thus, we can say that we already had our feet in the local and global scenarios, struggling to find the connections and disconnections between these two.

With the inclusion of the transdisciplinary theme Global Dimension in British schools and universities and the need to broaden our perspective of the topic by leaving the local scenario for a while, there came this chance of finding out what was being constructed as a global citizenship in the UK. Our aim was to understand the views and modes of action of academics from universities that host internationalization programmes. The interviewees were chosen for their positions as researchers, postgraduate supervisors, members of committees and councils, and/or coordinators of projects that involve students of universities in the UK and other countries. They collaborate with a wide range of organizations, such as the Council of Europe, UNESCO, the British Council, the House of Lords, and NGOs concerned with nature conservation, human rights and humanitarian aid. The choice of respondents also took into consideration their fields of expertise, which span education, earth sciences, health, biological sciences, and social sciences.

The different meanings attributed to Global Citizenship by the academics portray agreements that project participants engage in, and such agreements materialize the floating signifier in their particular discursive contexts.

Three main concepts came up in the interviews: global, international and cosmopolitan. Global is directly connected to globalization where the economic aspect prevails, subjugating the cultural. “The word global is a commercial construct”, says an interviewee. “It has to do with markets, not with intellectual sensibilities. Global is about how big a market we can have for our products. It is watching the same television
program in Calcutta as you might watch in Texas”. It means the G8 trying to impose commercial rules, habits and "ways of being in the world” (Andreotti, 2011, p.178)

Internationalism helps 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).

In cosmopolitanism, say the interviewees, the main concern is inclusion. It proposes overcoming the 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, of interaction with humans. “You need a cosmopolitan perspective to see that people who are not members of nation states are deserving of respect, dignity, due process”. Cosmopolitans take institutional initiatives to include the Other based on principles of social justice and peace, values, human rights, democracy, and citizenship (Moraes 2014).

As the study locus changed to Brazil, and the Ecology of Knowledges was included in our conceptual framework, global became planetary. Here, global is associated with exclusion, division, injustice; planetary came up naturally as a context that is more embracing, more connected to our concerns about sustainability and cultural inclusion. The emphasis is being given to the planet becoming a most important part of every project; every research in the university and the Ecology of Knowledges carries such proposal. It has made us realize that our transdisciplinary theme is indeed Planetary Citizenship.

**Planetary Citizenship as a floating signifier**

A contribution in regard to the epistemological possibilities of diverse knowledge within the university for the promotion of a broader citizenship is given by Linguistics through the concept of floating signifier. The idea of floating signifier goes back to Saussure (1979) who defined a linguistic sign as being composed of a 'signifier' (signifiant) -the form that has the sign-and the "meaning" (signifié) - the concept it represents. The sign is the whole that results from the association of the signifier with the meaning, i.e., a recognizable combination of a signifier with a special meaning.

In our analysis, we use the concept of floating signifier of Ernesto Laclau (2007). For Laclau, there are two types of signifiers: the empty and floating. An empty signifier tries to break its relationship with any meaning in order to represent a heterogeneous field. A floating signifier is articulated in a variety of concrete projects: since it moves between projects, it is not empty, it is floating.

Laclau exemplified a signifier with the Solidarność movement led by Lech Walesa in the shipyards of Gdansk, Poland, in the 1980s. The movement began attached to a set of precise demands of the workers of the shipbuilding industry, but eventually came to encompass many other demands in different areas. At the end, Solidarność became the signifier of something much broader. The demands increased so much that the reference to a particular meaning was diluted. It became empty.

A floating signifier is different. It can be connected to different contexts, so the meaning in each context is fully realized. It may even be ambiguous: an over-
determination or determination of sub-meanings prevents it from being fully resolved. However, still it does not mean it is empty. It fluctuates between different forms of articulation in different projects (Moraes, 2015).

Democracy is a good example of a floating signifier that can become empty because it is open to contestation and articulation in radically different political projects – that is, it has one meaning for a certain group and the opposite meaning for another. We are now seeing in Brazilian politics this signifier floating from one group to the other, each one suggesting projects, laws and modes of action to “fill in” the signifier democracy.

In regards to a greater social intentionality that an educational institution as the university must have, which is the education of citizens, the meaning of citizenship remains open to contexts and projects. For a planetary citizenship to be articulated, it is necessary to design projects that give it its meaning.

Pinar (2014) criticizes the presentism and narcissism in the American culture today. Presentism, says he, erases time and space, as place becomes nowhere in particular, cyberspace. Citing Lasch’s (1978, p. 102) Pinar defines “the culture of narcissism” as “the intense subjectivity of modern world, exemplified even more clearly in the office than in the factory,” that “causes men and women to doubt the reality of the external world and to imprison themselves ... in a shell of protective irony (p. 100)”.

Strengthening Pinar’s criticism on presentism and narcissism, we find in Sousa Santos the attribution of a primordial role to the present, but considering it as a possibility of expression of a plurality of experiences and heterogeneity of knowledges shared by collectives in creative arrangements. The perspective of collectivity opposes narcissism and monoculture, generating new possibilities for dialogue. Planetary citizenship building with the ecology of knowledges contradicts presentism and narcissism by insisting on the inclusion of knowledges originated outside a Western-based space and time of reference.

Articulating Planetary Citizenship: jumping over the university wall

There has been a movement towards overcoming barriers and prejudices between the academy and popular knowledge in the shape of projects, discussion forums and other initiatives mainly coming from the university. In this session we will briefly refer to The House of World Citizenship, the group TRAMAS (Trabalho, Meio Ambiente e Saúde para a Sustentabilidade -Work, Environment and Health for Sustainability), Encontro de Saberes (Encounter of Knowledges) and Encontro dos Profetas da Chuva (Encounter of the Rain Prophets).

In the Paulo Freire Institute (IPF), the House of World Citizenship (CCP – Casa da Cidadania Planetária) aims to develop programs, projects, discussion forums and social mobilization, attributes itself the main challenge of contributing for the construction of a Planetary Citizenship, active and critical in different educational spaces, from the perspective of a culture of sustainability.

The CCP acts in three main programs: o Município que Educa (Municipality that Educates) which seeks to contribute to the development of municipalities through shared, collaborative municipal management, with emphasis on the educational dimension of all local actions; The Education Program for Planetary Citizenship (CPET) whose concept has to do with the awareness that this planet is a living organism, and, like us, has a history which is also our history. We are the Earth together with all that lives on it in dynamic harmony, sharing the same space and the same fate. Educating for a Planetary Citizenship implies a reorientation of our view of education as
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the individual insertion in a community that is local and global at the same time; and the Social Mobilization Program, responsible for integrating the various actions of the Paulo Freire Institute (IPF) regarding the participation and coordination in the discussion forums and local social movements, regional and planetary.

The CCP recognizes the Earth as a living organism of which humans are part therefore recognizes that the survival of the planet depends on an ongoing educational process aimed at forming a global community, conscious of our interdependence, able to recognize what is best in terms of individual (personal) and collective (public) and ensure the environmental sustainability. Therefore, it seeks to contribute to the strengthening of social mobilization movements that IPF is part of, with emphasis in education for global citizenship, expanding the dialogue between Freire pedagogy and the themes of each of these democratic spaces for discussion. Their overall objective is to develop programs, 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 group TRAMAS at UFC (http://nucleotramas.webnode.com.br/) aims at integrating dimensions of Education, Research and Social Cooperation, focusing on the interrelations of Production, Work, Environment and Health within the present development model. It mediates environmental conflicts seeking to feed and contribute to building the field of Public Health. Tramas’s members are graduate students in Biology, Geography, Law, Medicine, Social Sciences, Communication, Education, Pharmacy, and Home Economics. Some are social militants of the MST (Movimento dos Sem Terra – Landless Workers’ Movement), NGO’s of Human Rights, Political Parties, Student Movement, Feminist Movement.

Another project that has been very successful is the Encontro de Saberes (Encounter of Knowledges). It is an initiative of the National Institute of Science, Technology and Inclusion in Higher Education and Research (INCTI), based at the University of Brasilia. The project's goal is to provide an educational and epistemic space of experimentation in teaching. It is a major challenge because of the wide gap that separates the two worlds that are supposed to dialogue: the academic world, highly literate and focused exclusively on knowledge derived from modern Western universities; and the world of traditional knowledge, of indigenous and African origin and other traditional communities’, which have been accumulated for centuries in Brazil.

Moraes has recently been to an Encontro dos Profetas da Chuva (Rain Prophets Encounter) in the interior of Ceará, Brazil, in January 2016. Nature gives different signals to these men and women of the hinterland that make forecasts for the rainy season which runs from February to May.

Antonio Lima, 75, came to the 20th Meeting of the Rain Prophets in Quixadá³, 168 kilometers from the capital, Fortaleza, carrying a joão-de-barro’s (Furnarius rufus), house. This little bird according to Antonio Lima, builds its nest with the opening in the opposite direction of 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 describes. On Saturday morning, Jan 9, 2016, the skies of Quixadá 1were cloudy. Antonio looked at the clouds and described them as a thick veil, bringing rain from the
south of Ceará to the central hinterland. According to Ceará rain calendar, published by FUNCSEME (Função Cearense de Meteorologia e Recursos Hídricos - Cearense Foundation for Meteorology and Water Management), on that day it was raining in 96 of the 184 municipalities in the state. For Antonio Lino and many others of the 30 prophets gathered at the meeting this year, the rain of the last days shows that the "winter" has arrived in Ceará.

However, this is not the opinion of other rain prophets. João Américo da Costa, 88, shows a banner with photos of an anthill in the bed of a dry river. "It is three years this anthill appears in the river barrier. The forecast is for a very weak winter." If there was going to be heavy rain, the ants would not build their anthill on the bed of a river because it would be washed away.

Paulo Costa de Oliveira, 70, sees beyond the clouds and says, "We will not have winter this year, we will have isolated and localized rains.” The prophets believe more in the information that nature offers than in meteorological studies. However, nature no longer responds like in the old days, they say sadly. There have been changes in the way nature behaves. Some old signs are not valid anymore. However, on that day the Rain Prophets sat side by side with meteorologists who have a lot to learn from them. On the other hand, for larger territories, more advanced instruments are definitely necessary.

One of the organizers of the encounter said he would like to keep the rain prophets’ knowledges within the territory of culture, and not to submit it to the scrutiny of scientists. As a cultural product, their predictions would not be challenged, or compared to the strictly academic/meteorological results.

**Articulating Planetary Citizenship in the curriculum**

As far as the university is concerned, inclusion of Planetary Citizenship and the Ecology of Knowledges perspective in the curriculum has started. We will cite three initiatives/projects/modes of action that corroborate our assertion: the UFC Faculty of Education line of research in the post-graduate program; the project *Planetary Citizenship and Ecology of Knowledges: interdisciplinarity, transdisciplinarity and internationalization in the university curriculum*; and the International Conference *Knowledges for a Planetary Citizenship* to be held in Fortaleza/Ceará, from 24 to 27 May 2016.

The Faculty of Education post-graduate program has as main lines of research Curriculum, Social Movements and Popular Education, History of Education, Work and Education, Children Development and Language, Evaluation, Philosophy and Sociology and Marxism. The whole program illustrates both traditional and contemporary trends but we will make special mention to the Social Movements and Popular Education research line. Its main objectives are to study the different forms of education that relate to the social movements, particularly Paulo Freire’s Popular Education. This group’s research is situated in the borders of formal education and new emerging epistemologies as well as contemporary themes – we call them thematic axis - such as Rural Education; Environmental education; Spirituality; Culture of Peace; Art; Africanaism and Afrodescendance; Youngsters in School, Family and in Urban and Rural Society; Ethnicity, Culture, Subjectivity and Gender. The line also offers important insights for contemporary debates involving intercultural studies, coloniality/descoloniality, dialogues about the new epistemological paradigms and their influence on educational processes (http://www.facedpos.ufc.br/2015).

The second initiative to articulate Planetary Citizenship is the research project *Planetary Citizenship and Ecology of Knowledges: interdisciplinarity,
transdisciplinarity and internationalization in the university curriculum coordinated. Given the natural expansion of the frontiers of knowledge and the evaluation criteria of graduate programs, universities are becoming more international. What we aim in this project is to relate the process of internationalization with the notion of Planetary Citizenship by including collaborators from other countries’ universities and expanding our outlook beyond national borders.

Planetary Citizenship is transdisciplinary because it pervades all areas of the university curriculum. For its complexity, scope and subjectivity, PC is also conceived here as a floating signifier that is articulated in a variety of concrete projects proposed by different groups according to their demands and aspirations. In order to include perspectives of different areas of knowledge represented in the university, we have assembled an interdisciplinary team with members from different departments of the Federal University of Ceará and from national and international institutions. Each participant will analyze/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; c) contribute to the internationalization of the curriculum of participating institutions.

For data collection, we are using investigative procedures in accordance with the different areas, such as ethnography, critical analysis of literature produced in the area, questionnaires (subjective and objective questions), interviews, participant observation, statistics, etc. Since this project started in 2015, in August 2016 we will meet to see what has already been done by each group/participant. It is really encouraging – to say the least – the enthusiasm with which the group of participants has responded to the call for this project. In the end, we expect to write books and articles about the subject, to organize workshops and seminars and to be able to offer scholarships for graduate students.

The researcher participants, their institutions and area of studies are:
- three of the Federal University of Sergipe (UFS), Visual Arts and Design;
- eight of the Federal University of Ceará (UFC), Geography, Music, Theater, Fashion Design, Engineering, Gastronomy, Oceanography and Education/Curriculum;
- one of the National Institute of Spatial Research (INPE), Ecology
- one of the Federal University of Campina Grande (UFCG): Meteorology;
- one researcher from the State University of Minas Gerais (UEMG), in Education/Curriculum;
- and one of the University of British Columbia (UBC), Educational Studies.

Initial questions the researchers aim to answer:
- Visual Arts and design, Universidade Federal de Sergipe (UFS) - A marker of contemporaneity is the "Media Age," in which borders disintegrate and hybridity makes real the existence of objects composed of different cultures, the period of the "Media Age" provides a large volume of rootless information that enhances the challenge of the designer in his/her creative action. It demands greater vocabulary references and power of ultridisciplinary interrelationship within ethical conduct or even a responsible sociocultural intention. In this perspective, this project stimulates future designers to enter socio-cultural contexts in order to be able to learn how to be autonomous in their propositions. Contemporary design, more than ever, is immersed in a complex world where it needs to be closely linked to the problems of society. In this sense, the Visual Arts and Design group of UFS has come up with the following research questions: How can the design curriculum contents be improved with non-disciplinary knowledge...
existing in cultural social practices’ scenarios. Is it possible for the designer in training to strengthen the semiotic interpretation process through the exchange of experiences between collective imagination and academic methodologies of semantic analysis? How can the designer in training take ownership of aspects and constituents in socio-cultural scenarios for the production of educational material?

- **Music/Encounter of Knowledges, Universidade Federal do Cariri**\(^4\) (UFCar) – The Encounter of Knowledges can be understood as a concrete proposal of intercultural education capable of including both the arts and traditional knowledges in the curriculum. Initial question: How can transdisciplinary intervention of the Encounter of Knowledges contribute for the decolonization and dynamic knowledge taught in universities?

- **Theater, Universidade Federal do Ceará (UFC)** – In a scenario that recognizes the infinite plurality of knowledges and the need to value them for the realization of a truly emancipatory curriculum, we will investigate how and what meanings have been forged in the education of artists-researchers in Theatre and what place Theater has in the development of a participatory and aware citizenship.

- **Fashion and Design, UFC** – we see a regionalization movement in trends and products that concern the Brazilian identity. The State of Ceará has played an important role in establishing this relationship between fashion and local products. How do we prepare students to work with artisans?

- **Ecology, Oxford University/Instituto Nacional de Pesquisas Espaciais (INPE)** - Our study aims to critically evaluate the Ecology of Knowledges in the light of current knowledge in the Science of Ecology. We will compare notions of ‘harmony’ and ‘balance’ traditionally associated with natural systems, with the concepts of ‘stability’ and ‘resilience’, currently considered emerging patterns of cooperative, competitive and predatory processes, among others. This more modern view, whose origin is in the observation and analysis of nature, can contribute to understand why some traditional knowledge disappears while others (such as scientific) remain and thrive, how this process occurs, and how it could be avoided, minimized or, to some extent, controlled. The main idea is to expand the range of knowledge that makes up the Brazilian university curriculum so that it not only enjoy the richness of scientific knowledge, but also the patrimony of existing traditional knowledge in our country and the world.

- **Computer Engineering, UFC** – We play a key role in scientific and technological development of a nation and the world in general, and good education for professionals becomes a key to progress. In Brazil, there are few studies involving the curricular restructuring of undergraduate engineering courses that aim to prepare their students for the labor market as well as educate them as critical citizens. Thus, some key questions arise as to provoke a change of this paradigm in our society: What kind of engineers do we need and how are we educating them? What kind of curriculum still prevails in Engineering courses in Brazil?

- **Gastronomy, UFC** – Food is a category not only related to the act of eating to generate the energy necessary to maintain the physical and biological body. It also refers to the culture that guides many of the relationships that people, regardless of class, color, social status, identity and nationality, establish with the world around them. It carries a universal and a particular language, at the same time. As a universal language, it helps to interpret the world, society, including the relationship of people with faith; in a particular plan, it expresses what people are identified with and tells where they are from (from Brazil, Mexico, England, Ceará, Piauí, Minas Gerais, the
Inhamuns Cearense, the Cariri Cearense. It also identifies whether a person is Catholic, Jewish, Muslim, Umbandist, etc. Moreover, as a universal language it goes beyond the language barrier, it is mainly guided by taste, something you cannot measure. In this sense, considering the food as culture, we look into how much food can be taken as a language that expresses and allows you to know the world, your reality, including the human being in his relationship with the planet and the environment. It cannot be properly understood without taking into account its opposite, Hunger. This was the motor of development of related technologies, from production to preparation and attracting the consumer - fire, artifacts used to prepare, cook and preserve, what you eat, the place to eat, how to eat and with whom you eat. Thus, one must question the role of Hunger as a protagonist or generator theme, in the academic and social discussion, of geopolitical issues such as the wars, the hunger that affects millions of people, despite the food production be enough to feed the whole planet population, construction and maintenance of the identity of peoples, ethnic groups and populations’ food. More specifically, we intend to investigate what are the limits of the food issue as a transversal theme and a knowledge dialogue generator in politics, history, gastronomy, education, ecology, physics, chemistry, etc., currently separated by fragmentation and hierarchy of academic knowledge and power relations.

- Meteorology, Universidade Federal de Campina Grande (UFCG) - The group of the Department of Natural Resources of the Federal University of Campina Grande, together with the INSA (National Institute for Semi-Arid), will investigate projects that aim to develop strategies to adapt to water scarcity and future climate change. Our questions aim to answer the following: if there is use of traditional knowledge in developing strategies to cope with water scarcity and climate change; how the knowledge needed for adaptation to climate change can inspire formal research in Meteorology; what strategies are being developed in other semi-arid or arid places in the world to deal with water scarcity and climate change; if these strategies make use of traditional knowledge and what type; if the traditional knowledge of these other locations help guide research in formal climate science.

- Education/Curriculum, Universidade do Estado de Minas Gerais (UEMG) - Given the paradigm shift process we are experiencing regarding the relationship with knowledge, permeated by the ease of access to information and the construction of new spaces for social interaction through the network, the universities are placed in a position both to rethink their bases, as to make active this paradigmatic consolidation. We believe that the path being designed passes through the acknowledgement of the epistemological diversity in the world, in particular by providing recognition that scientific knowledge and so-called traditional knowledge, popular, must write together a new dynamics in the Ecology of Knowledges perspective. This perspective belongs to a broader approach entitled by Sousa Santos as Sociology of Absences and Emergencies and the work of Translation, which deals on a sociological imagination exercise where we should expand the present, providing visibility to innovative experiences of knowledge, which often do not obey to the strict canon of modern science. Our goals in this research are to discuss what contribution the Sociology of Absences and Emergencies and the Translation work have to offer in promoting the Ecology of Knowledges at the university nowadays; to identify and define what other theories can be considered in this perspective.

- Oceanography, UFC – Ongoing climate changes alter the water flow, intensify drought and affect the quality of water resources. Moreover, the Intergovernmental Panel on Climate Change (IPCC) shows that, as a result of global warming, sea levels
will increase and enhance coastal erosion. In Ceará, studies by UFC show that estuaries are suffering intensified salinization process that affect estuarine biogeochemistry and consequently the organisms that live in. Many of these organisms and fresh water are very important resources for rural, urban and fishing populations. Our questions are:

- With the collaboration of experts, which questions can be applied to the Institute of Sea Sciences (Laboratório de Estudos do Mar - Labomar) and other institutions on the inclusion of social and educational aspects in the courses of Oceanography so that future oceanographers become aware of the global social problems that global warming and climate change are causing the population? Are the students open to questioning the resilience of populations to these environmental changes, including those where they are included either as mere citizens or as technicians? What can one learn from the experiences of students who participated in the Science without Borders program in reshaping the Pedagogical Project of the Oceanography course in making it more planetary, without forgetting that national issues are relevant, and that solutions also depend on them?

- Educational Studies, University of British Columbia (UBC) – Examining the historical and systemic patterns of reproduction of inequalities and how these limit possibilities of collective existence and global change, the researcher of Educational studies at the University of British Columbia aims to answer the following: What aspects of Western Enlightenment (or other narratives) may terminate or prevent a non-coercive relationship or dialogue between different ways of being in the world?

A third initiative towards the inclusion of Planetary Citizenship in the university and the school curriculum is being given by the State University of Ceará, together with the Catholic University of Brasilia and UNESCO with the sponsorship of International Conference Knowledges for a Planetary Citizenship to be held in Fortaleza / Ceará, from 24 to 27 May 2016. This event will have Edgar Morin as its Honorary President and will be chaired by Prof Maria Cândida Moraes. There will also be national and international speakers, talking about issues related to the work of Edgar Morin, in celebration of his 95 years and his whole life dedicated to humanity.

The main goals of the conference are:

1. Reflect and build knowledge contributing to the creation and dissemination of projects, programs, organizations, policies and individual or group actions of economic, technological, social, cultural and educational character that favour the emergence of a Planetary Civilization and / or opening and support of new "pathways to the future of humanity."

2. Analyse the educational, curricular, organizational implications of the new emerging educational paradigm based on complexity in transdisciplinarity and founded on the values of responsibility and individual and social solidarity.

3. Identify and analyse the needs of basic education teachers according to the actual situation in which this collective of professionals plays their skills, with reference to the requirements of the necessary knowledges of education for the future and the desired paradigmatic educational reform enunciated by the Thinking of the South.

4. Contribute to the formulation of strategic policies that contribute to the dignify and the recognition and appreciation of basic education teachers, as well as the selection and continuous training of more qualified candidates and vocationally gifted to the teaching function and its transcendental social responsibility mission.

5. Guide the formulation of more consistent transversal lines for the construction of a curriculum and a program of educational training, pedagogical and didactics for the teaching profession, according to the characteristics and ontological, epistemological
and methodological implications of the emerging educational paradigm based on complexity and transdisciplinarity.

6. Propose initial and ongoing training strategies for basic education teachers, in order to increase the quality of the performance of their professional skills in leadership, participation and empowerment of both the teachers and the school communities and building on the real needs and the uniqueness of them.

7. Contribute to the creation of an international network of teachers’ education of all educational levels, with different modalities of participation, based on the recommendations set forth in the Document Thinking of the South and Fortaleza Charter.

8. Reconnect spaces for dialogue and share experiences in different fields of knowledge to enable a fluid exchange, systematized experiences in the world.

Among the expected results of the conference we will cite the one that has to do with the Curriculum Matrix: to analyse the epistemological basis of the current school curriculum and suggest new epistemological bases from a complex and transdisciplinary perspective, able to promote the necessary integration between disciplines, interdisciplinary and transdisciplinary knowledge, suggesting strategies for its implementation in the schools’ pedagogical projects and consistent with the New Curriculum Guidelines established by the Ministry of Education.

We have given here examples of initiatives that are directly or indirectly connected to the curriculum but there are many other educational institutions that are developing projects and curriculum reforms to adapt to/to adopt this emerging paradigm that treats inter and transdisciplinarily major themes like Citizenship, giving it whatever adjective to be used after the noun or simply leaving it plain. As researchers, post-graduate supervisors, members of committees and councils, coordinators of graduate and post-graduate courses, course professors, and schoolteachers, we must put our specialities and expertise to engage in this fascinating enterprise.

Conclusions
In this essay we defend a closer relation between the university formal knowledge and the knowledges that come from social movements and from our African and indigenous matrix. The Ecology of Knowledges seems more coherent and democratic not only in the epistemological sense, but as a means for citizenship building. Understanding the plurality of discursive contexts where this knowledge develops is to live up to the etymology of the word university. It comprises different worldviews, and even dialectical contradictions, but it is a place of experimentation and exercise of dialogue. Only through dialogue with these other social voices is that the university will establish a relationship between different elements in the discursive field.

Post-colonial theory gives us a broader political perspective. It helps us understand our past and our present within a scenario of power relations between the global north and global south - a classification that already carries a heavy weight of an international class divide – putting together these two fascinating and useful worlds of the scientific/academic and the popular knowledges. In fact, the African and Indian knowledges are in danger: the Ecology of Knowledges comes as an alert against their elimination.

We understand that our reality implies organizational, cultural, epistemological and, above all, ideological changes in social institutions. The university is in a position both to rethink its bases and to act in the process, contributing to the consolidation of a
new paradigm. Projects that include internationalism, cosmopolitanism, sustainability, human rights, social justice, interdependence, in close relationship with the natural scientific knowledge, articulate the floating signifier Planetary Citizenship.

The postulation of another rationality, which aims to confront the supremacy of modern science, not to suppress it, but to redirect it to the complexity of life and to social emancipation, necessarily has to address other human elements, such as the body, affections, subjectivity, culture, political context, etc. None of these other spheres should be ignored.

Knowledge at the university in a perspective of social emancipation has to emerge from demands of groups that suffer the violation of their rights by oppression and capitalist domination. The development of interdisciplinary and transdisciplinary proposals only have sense and consistency if they address real issues, strengthening interdisciplinarity and transdisciplinarity as categories of action to be used in concrete projects to articulate transdisciplinary themes.

With the epistemological premise of the Ecology of Knowledges, on the understanding that academic knowledge and traditional knowledge have the same degree of legitimacy, it is the role of the academy to make use of its symbolic capital in favor of issues experienced by groups in vulnerable situations.

The current model of production of scientific research results, proposed by funding and validation agencies in Brazil is today one of the biggest challenges to knowledge integrating experiences since such experiences demand a longer collective construction, diverging from the productionist perspective currently imposed by the monoculture of linear time and productivity.

The inclusion of undergraduate and graduate students in building and developing their interdisciplinary investigations in issues of real life reinforces the social understanding of their profession and promotes integrative knowledge perspectives. The collective construction of knowledge in the Ecology of Knowledges promotes the restoration of trust between the fields of research and the university. The immediate adhesion of researchers to the project of Planetary Citizenship and Ecology of Knowledges in the university curriculum shows a demand for this type of action.

Based on our observations and experience, we argue that another knowledge that aspires to wholeness and social emancipation is not only possible but is already being developed and moulded in dialogical, democratic, and political relations, thus possessing great emancipatory potential.

Notes

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2 ludmilafreire@yahoo.com.br

3 Quixadá - a city in the interior of Ceará

4 Inhamuns Cearense – a region in the interior of Ceará

5 Cariri – a region in the interior of Ceará
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Submitted: April, 6th, 2016

Approved: July, 3rd, 2016