



ECOLOGY IN HEALTH: BEYOND MEDICAL ECOLOGY

*¹Maria Elizabeth Souza Gonçalves, ²Manoel Messias Alves de Souza
and ³Luciano Sérgio Ventin Bomfim

¹Docente da Universidade do Estado da Bahia

²Docente da Universidade Federal do Vale do São Francisco

³Docente do Programa de Pós Graduação em Ecologia Humana e Gestão Sócioambiental da Universidade do Estado da Bahia

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ABSTRACT

This study is resulted from a bibliographical research in the Virtual Health Search Engines and Scielo, it aimed to problematize, in an exploratory way, the implications that the word "medical" ecology brings to the studies on which the human ecology has emphasized the health – disease – environment phenomenon, under the integral understanding of the human being in his physical, biological, social and economic environment. The results point out that the ideology underlying the word "medical" has distanced many productions that focus on the health-disease-environment phenomenon from the Human Ecology locus, and in this way it is necessary to break the centralizing and hegemonic paradigm, by the recognizing of the Ecology in Health, in a way to avoid the distancing of relevant contributions from the area of collective health, preventive medicine, health education, health promotion, bringing with this immeasurable damages to science and especially to the society.

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INTRODUCTION

The analysis unit of Human Ecology is constituted of the relations that the human being establishes with himself and with his surroundings (Pires & Craveiro, 2011) and in this way it generates a dialectical tension due to formative diversity of the human ecologists in a way to understand the human being in two gigantic constitutions - his subjective world and the socio-cultural universe that forged him; two giants in permanent duel. Consider one world over the other, mark the trajectory of countless Human Ecology researchers. The overcoming of the isolated comprehension of these worlds is gaining visibility, and in this sense, by extending the understanding of human being, the dimension of the "relations" from the object in analysis is also extended: inter and intrahuman relations with all the biotic and abiotic constitution (Marques, 2012; 2014; 2016). This has significant implications, among them is the affirmation of Human Ecology as a field that not only constitutes the affective

*Corresponding author: Maria Elizabeth Souza Gonçalves,
Docente da Universidade do Estado da Bahia

meeting of several knowledge areas, guided by a pluridisciplinary perspective (Pires & Craveiro, 2011) and that recognizes the human being in its diverse dimensions, including the political dimension. In this sense, knowledge and power constitute a triad on which the academic production in Human Ecology is decolonized, and in this way it is constituted a new perspective of human analysis and environment relations. The decolonial perspective that grounds this study assumes research with engagement, aiming to solve concrete questions about the real world, which places the knowledge production in a political perspective (Freire, 1967; Mama, 2010): knowledge dated and situated looking for intervention in the world, favorable to all life beyond the human (Marques, 2012). In this sense, this text reflections come from the experiences of one of the authors, in permanent interface with the studies, dialogues and actions. The place where we speak in this essay is the one who assumes that words can unveil diverse universes, sometimes conflicting with the embryo, because the word circulates in several discourses and at the same time that it carries an ideology, also

homes a neutrality that makes it pass through different discourses (Baktin, 1988). The origin of the issue that instigates this study comes from one of the researchers first contacts with the Medical Ecology in the Graduate Program in Human Ecology of the State University of Bahia / Brazil (PPGECoh), in the second half of 2017 as a Master's student. We could see in our experience with Medical Ecology that the incipient and tangential way in which the various sectors of health have discussed intrinsic elements of Medical Ecology (Ávila-Pires, 1974), leading them to suspect that the medical attribute in the expression Medical Ecology could be excluding other enormous contributions from approaches to the human health phenomenon, which, because they are not specifically produced or performed by medical professionals, would not be considered within the scope of what medical ecology has been doing. It has been called Medical Ecology the processes that comprise the homeostatic balance of organisms with their surroundings (Ávila-Pires, 1974), knowledge about diseases and their connections with the Human – environmental relation (Dias-Lima, 2014), aiming to restore balance, in a holistic perspective of health as a fundamental human right, based on the inseparability between environmental justice and social justice (Porto, Ferreira & Finamore, 2016). From an ecological perspective in Ávila-Pires (1974) to a political aspect (Porto, Ferreira & Finamore, 2016), Medical Ecology substantiates the emphasis on health in a broad sense, resulting from cultural, economic, political and environmental elements, acclaiming for its debate not only other specialists and researchers of the natural and social sciences, but several health professionals, especially those whose formation is sensitized to collective health: nurses, psychologists, nutritionists, pharmacists, among others.

But, how the relations between human being and environment have been the object of knowledge production to human health and the environment quality? Who are the professionals involved with these processes of knowledge production? How to enhance the academic knowledge in Health Ecology by receiving in the debate scientific productions from the various health professionals who have been involved in the understanding / intervention of the health-disease-environment phenomenon? Recognizing the political dimension these concepts home allows to re-dimension a decision making, to choose between the already known representations or looking for a new term that gives sense to the new construct. As Thomas Kuhn (1998) puts it, "new discoveries need a specific vocabulary to account for new events discovered" (p.81). Would Medical Ecology be able to home the approaches and interventions of the several aspects that guide health-disease-environment processes in a country like Brazil, where issues such as unemployment, child malnutrition, hunger, lack of sanitation, illiteracy, difficult access to quality water, lack of housing, land conflicts, among many others, are the boundaries of the ways of life of millions of Brazilian people?

The complexity added to the health-disease-environment phenomenon at the time of Human Ecology where not only the conception of health but of the environment and the human-environment relations is extrapolated, where the inseparability between social and environmental justice and the symbolic gain visibility, would not imply "in the recognition both of the something's existence and of its nature" (Kuhn, 1998, p.81). The "medical" attribute as an ideological product delineates a reality that is external to it, considering that "everything that is ideological has a meaning and refers to something situated

outside itself" (Baktin, 1988, p. 21). And it is in this condition that the sign homes (always bearer of an ideology): to exist as part of a reality while it can represent another, distorting or reaffirming it, which instigates the problematization we raise around the ideological domain of "medical ecology", considering that, as Baktin (1988) states, "wherever there is a sign, there is also the ideological." (p.22). In this exploratory study (Gil, 2002), the study proposes to problematize the implications that the term "medical" ecology brings to the studies of Human Ecology that assumes the health-disease phenomenon from a holistic understanding of the human being in their physical, biological, social and economic environment (Dias-Lima, 2014), looking for not only to broaden the sense of "health" beyond the absence of diseases, but also to think about diversity of the human collective in their different contexts and the inter / intra relationships they establish, and their unfolding in the survival of life in a full sense, linking social justice to environmental justice. The word "medical" is being provoked concerning to its possibility, by the nature of any sign, to reflect faithfully or to distort the set of elements that it proposes to represent, assuming that every sign is always subject to being questioned, for as Baktin teaches us, "every sign is subject to the criteria of ideological evaluation (that is, whether it is true, false, correct, justified, good, etc.). The domain of the ideological coincides with the domain of the signs: they are mutually corresponding "(Baktin, 1988, p.22).

The relationship between the expression “medical” ecology and the concept of ideology in philosophy

We do not start from an ideological position against the expression Medical Ecology, since we defend thesis that all fields of knowledge must guide their approaches of the real under an ecological perspective, in which the relation of all the species with the human being must be dialectically apprehended, not only to promote the welfare for the human species, but also, and not less, for all species. Therefore, we understand an Ecology of Nursing, Mathematics, Astronomy, Physics, Nutrition, Literature, History and so on. Let us go further, starting from the understanding that one day we will begin to recount the history of each science and make a science totally divergent from that which we have produced so far, since, from the moment we break in all the dimensions of human understanding with vision utilitarian and anthropocentric of the real, we will feel morally responsible for reviewing the history of science. Despite, we believe that Medical Ecology does not home the dimension the phenomenon health-environment-society concerns.

The medicine has been seen historically as the unique science of human health, it used the power over life to assert itself on the subjectivities that are objectified in each body, considering that its professionals are invested with such power, assuming the incarnation of this power, stabilizing their relations with the occupants of the bodies as sovereigns, thus deciding about their lives. Far from seeing themselves as a health professional of the human body, as conceived by Hippocrates, doctors are taught to see themselves as sovereigns. Far from challenging themselves and organizing themselves politically for the defense of life, the medical class has historically allied itself in the reproduction of the most diverse forms of reproduction of the interests of the elites, even though it is part of this. Despite of the doctor, in the context of contemporary peripheral capital, works under adverse conditions, he occupies the core

of power to defend human life. Corporatively the doctor is a giant, individually he is crushed by the perverse logic of Peripheral Capital. Corporately it shades the entire health area, imposing a hierarchical relationship with the other health sciences, materializing this power in the current legislation. The medical attribute, far from being attached to the field of knowledge, has a radius of action beyond this, manifesting itself symbolically and normatively in other scientific areas, such as nursing, physiotherapy, phonoaudiology and others, reproducing as an empire constituted of concessions. In this sense, when it comes to Medical Ecology, it is intended to incorporate all the Ecologies of Health, reaffirming this empire in the scientific field. This fact has serious implications for Ecology in Health, which homes all knowledge, research and studies that interfacially, inter or transdisciplinarily investigates the human-environment relationship from the point of view of human health.

This action of a simple attribute is not only a manifestation of the semantic power of a word but an expression of the class structure of society in which the hegemonic class guarantees that all social symbologies and meanings express the power relations that constitute themselves. As Marx teaches us, "it is not the consciousness that determines life, but the life that determines consciousness", then words, as a socio-historical production, imposes itself on each consciousness (subjectivity) with the socio-historical content that determined it. That is why the medical attribute in the Brazilian social context, still deeply marked by oligarchic thought, expresses a class power, and such power is materialized in all facets of social life, especially in the health area. That is why the questioning of this attribute in the expression Medical Ecology is not out of its class power, that presents itself through a scientific field as universality. Instead of talking about Ecology in Health, it is usual to speak naturally in Medical Ecology. Such naturalness, however, is not a flawed act, or a simple custom, but a semantic power instituted by a class power. The white collar, the stethoscope and the coat are symbols of an ideology of superiority forged in the class struggle. Ideology is not a product of theory; it is not forged primarily on the theoretical plane, but rather in the historical-social materiality of a society founded on the alienation of the human being, private property, and commodity fetishism. Every ideology reproduces on the theoretical level what happens in the economic sphere, where the product is presented and treated as a producer and the producer as a product. Such a reversal in the real is what Marx calls the Fetish of Merchandise. Ideologies reproduce in the plane of thought this same inversion of the real, fulfilling its function of contributing to the reproduction of the real as it is put, and does this by hiding the genesis of the real, giving the idea of naturalness of the processes of alienation of the human being. We can thus conclude that an ideology is an explanatory theory of the real that does not explain the genesis of the real, contributes to its reproduction. In doing this reasoning we are not asserting that Medical Ecology is an ideology, but we recognizes that the assumption of its attribute is due to a class power that, by allying with the *status quo*, participating in it, feeds all ideologies by using symbols of power, reproduces them as an ideology.

Ecology in health: Expanding concepts and practices

The relationship between the environment and the health-disease phenomenon that goes back to Hippocrates (460-377 BC) in the book *Airs, Waters and Places*, presented under the

name of medical ecology by the French microbiologist René Dubos in 1939, when conducting research on tropical infections and the interaction of the environment in the treatment of diseases (Dias-Lima, 2014), has been receiving a holistic understanding of the human being in his physical, biological, social and economic environment. But would not medical ecology be what it would be called a Health Ecology? Does the term used so far not restrict the multiple approaches and possibilities of other looks dedicated to the health-disease-environment phenomenon? To think about the right to food and food quality, the right to water and access to drinking water, the right to be protected against institutionalized toxic substances by allowing the use of agrochemicals that are increasingly present in Brazilian food, in the broad sense assumed here would not require multireferences? Thinking about health can desconsider leisure, social relations, education, socio-economic conditions, spirituality?

It is necessary to contextualize the discussion of key concepts such as health and health promotion, which will be used quite frequently in this research. We present health as a quality of life, supplanting the definition historically perpetuated by the various health professionals, having as a background the influence of large corporations, among them the pharmaceutical industry and several other agents that greatly influence the logic of government policies throughout the world, especially in developing nations such as Brazil. Likewise, we propose Health Promotion as a set of strategies that allow the empowerment of the various sectors of organized civil society (Ottawa, 1996), the emergence of an intersectoral network to support the many social demands that commonly emerge from within the Brazilian population and which strengthens, among other issues, social control in the Single Health System – SUS (Brasil, 2006). Unfortunately, the emergence of disease outbreaks associated with sanitary issues in Brazil instigates us to retake the discussion of health education practices developed throughout Brazil, emphasizing the training processes of all health professionals, especially those who work in the health sector. And the need to strengthen the production and universalization of research and other successful practices that are usually centralized in academic "niches", reducing their impact and consequently their contribution to improve the quality of the services offered and the life quality, of the population in general. We need a Health Ecology that touches on what Pires (1974) calls Medical Ecology: "Its basic premise is environmental homeostasis, where natural balance depends on a syncretism ecology and health translate the point of balance: this a homeostatic adjustment of the organism with the environment in which it lives." (p. 240).

Diseases such as yellow fever that has devastated especially the southeastern region of Brazil, with capillarization throughout the national territory, the viral triad also transmitted by the mosquito *Aedes aegypti*, which has perpetuated dengue for decades and its complications in the human body and in recent years Zika and Chikungunya, with serious implications for the affected individuals, has fomented the discussion of the need to retake the discussions of public policies of professional formation that allow a broader formation of health professionals, focusing on the inseparability of the human - environment - society triad, with an emphasis on the relationship between societies and diverse ecosystems, transposing the human - disease binomial, according to what Avila - Pires (2000) calls for the

recognition of the set of elements that provoke diseases. It is necessary to break the paradigm of professional training imposed by the productive market, globalized capitalism, considering that: "When it is submissive to market dynamics, education also becomes commodity, and pedagogical work has as its ultimate goal only the preparation of individuals to serve the market," (Gonçalves, 2011, p 121), and this privileges the individuality of the profession, strengthening only the market reserves of historically established professional categories at the expense of the segregation of others.

It is no longer conceivable to dissociate the discussions about quality of life, health-disease process, environment and society, which Dias-Lima (2014) also presents as Medical Ecology, because it is latent that the organism human being when becomes ill only denotes the breakdown of their equilibrium with the ecosystem, be it on a psychological, environmental, economic or even cellular level. The human ecologist, in the perspective of Health Ecology, besides addressing the interconnections of the dimensions punctuated by Pires (1974), breaking the disciplinary academic formation, is educated in another logic of health services organization, looking for life quality of the population according to diverse realities and considering the management of the diverse ecosystems, assuming the indissociability between social/environmental justice and collective health. In this context, we present the concept of Health Care Model beyond the assistencialist concepts of illness, homing inseparable strategies for health surveillance and risk control, coming from the individual to the collective, involving actions to promote health and improve the life quality of the population in general (Teixeira, 2016). In this sense, it is necessary to question, even if in an incipient way, the Private Assistencialist Medical Model, a hegemonic pattern that has been perpetuated in Brazil for decades, having its apogee in the military regime (1964 to 1984), but maintaining its influence pattern until today. It's a hospitalocentric model, focused on pathology, centred exclusively on the medical professional, on the production of results and statistics demanded by the internal and international control bodies. (Paim, 2001). Contrary to this model that prioritizes pathology, the Family Health Model emerges in the last decades of the twentieth century, which over the years has shown itself to be a real alternative to break the Care Model that historically has lowered emblematic issues to lower planes and this has a great influence on the quality of life of the population, the environment, social relations and their psychological, individual and / or collective implications. This model seeks a vision beyond disease, focus in the individual in his family, at the same time that prioritize the collective and the environment (Paim, 2002).

Secular challenges that strengthen the need for amplification of the discussion of human beings relationship with ecosystems

At the beginning of a new millennium, it's became necessary to do a systematic and careful analysis of the advances, the setbacks and challenges inherited from the second millennium of humanity. We can not simply turn the page of the History, as we have historically accomplished, without rescuing relevant and little-faced issues. It is not difficult to find in the books, periodics, Internet sites and in the news in general, several reports about the difficulties that contemporary society in the various nations find in offering a minimum life quality for the general population. The capitalist logic has generated

secular problems that still afflict a large part of the world population, socio-environmental issues ranging from rich and poor disparities, especially in regions most affected by colonialism and wars, high consumption patterns, suicidal food production in as a result of agribusiness, extreme poverty, lack of access to basic health services, basic education, difficulties in eradicating diseases associated with poor sanitary conditions, to which most nations and communities are still exposed (Alvim, 2012). It is in this scenario of social uncertainties that we start our journey in this millennium that begins. Faced with this dismal context in which a significant part of the underdeveloped countries were located, the United Nations (UN) in 2000 called on all its member states to adhere to what it called the Millennium Goals, a list of priorities, which at that time, were identified as critical "nodes" for improving the life quality of the general population and sustainable growth of the most vulnerable nations (ONU, 2000). In 2015, after a robust analysis of the emerging indicators reached by all member countries, the UN launched the Sustainable Development Goals (MDGs), acknowledging the regression and inefficiency of the strategies initially proposed in the MDGs, and respecting the global context of discussion environmental issues, has broadened its objectives.

In this multifaceted context of incessant disease emergence in Brazil, considering both the contemporary diseases associated to modernity and the perpetuation of secular diseases, which insist on aggravating the life quality of the general population, as a result of poor sanitary conditions and degradation of the various ecosystems, it's fundamental researches that may demonstrate the need to expand formative spaces, with an emphasis on the discussion of issues related to Health Ecology. In this way, it is possible the strengthen the health education strategies developed by the various social actors, looking for the emergence of healthy and sustainable environment as it was agreed by UN member states in setting the Sustainable Development Goals.

METHOD, RESULTS AND DISCUSSION

This essay was developed in a qualitative approach through a bibliographical research, reviewing bibliographic productions, characterizing itself by its structure as exploratory research. The terms "medical ecology", "health education", "environmental health" and "health promotion" were used in the search engines commonly used by health professionals / researchers, the Virtual Health Library - VHL and Scielo in recent years five (05) years, having as filters the publications in the Portuguese language and published in Brazil. The result of the first research in Virtual Health Library (VHL) indicated, even in an incipient way, the worrying scenario of the existence of a hiatus in the productions / publications of the various professional categories of the health área. The productions, not going beyond the typification of the medical category, as a totalitarian expression of the Sciences of the Health, on the other hand signal the incipient formation of the various health professionals in the sense of proposing broader actions of health promotion, in addition to the health disease process. By using the term "medical ecology" in the VHL search engine, only two articles were found, but the term "medical ecology" was not identified in the body of the discussion on this topic. The first paper, an official publication of the Brazilian Ministry of Health, highlights the issue of air pollution and presents the several facets of this problem, identifying polluting agents and distributing responsibilities,

but unfortunately distancing itself from the discussion proposed in this article on Ecology in Health, where we propose a responsible discussion of the need to create healthy environments that respect the various ecosystems equilibrium, based on professionals with a broader vision, either from the health-disease-environment processes or from the need to broaden the discussion to the different areas of knowledge, which directly or indirectly influence equilibrium in the relation between human specie and nature, which requires the public power intersectoral actions of various policies (Brasil, 2016).

The second paper concerns to a recurring discussion in the different academic "ghettos" of health in Brazil, the dialogue between traditional knowledge and medical knowledge. We emphasize here the approach that this work has to the medical ecology concept, always polarizing and evidencing the misconception of centralizing the medical figure, acclaimed by the definitive term, the unique protagonism in the development of strategies postulated by Human Ecology. We could see that the previous research presents not only the misconception that we are denouncing in this paper, concerning to medical ecology, but the emergence of the sea surface of this immensity that has become Human Ecology, the need to break this central paradigm of the "medical knowledge", where professionals with higher education in relevant areas of collective health are not recognized as knowledge producers, merely replicators of "medical knowledge". The need to strengthen Health Ecology beyond medical ecology is overwhelming. On the other hand, when we carried out the search excluding the term "medical ecology", using only the terms "health education", "health promotion" and "environmental health", fourteen publications were found, all proposing discussions broadening the concept of disease besides both the biological aspect and the absence of disease. In this way those articles point out the importance of ecology of knowledge (Santos, 2010), in the convergence and dialogue of knowledge and experiences. In the Scielo indexer you can find no articles with the keyword "medical ecology" published in Brazil in the last five years. After analyzing the collected data, including the silence, it's grows the perception that the word "medical" in Medical ecology, as a branch of medicine, distances a significant part of the professional community in Brazil (Souza et al, 2015). This distance reduces participation and contribution of other professional categories in this discussion, disregarding the immeasurable possibilities of a Health Ecology besides the medical figure.

Final Considerations

This study announces some limitations that the term "medical" ecology homes in the visibility of researches in Human Ecology that focus the health-disease phenomenon, considering that the restrictions of the word make distance to the debate the productions coming from multiprofessional health teams. The universe of research possibilities can strengthen problematized issues in Human Ecology as soon as the conceptual paradigm imposed by the medical ecology is broken, considering that it just adds in a incipient way some health professionals, which reaffirms the centralization of the discussion of the health aspects to the hospital aspects and limited to the medical practice. Since the redemocratization period in Brazil, strengthened by the pillars of the Brazilian Health Reform, legitimized by the Federal Constitution, collective health has been able to strengthen health promotion

actions and consequently improve the quality of life of SUS users, with the strengthening and improvement of the professional training processes and the promotion of the protagonism of the multiprofessional teams in health, surpassing the model centered only on the doctor and potentializing the different knowledges. Among the perceptions that emerged in this research, we highlight how the ideology underlying the word "medical" has distanced several productions that focus on the health-disease-environment phenomenon of the Human Ecology locus, weakening it. In this sense, Ecology in Health embodies the break with the colonial model imposed by the various power structures, among which the pharmaceutical industry, research funding and / or research groups that limit the scope of health vision, distancing the perception of the necessary harmonious relationship between the human being and the environment. The contribution of this study will consequently come to the discussion of the professional training of the various actors that play a leading role in the health area, especially in the Unified Health System - SUS, which we will discuss in another study. Ecology in Health affirms a counter-hegemonic perspective of Human Ecology, breaking with the colonial way of doing science, by taking on permanent dialogue with other scientific fields and other non-academic knowledge, denounces the coloniality that imprisoned and dehumanized human beings, with this perspective invisibilized several knowledge and violated nature, the human ontological extension. In a decolonial perspective of producing and disseminating knowledge and experiences, this study recognizes that subalternized subjects and narratives have been fundamental for social and environmental justice.

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