



POST-ABYSSAL KNOWLEDGE: THE EXPERIENCE OF WATER "SEERS" IN THE CAATINGA

***Maria Elizabeth Souza Gonçalves and Luciano Sérgio Ventin Bomfim**

Professores Titular da Universidade Estadual da Bahia – UNEB

ARTICLE INFO

Article History:

Received 17th July, 2018
Received in revised form
27th August, 2018
Accepted 06th September, 2018
Published online 30th October, 2018

Key Words:

Human Ecology,
Hydroesthesia,
Ecology of Knowledge.

ABSTRACT

The objective of this work is to investigate the contribution of water "seers", individuals with a sensitivity to the presence of "veins" of water in the subsoil, whose work has been fundamental to the identification and drilling of artesian wells in the Caatinga. Our universe of analysis was the Municipality of Campo Formoso, Bahia, Brazil. The transdisciplinary methodology crossed the documentary research of the City Hall collection to identify artesian wells defined by "seers" and a semi-structured interview with the municipal technicians and with the "seers" identified by them. The results indicate that the work of "seers" in the identification and drilling of tubular wells in the field of Campo Formoso-BA revealed that the practice/sensitivity of men and women of the backlands as agents for the identification of underground water has been fundamental to the permanence of peasants in the semiarid and specifically in the Campo Formoso Caatinga.

Copyright © 2018, Maria Elizabeth Souza Gonçalves and Luciano Sérgio Ventin Bomfim. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Maria Elizabeth Souza Gonçalves and Luciano Sérgio Ventin Bomfim. 2018. "Post-abyssal knowledge: the experience of water "seers" in the caatinga", *International Journal of Development Research*, 8, (10), 23719-23723.

INTRODUCTION

Human Ecology, which is based on epistemological diversity, presents the importance of science guided by dialogical principles that allow the meeting of various fields of knowledge, and its dialogue with many traditional types of knowledge produced beyond the walls of universities and major research centers. Such meeting allows a diversity of confrontations, announcing a project of society under a network of solidarity allied to the strengthening of silenced voices that echo and reorient science to be at the service of socio-biodiversity. In the Brazilian Northeast, socio-biodiversity manifests itself in the exuberance of the Caatinga, Cerrado, Atlantic forest, coastal region, an ecosystem rich in fauna and flora, but especially in the immeasurable human diversity, composed not only by many different indigenous groups, quilombolas, gypsies, peasants, city dwellers, immigrants, but by the different immaterial patrimonies of which they are representatives, and by the symbolic dimensions of their existence and presence in the world (Feire Júnior and Silva, 2016; Estrela, Marques and Borges, 2012; Jesus and Marques, 2012; Aroucha, Nogueira and Aroucha, 2014; Mira, 2014).

This vast heritage of identity has meant resistance to the hegemonic societal project (Castaño and Hernandez, 2016). It happens both in the affirmation of new intelligibilities, new practices of coexistence with the threatened environment, and in the unveiling of traditional knowledge that has been indispensable to the survival of these groups, but which has been rendered invisible from the condition of valid knowledge in the framework and orientations of Eurocentric science. The ways by which humans relate to the environment in which they live is implied in the dialectical demands they establish. On the one hand, there is a socio-environmental context with its idiosyncrasies, reflecting directly on people's lives; on the other hand, there are individuals with an re-significant authorizing force of experiences and responsible for different responses and ways of dealing with the world. Studies have broadened the knowledge about the biological diversity of the Caatinga (Vitória, Santos and Fortes, 2016; Freire Júnior and Silva, 2016). They address the vegetation, whose characteristics are related to the adaptive capacity to water deficiency (Cabras, Andrade and Santos, 2012), and the different ways by which human groups live. They deal with nature and resist millennia of difficulties and an onslaught of capital over the environment and the people in their biological, sociological and symbolic dimension. In addition to the botanical knowledge developed by traditional peoples expressed by their sacred rituals (Pereira, Tomás and Bandeira,

2012; Tomáz, Morimitsu and Brito, 2012), several other types of knowledge have allowed the coexistence of human groups that migrated to the countryside with natural and cultural adversities, expanding the struggle for the right to live on the land with dignity in light of the education of the countryside as a tool of struggle (Silva and Sena, 2016). Among the several types of knowledge of Caatinga dwellers, this study is devoted to describing the important contribution of water "seers", individuals with a sensitivity to the presence of water "veins" in the Northeastern subsoil whose work has been fundamental for the identification and drilling of artesian wells in the Caatinga. Our universe of analysis was the Municipality of Campo Formoso, Bahia.

Human Ecology as ecology of Knowledge

Human Ecology, as an intersectional field from which knowledge from social and natural sciences converge, is the locus of permanent interaction with popular knowledge historically validated by various human groups. This work assumes that narratives are "subjectivities in action" (Cunha and Silva, 2016) based on an epistemological plurality (Santos, 2010) that recognizes and highlights the voices of several concrete subjects enunciated in diverse contexts of resistance structured by a linguistic referential peculiar to them. It aims to strengthen a new epistemological perspective that reinforces the de-colonial knowledge and extols the discursive/existential/social authorship of struggling individuals, denouncing the capitalist, colonialist and patriarchal societal project (Santos, 2010; Quijano, 2010; Moldonado-Torres, 2010) which forged the material/existential/social conditions under which thousands of excluded people live. In this sense, it is necessary to consider that Eurocentric colonialism has been re-signified to maintain itself as a political and epistemic paradigm thanks to a colonial pillar (Mudimbe, 2013) that supports it. It is a deposit of knowledge with universal value that underestimates and marginalizes many types of knowledge that lie on the other side of the abyssal line (Santos, 2010), thus reaffirming Eurocentric science as defining valid types of knowledge.

However, the oppression of colonialism does not materialize in isolation, but it is articulated with other axes of domination: capitalism and patriarchy (Quijano, 2010). Bodies of black women, rural workers, indigenous women, elderly women, among so many other groups of women, are daily decimated by a civilizational standard established by the waste of experiences, material and immaterial goods, exacerbated consumption, destruction of nature, and consequently by the extermination of disposable groups and peoples for the interests of the Capital. However, where lies the discourse of various human groups and their interrelationships as an area of knowledge as an empirical field? Which narratives do human ecologists want to affirm with a view to keeping on their struggle to review the hegemonic societal project that implies the deterioration of the human being-nature and human being-human being relationships? In this struggle for a societal project established under the aegis of social justice, how to promote cognitive equity, highlighting so many forgotten histories, so many muted voices, so many subaltern bodies?

Assuming Human Ecology as a science where mutual dependencies between social and natural systems are expressed (Pires and Craveiro, 2011). It is also an engaged knowledge that at the same time as it points to the overwhelming criticism of scientific arrogance - which,

besides not accounting for answering the anguish created by the "civilizing" processes, deprived the human being of his condition as an inseparable part of a complex Nature -, also guides to the necessary internal revision of science that can no longer be thought but in its internal plurality and in view of a permanent ecology of knowledge, where a scientific and non-scientific dialogue must take place with great affection for the safeguarding of the soul of the earth, other beings and the human being itself (Marques, 2012). Challenging the spaces set by groups that have historically been dominant and dictated the law is always very difficult and tense because it requires a complex confrontation in light of an ecology of multifaceted and articulated types of knowledge and practices. Santos (2010) calls attention to the suppression of the right to knowledge as a provocateur of the epistemicide on which the Eurocentric knowledge was established. Post-abyssal right presupposes the right to alternative knowledge under the aegis of epistemologies of the South, where new stories, new voices, new languages, new knowledge, new from the point of view of emergency, are given evidence, since they are revisits and re-readings of destructing walls of silence.

In this epistemological plurality, typical of de-colonial times, where one seeks to recover the inventive capacity as an alternative in an exercise of revisiting the spatial and corporal memory (Mira, 2012), and still assuming that this exercise of affirmation of new narratives is a process of decolonization and unlearning, assuming a new and emancipatory conceptual framework, transforming our memory territory into strength and resistance (Martins, 2015), we propose to give evidence to the work of "water seers", people sensitive to underground water, and the importance of this practice in living with the semiarid. We are talking about the practice of hydroesthesia¹, a knowledge already described in 1556 by the physician Georgius Agricola as the search for water and minerals in the soil using a stick of hazel. This physician is also credited with the term "water veins" to refer to the way water circulates underground similarly as blood in the body. It should be noted, however, that the denomination of this practice is embryonic of the radioesthesia, which means sensibility to radiations of materials underneath the earth whose origin goes back the end of the XIX century in France. The term hydroesthesia is, therefore, a delimitation of the radioesthesia by the emphasis on the sensitivity of the human being strictly to water (Gnadlinger, 2001). In spite of the incipience of the literature, Oliveira et al (2011) presented at the VII Brazilian Congress of Agroecology the use of the radioesthesia to locate sensitive points to homeopathic applications in agroecosystems, and in this case, in Cupuaçu cultivation. The Regional Institute for Appropriate Small Farmers (IRPAA) has been an important space for disseminating the practice of hydroesthesia, investing both in the construction of narratives on the topic (Gnadlinger, 2001) and in proposing training spaces for small farmers of the semiarid region, with special emphasis on the promotion of actions to coexist with the Brazilian semiarid and water management, among them hydroesthesia. The (self) formative studies and moments carried out by the IRPAA highlight the importance of hydrostatics as a water abstraction technology that cannot dispense care, such as water management, recognition of characteristics of the subsoil, and political mobilization, so that the public power can, in light of such

¹The practice of hydroesthesia consists in holding firmly two sticks or copper wires with the palms upwards to enable the end to be turned over when passing over groundwater.

popular knowledge, present water policies with the consequent installation of demarcated wells and the subsequent common management of community goods (IRPAA, 2012). Although studies indicate that the drilling and installation of tubular wells without a detailed study by specialists may cause serious environmental problems, depleting groundwater reserves, interfering with water quality (Fagundes and Andrade, 2015) and consequently implying socio-biodiversity, we understand that it is necessary to decolonize the ways by which we learn, how we live and how we maintain our inter-subjective and our intra-subjective relations with the various forms of life. This implies in dialogues with other ways of understanding and being in the world. In addition, one must give visibility to other - besides those recognized - ways of living with the Brazilian Caatinga from experiences, practices and knowledge not appropriated by science. This may point to new interventions by the Brazilian State potentiating the coexistence with the semiarid, especially due to the scarcity of water resources (Oliveira, Rocha and Martins, 2015) and the consequent implications to the life of the Sertão dwellers.

METHODS AND DISCUSSION OF DATA

The transdisciplinary methodology crossed qualitative and quantitative data. We used, at first, documentary research within the Municipality to identify artesian wells demarcated by "water seers" with a sufficient flow that allowed their installation, in addition to a semi-structured interview with the technicians of the City Hall responsible for the service. The data obtained were intersected with the narratives of the "water seers" selected during the first phase of the research as the ones that had the best answers for the identification of water. The ethnographic nature of the research was constructed by the emphasis on narratives, oral history and data obtained from the Municipality of Campo Formoso through the Secretariat of Works and Sanitation, Sector of Drilling and Installation of Artesian Wells and Water Supply. In order to conduct the interviews, we used the procedures required by the Ethics Committee, including the consent of all interviewees through the signing of an informed consent, highlighting, however, the clear manifestation of "water seers" in announcing their names as an affirmation of a skill to be divulged and a socially relevant service to be diffused, although we have, in common agreement, maintained the anonymity of everyone. The documentary research elucidated a fragility of record within the responsible Secretariat, so that it was not possible to formally identify the number of wells drilled successfully from the identification by "seers", except in the speech of one of those responsible, who declared that during the period under his responsibility, around fifteen years, more than six hundred artesian wells were successfully drilled. In the narrative of the oldest technician, here identified as t1, currently retired, but responsible for the Sector from 1997 to 2012, we identified a wealth of information.

The experience of seers has both deconstructed and added with new practices regarding the levels of granite drilling performed by the City Hall, as can be seen in the following speech:

The seers began by undoing the geologists' talk that the drilling in the granite could only reach sixty meters; they said it could drill up to 120 meters in the granite, reaching water; and it really did. After that, the geology went on to say that it could drill up to 80 m. (verbal information, t1)

The technician t1 also considers that the work of "seers" was indispensable for the water supply of many villages and for the care of animals. Although the municipality had a partnership with the Company of Bahia Hydroelectric Engineering and Sanitation - CERB for the identification and drilling of tubular wells, the success in the identification of water by the geologists was not expressive due to the characteristics of the soil of the municipality, as it is observed in its speech: "Geologists only start work if there is a geological formation; then, they have to open the ground with picks; in addition, geophysics loses a lot, even the CERB loses a little, even with good instruments." (t1)

As for the questioning raised about the importance of the knowledge of these "seers" and how the process or ritual of identification occurs, t1 tells us that it is not about knowledge, but about sensitivity that some have and others do not:

They have no knowledge; they have sensitivity. They like to perform a ritual. Press the nose; put a thick wire around the neck. "P" puts a damper on the ear, and uses a copper iron. "Z" uses a thin copper wire. They embellish a lot; they say they know how many meters until the water. They do not know this, but the fact is they really feel the presence of water; sometimes even failing by a meter or two; but there is indeed water, most of the time. There were wells that the geologists discarded, the 'seers' insisted, we went there, risked, and there was water (verbal information, t1).

According to t1, were it not for the drilling of artesian wells, people would have starved to death in the 1990s and early 2000s, when the Caatinga received insipid education policies for living with the semiarid region, encouraging family farming in support of small cattle breeders. The Technician responsible for drilling wells in the Municipality of Campo Formoso from 2013 to 2017, except for the year 2014, here called t2, also highlighted the significant contribution of "seers" to the resolution of the lack of water in many towns in the municipality. He stressed that, for the municipality of Campo Formoso, the work of "seers" has made it possible for men and women to remain in the field, since water from artesian wells maintains human consumption, agriculture and livestock.

Final Considerations

Human Ecology, which is based on epistemological diversity, presents the importance of science guided by dialogical principles that allow the meeting of various fields of knowledge, and its dialogue with many traditional types of knowledge produced beyond the walls of universities and major research centers. As an intersectional field in which knowledge from social and natural sciences converge, Human Ecology is the locus of permanent interaction with popular knowledge historically validated by various human groups. The practice/sensibility of Sertão dwellers for the identification of water in the subsoil has been fundamental for the permanence of peasants in the semiarid region, and, in this case, in the Campo Formoso Caatinga. To demonstrate this practice, to discover subaltern narratives by Eurocentric science and, in the case of this study, the sensitivity to the presence of water, to give life to the memory of countless collectives in the process of dealing and living with nature - producing culture, resisting social injustices due to official silencing that for so many decades characterized the Brazilian

- encanto nos segredos. In Marques, Juracy.(org.). *Natureza Sagrada: ensaios de Ecologia Humana*, (pp. 85-106). Petrolina, PE: Franciscana.
- Vitória, NS; Santos, MAL; Fortes, Nilo GS. Comunidade fúngica de *Syagrus coronata* (Mart.) Becc: Ascomycota anamórficos e teleomórficos. In Andrade, M.J.G de.
- Nogueira, E. M. de Souza. Santos, Carlos A. B. dos. (Organizadores). 2016. *Ecologia e Biodiversidade do Semiárido Nordestino*, (pp.35-46). Paulo Afonso: SABEH, Volume I - Botânica E-BOOK.
