

Terras Pretas in Technique interface: literature reviews

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Abstract. In this text I present on the Terra Preta in interface with discussions on the Anthropology of Technique. The "Terras Pretas de índio", as they are also called, have a strong anthropogenic connotation, in comparison with the soils present in the Amazon. The Terras Pretas, if understood from the perspective of space, according to Milton Santos, who understands it as a conjunction of systems of objects and systems of action, we realize that technique is a register in space, and therefore, a link between these dimensions. In this sense, the techno diversity that exploits the floristic potential of the forest and the soil can make it possible to think about the transformations that may have allowed the existence of Terras Pretas and their variations.

Keywords.: Amazonian Archaeology; Anthropology of Technique ; Terras Pretas;

1. Introduction

In this paper, my own goal is approached about the "Terras Pretas de índio", in the interface of the Anthropology of Technique. This research is an approximation of ideas and reflections that converge between the subjects. I do not intend to present new conceptions about Terra Preta, nor about the Anthropology of Technique, I seek only to present approximations that can be addressed in future work. Since few studies have dealt mutually with these two themes.

Recent approaches to terra pretas have provoked several reflections in different fields of knowledge, such as Archaeology, Geology and Ecology. In Anthropology, reflections on Nature and Culture also receive impacts from this debate. The notion of an anthropogenic Amazon highlights the notion of separation between nature and culture, as if human beings were outside the spectrum of nature.

2. Amazonian Archaeology

Hemming (2011) points out that the first investigations of the Amazon prehistory were of Brazilian naturalists, such as Alexandre Rodrigues Ferreira, in the 1780s, and after a century, came the names like "Domingos Ferreira Penna, Ladislau Netto, João Barbosa Rodrigues and others" (HEMMING, 2011, p. 344). Important names who produced on the culture of indigenous peoples, rock engravings and ceramics. These archaeologists,

however, worked with the absence of evidence, in which their field of study depended on stratigraphy for dating, and the attention was focused on the discoveries in Egypt, the Fertile Crescent, among the Incas and the Mayas.

The ceramics were the initial objects of studies, Spaniards led by Orellana, Hemming (2011) tells us, were amazed by the pottery they found among the riverside indigenous people. One of the most famous styles of ceramics, became known as "marajoara", due to Marajó Island "fitted like a cork into the mouth of the Amazon" (p. 345). It was discovered in 1870 by Ferreira Penna and Charles Hartt. The Marajoara funerary urns drew much attention from these researchers, who describe it for its beauty and level of detail. But Marajoara pottery also appears in utilitarian forms such as bowls, plates or pots. In 1947 radioactive carbon dating was discovered, which made it possible to determine the time elapsed since the death of any organic matter, and in the 1970s thermoluminescence was discovered, which told when the pottery had been fired.

According to Hemming (2011), these improved techniques can show at what time the stone was chipped, it was also followed by improvements in soil study, pedology, and in palynology, which is the study of pollen and seeds. These technical advances, added to research in the Amazon in different places, caused accepted theories to be questioned (HEMMING, 2011, p. 351). At the end of the twentieth century, four questions emerged in the debate: "when did the first humans reach these rivers and forests; in how long did they develop

agriculture and pottery, did they cultivate in clearings or did they do simple forest management; and what would be the extent of this pre-conquest species sophistication. The 1960s and 1980s were marked by the studies of Daniel Lethrap and his students, who proposed the Central Amazon as an important area for cultural innovation in South American archaeology (NEVES, 2022, p. 21). This was explained by the occurrence of very old ceramics and also by the fact of linguistic diversification during the middle Holocene (NEVES, 2022, p. 22). Lethrap's reasoning, Eduardo Neves points out, was that the central Amazon would be a key area due to its radial hydrographic pattern: "it is possible to access northern South America and the Caribbean, via the Negro and Orinoco rivers; the upper Amazon, via the Solimões River; the Paraná basin, via the Madeira and Guaporé rivers, and finally, the Atlantic coast, via the lower Amazon. (NEVES, 2022, p. 22).

Daniel Lethrap, in 1970, also presents a hypothesis coined the "cardiac model", based on the idea that the rich soils of the Central Amazon floodplains would lead to a demographic growth, in which the surplus populations would occupy even the entire floodplains had semi-sedentary populations around them, exploiting the riverside fauna and combined with the planting of tubers (NEVES, 2022, p. 23). According to Eduardo Neves, the initial formulations of the heart model included a series of hypotheses later developed, correlating the archeological record of the central Amazon with the supposed process of differentiation of the linguistic trunks.

3. Terras Pretas

Although this discussion about the origin of the Terras Pretas (TP) is still present, Neves (2022) points out that there is evidence of the formation of the TP over 11 thousand years ago, as discussed in the Pedra Pintada Cave, located near the left bank of the river, in Monte Alegre. This may reveal that the history of the Amazon from the Middle Middle Holocene was marked by demographic densification and landscape changes (NEVES, 2022, p. 123).

The Terras Pretas have been known to science since the 19th century, due to the work of Hartt and Katzer, however, the paradigm shift came to occur in fact in 1980, with the publication of the geographer geographer Nigel Smith (1980), in which he presents the hypothesis that the Terras Pretas had an anthropic rather than natural origin. The importance of this discovery served, above all, to dismantle the ideas the ideas that came from environmental determinism. Neves (2022) calls attention to an article written by Maggers in 1954, which influenced principles of environmental determinism in the archeology of the the Amazon, as a structuring element the hypothesis that "low fertility of Amazonian soils the apparent

impossibility of improving them, was the limiting factor par excellence that determined the the emergence of an itinerant agricultural pattern characteristic of the rainforest" (NEVES, 2022, p. 123).

In the central Amazon, according to Neves (2022), the Terras Pretas were formed in places of habitation and not in the In the central Amazon, according to Neves (2022), the Terras Pretas were formed in places of habitation and not in spaces destined for agriculture. After extensive work developed by PAC, it was realized that the depth of the black earth varies notably within the sites themselves.

"Esse tipo de evidência, ao menos na área de confluência, aponta para uma relação direta e casual entre profundidade de depósitos de terras pretas e áreas de habitação, o que confirma que esses solos se forma de início pelo acúmulo de refugo orgânico doméstico e não intencionalmente, como estratégia de aprimoramento." (NEVES, 2022, p. 125-126)

These soils, therefore, mark the ancient human presence in the Amazon, presenting great importance for the local indigenous importance to the local indigenous populations, which is still present today. This enables us to think about how intentional or spontaneous actions cross temporalities. Today, many of these soils are handled by quilombola populations, as, for example, in Santarém.

According to Lima (2013), "Bom Jardim, Murumuru, Murumurutuba, and Tiningú present traces of Terra Preta (TP) with some food production, as in the case of Bom Jardim and Tiningú" (p. 198). In this context, Márcia Silva (2022) states: "The new labor handlings of the land materialize in Amazonian social, economic, cultural, and ecological practices, rural and urban practices. In this process, new forms of land use are incorporated; new forms of relationships are established [...]" (SILVA, 2022, p. 20)

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4. Spaces, Techniques, and Temporalities

Milton Santos (2006), in *Nature of Space*, says that the main form of man's relationship with the environment is given by technique. This would serve to overcome the nature/culture binomial. "Techniques are a set of instrumental and social means, in which man realizes his life, produces and, at the same time, creates space." Or as Jacques Ellul (1977) coined it, technique is far beyond the mediation of the instrument, for him there is no relationship between man and nature other than technical mediation. This is understood as a continuous fabric between man and nature, but also in the relations between individuals. Here we return to the idea that "human" and "non-human" are inseparable (SANTOS, 2006, p. 14). Such ideals converge with what we saw in Descola (2005), and Tim Ingold (2000).

The Terras Pretas, in this way, demonstrate to be results of constant relations of this body-environment" totality (INGOLD, 2000). For Milton Santos (2006), techniques are a register in time and space, a link between these dimensions. Space then is a conjunction of object systems and action systems (p. 226). The terra preta de índio seems to come from a broad techno diversity, which conjugates elements creating new ways of relating to the soil, demonstrating possibilities of exploring floristic potentials of the forest and the soil. It [the terra preta] is also thought of as part of this system, it is crossed by this set of temporalities that make up the Amazonian space. Thus, terra preta is in the Amazonian "totality", it is part of this system, which "is reality in its integrity" (SANTOS, 2006, p. 74),

The totality is the set of all things and all men, in its reality, that is, in its relations, and in its movement. In his book *Origins of Dialectics*, L. Goldmann (1967, p. 94) tells us that totality is the "absolute set of parts in mutual relation". This is how totality evolves at the same time to become another, and to remain totality. This totality of the real, as Karpik (1972) wants, jointly comprises the Planet, that is, nature and the human community.

To reflect the complexity of the Amazonian reality, Porto-Gonçalves presents us with the geological, geomorphological, archaeological, historical, and anthropological Times (2008, p. 26). Regarding geological time, Porto-Gonçalves (2008) refers to the formation of the Amazon Sedimentary Basin, which is estimated to be 70 million years old. Geomorphological time, on the other hand, begins with geomorphological formation, which takes place between 18 thousand and 12 thousand years ago, a period that marked the last glaciation. As the ice melted, the climate also began to change.

The archeological and anthropological times lead us

to think about the population density of that population that inhabited the Amazon before the European invasion, about 3 million and 780 thousand Indians in the region. Since then, depopulation effects have been observed in the region. Thus, the idea that the Amazon forest is exclusively natural has been increasingly questioned.

Cocoa, for example, may give clues to part of this occupation in the Amazon, considering that where there is cocoa, there were indigenous people, the same that occurs with the ouricuri and pupunha palm trees. The historical time, in the article written by Porto-Gonçalves, is presented starting in 1611, when Fort Presépio was founded, today known as Belém. And it goes up to the current times, which is where all the times act. line.

5. References

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