

40. Ex-rubber tappers' and small farmers' views of weather changes in the Amazon

by
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How do people living in the Amazon forest, and to be precise in the Alto Juruá region of Brazil, understand climate change? Indigenous forest dwellers make their own observations and interpretations from changes in animal behaviour.

Many forest dwellers in the Alto Juruá in Brazil used to work as rubber tappers and are descendants of migrants and indigenous people from the region. This research examined the climate variations they have observed and how they have processed this information.

An impression of the weather is arrived at by observing a combination of weather types, which together comprise a representation of the weather. This article is a phenomenological study of meteorology and climate, and of the forest dwellers' interpretation and representation of these phenomena.

Today most inhabitants have an agricultural lifestyle and pay close attention to the relationship between agriculture and the weather cycles, or their perceptions of them. There is now no rubber production in the region, and agriculture provides income for most local people. The deforested areas are greater in size and are increasing as a result of cattle farming.

The forest dwellers' perception has been transformed in recent years, and they speak of "the old weather" in the forest and "today's weather".

Most of those questioned perceive some changes in the region's winter and summer weather characteristics. The elderly speak about these changes through their life stories. They convey their observations and experiences of what they refer to as "the heat" with authority. Some residents believe that the changes in the weather, and increasing heat, have been getting worse since rubber tapping ended. Deforestation for non-subsistence agriculture and for cattle is mentioned as one of the main causes of the changes in the weather and the reason for "the heat".

Some residents say the current weather causes "sadness in the jungle" because of the heat and the absence of cold spells in summer. They also talk about "smog" or "the veil in the sky", caused by smoke from the increasing number of local fires. This "veiled sky" occurs day and night, with the "smog" blocking out the stars. This means that the sky can

no longer be used to forecast the weather by observing the sun's colour and the position of the stars, which causes errors in prognoses and forecasts. Besides the "smog", residents believe that the position of the stars in the sky has changed.

The inhabitants interpret these changes via Christian eschatology. Indigenous and non-indigenous people also attribute the changes to human agency: for example, those who cut the forest down, which is not "respectful". Local people analyse natural phenomena and the environment in which they live in their own way.

Animal professors

Lévi-Strauss (1989) noted the meteorological role of animals in some mythologies. The people of Alto Juruá compare their loss of reference animals with the changes they notice in the dry and rainy seasons. Other residents link the loss of the animals that could foresee meteorological phenomena to deforestation, pollution, and the end of the world.

Knowledge relating to the stars is common, and is closely linked to the lives of the forest dwellers. Marshall Sahlins (1990: 191) maintains that no event or thing has movement in human society except in the meaning that people give it. Thus, "an event is not only a happening in the world". There is also a relationship between an event and a given symbolic system. In this local cosmology, it is common to use methods to "divine" the weather. Beside the stars, cosmology also involves "animal professors". The behaviour of animals is mentioned in relation to forecasting the weather in the short and medium term. Forest dwellers accumulate this type of knowledge through their practical life in the forest (Mesquita, 2012).

Many people we questioned said the animals had changed their behaviour because of the current "messiness of the weather". They believe animals "have [had] science" or a particular understanding of the weather since the start of the rubber producing era, but are currently "making mistakes". This did not happen before the current changes in the weather. Without their normal references, animals can no longer inform humans about the weather, and are having to "learn everything anew, just like everyone else, because the weather has changed and no longer determines the actions of the animals, poor things".

The forest dwellers attribute ethos and sociability to certain animals, as they do to humans. Many animals are understood as people might be, because they act like them. Many inhabitants report that they have learned the language of a particular animal. Some even understand the language of a particular toad or a monkey species. This allows them to gain some knowledge from these animal "professors", who are currently themselves in the process of relearning new local realities.

This could be termed native science. Lévi-Strauss wrote in *Totemism* (1962) that people may be moved by the necessity or desire to understand the world around them, its nature, and the society in which they live, and that to achieve this objective, they act via intellectual means as a philosopher would or as scientists do.

Conclusion

Governments should take this native science into consideration to give them a better understanding of local realities before taking action, and before putting into practice mitigation and other policies related to climate change.

Bibliography

- Almeida, M. W. B. (1993), *Rubber Tappers of the Juruá River, Brazil: The Making of a Forest Peasantry*, Tese (Doutorado) and Cambridge University Press, Cambridge.
- Bourdieu, P. (1979), *O Poder Simbólico*, Bertrand Brasil, Rio de Janeiro.
- Lévi-Strauss, C. (1989), *O Pensamento Selvagem [The Savage Mind]*, Papirus Editora, Campinas and Companhia Editora Nacional, São Paulo.
- Lévi-Strauss, C. (1962), *Le Totémisme aujourd'hui [Totemism]*, Presses Universitaires de France, Paris; English edn trans. R. Needham, Beacon Press, Boston, Mass., 1963.
- Mesquita, E. (2012), “*Ver de perto para contar de certo*”. *As mudanças climáticas sob os olhares dos moradores da floresta do alto Juruá*, UNICAMP, Tese (Doutorado).
- Sahlins, M. (1990), *Ilhas de História*, Jorge Zahar, Rio de Janeiro.

Erika Mesquita's main research interests lie in anthropology, particularly indigenous and traditional people and environmental issues.



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