



How Human Niche Construction is tied to the landscape perspective of domesticated landscapes and how this may help the discussion about the offset of the Anthropocene

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This research is based on a review of published examples of geoarchaeological and landscape archaeological research throughout Europe. Through environmental reconstruction we relatively date the starting points where humans a) are altering their own selective environment as an inceptive change, b) respond to a (deteriorated) selective environment in a counteractive change. It is stated that geoarchaeology and landscape archaeology make a valuable contribution to NCT studies in considering landscape gradients as focal lines. NCT phase transitions from inceptive to counteractive changes are proposed as useful alternative in the debate about the onset of the Anthropocene.

While searching for a relevant approach to define this period where humans are driving the Earth, we discuss the pitfalls of the dialectic Nature/Culture and social/environmental divides and finally we prefer to approach the issue from the complex system perspective which does not oppose 'humans' with 'the rest'. In complex systems, such as Earth system, linear cause consequence relations do not exist. Therefore the response of the system is not always related in time, space or proportions with the causes.

On this basis, we present an alternative definition of the Anthropocene based on the causes of the changes instead of their effects. These causes are to be found in the change in human behaviour. The Niche Construction Theory conciliates the causes and the complex system approach previous remarks: that the effects are not easily correlated with the causes of changes. This is the point of view adopted by Zeder and Smith (2013) who argue that the onset of the Anthropocene is the start of Neolithic revolution, matching the lower boundary of the Holocene.

Zeder M. A. and Smith B.D. (2013). The onset of the Anthropocene. *Anthropocene*, 4:8–13.