

Empirical tests of theories of cultural evolution are (relatively) rare. Those using rigorous archeological datasets, even rarer. These reasons alone suffice to make *The Origins of Monsters* a must-read for anyone interested in exploring the interface between cognition, societal infrastructures, and the spread (and design) of cultural items.

But let's get straight to the heart of the matter. David Wengrow's main argument rests on two basic assumptions:

1. Composites (i.e., fictional beings produced by recombining the anatomical subunits of taxonomically different beings) eloquently typify the balance of intuitive and counter-intuitive elements, which, following Boyer and Sperber should make cultural items attention-arresting and memorable;
2. The epidemiological model should attribute to cultural items exhibiting such properties a selective advantage in transmission and diffusion, supporting the prediction that they should be, according to Boyer (2000) "both relatively stable within a group and recurrent among different groups".

To simplify, according to Wengrow, if composites do indeed exhibit the right combination of "rich intuitive base" and "limited series of violation of intuitive theories" necessary for the successful transmission of a cultural item (Boyer, 1994), we may expect a (more or less) uniform distribution of composites across geographical areas and ages, from the earliest combinatorial experimentations in human visual culture.

Gathering an impressive wealth of archeological data, Wengrow argues that it is far from being the case. Composites are in fact virtually non-existent before 4000 BC, a period when the institutional foundations of early urban societies were finally being laid down. Hence, Wengrow's question: "if the popularity of minimally counterintuitive images is to be explained by their core cultural content and its appeal to universal cognitive biases, then why did composite figures fail so spectacularly to "catch on" across the many millennia of innovation in visual culture that precede the onset of urban life?" (p. 50).

This apparent paradox exists only insofar as assumptions (1) and (2) are satisfied. As for the first assumption, Mathieu Charbonneau already forcefully argued that this may in fact not hold ground: composites, to put it simply, may not have the "shock value" required to make them cognitive attractors, in the sense epitomized by Boyer's religious entities.

As for the second assumption, on the other hand, it seems to entail that, for an attractor to qualify as such, it should be uniformly spread in the archeological record (this being a signature of the selective advantage in diffusion that the "attractive" cultural item enjoyed). This strikes us as an excessively demanding diagnostic criterion of attraction, for reasons that we shall unpack below.

Recent developments in cultural attraction theory have distinguished, amongst others, two basic types of attractors: cognitive and motivational. As defined in Olivier Morin's book:

"A tradition has cognitive appeal when it fits our information-processing capacities. This makes it easy to store and reproduce. It is motivationally appealing when it taps into emotional or decisional mechanisms that make us want to use or transmit it. The first kind of appeal has to do with the ease of communicating, recalling and reproducing it. The second kind bears on whether or not we want to do all these things." (*How Traditions Live and Die*, p. 148)

Importantly, both kinds of attraction may be more or less limited in scope: linguistic rules (an instance of cognitive attraction), which today's speaker find intuitive and easy to learn, may not have appeared so to previous generations; similarly, traditions which successfully spread through a population due to being promoted by political authorities would have no particular force among people outside the influence area of those authorities.

In sum, leaving aside whether composites qualify as instances of cognitive or motivational attractors, there is nothing inconsistent in principle in these cultural items making a late and geographically sketchy appearance in the archeological record. The association between mechanical techniques of image production and the spread of composites, which Wengrow considers "puzzling", insofar as it would imply "a superfluous cultural prosthesis to cognitive predispositions that are already biased towards the reception of such images" (p. 80), is in fact fully compatible with the possibility of composites being local attractors.

This, however, still leaves open the question as to what type of focal points for cultural transmission the emergence of large-scale societies (henceforth, LSS) provided.

We shall first entertain the hypothesis that LSS supported the proliferation of composites by making them cognitively attractive. One may argue that the transition to LSS societies, which — as Wengrow suggests (p. 68) — was accompanied by the cultivation of new technologies based on modular principles of assembly, could have raised the salience of those cultural items more fittingly reflecting these compositional principles. In this sense, composites would become cognitively attractive (i.e., easier to remember and reproduce), because particularly suited to means of artefact production based on compositionality.

It is important to emphasize that in this scenario LSS does not provide a template for the *ideation* of composites, but rather for their realization. This clarification is essential to safeguard our (speculative) account from far more radical interpretations of the role that LSS played in explaining the sudden appearance of composites. Wengrow himself seems to vacillate in several occasions throughout the book (as well as in the précis) between a lean account, akin to the one we just sketched, where LSS "merely" supplied the institutional and technological means for the proliferation of composites, and a thicker one, according to which the institutions of early urban life stimulated a genuinely new type of intuitive knowledge within which the counterfactual properties of composites were grounded. To put it with Wengrow, the early urban life:

"fostered the cultivation of an otherwise latent mode of perception that confronts the world not as we usually encounter it — composed of unique and sentient totalities — but as a realm of divisible subjects, each comprising a multitude of fissionable and recombinable parts." (p. 110)

While Wengrow is careful not to suggest that navigating the institutional environs of early LSS may have directly honed in the combinatorial skills required for the production of composites (an even more far-fetched claim, no doubt), the statement above nonetheless suggest that the "urban experience" may have awakened a dormant compositional cognitive style, which he find typified in James Scott's idea of "seeing like a state". Behind this evocative simile, however, we fail to understand which specific relational schemata or conceptual frame the gradual familiarisation with the centralised bureaucracy typical of LSS could have supplied.

Long predating the advent of modes of large-scale social organisations, the technological life of pre-state societies in fact already presented a number of adaptive challenges that may have solicited the

emergence of compositional abilities suspiciously akin to the “latent mode of perception” above described, as the production of composite tools documented in several hunter-gatherer groups attests. A proponent of the above account would then be hard-pressed to define just how specific, and how different from the cognitive routines of ‘basic’ analogical and compositional reasoning, was the representational mode that LSS made accessible.

This is especially the case, if we consider that (a) not all LSS were similarly characterized by the adoption of composites, and (b) performative arts — which may have been a feature of prehistoric performances (a possibility that Wengrow hints at in the *précis*) — prominently feature body-wear that is strongly reminiscent of the principles of anatomical re-shuffling underpinning composites.

These two considerations alone suffice to doubt the claim that LSS solicited the adoption of a new conceptual schema only as a function of some (underspecified) conceptual matching between this “latent mode of perception” and the principles of inter-relatedness, embodied in the institutional settings of LSS, that are supposed to reflect it. These two signature limits of composite distribution, on the other hand, are perfectly compatible with the possibility that LSS may have provided instead a set of political and socio-economical motives for the transmission of these cultural items.

According to this second account, based on the idea of *motivational* attraction, LSS boosted the attractiveness of composites via the provision of an increased motivation to ‘use’ them. Consistently with this possibility, Wengrow charted out three modes of transmission (transformative, integrative, and protective) intended to explain the diffusion of composites on the basis of the societal and political function that these should have served. Each of these modes, Wengrow suggests, is associated with environments of heightened risk where failure to properly negotiate boundaries would be often catastrophic:

“Within the transformative mode, status accrues to those groups within society who can establish stable relations with an encroaching outside world. The integrative mode is associated with the tense theatre of court diplomacy, with its fragile alliances and fateful transgressions. And the protective mode [...] is a direct response to threats against the household.” (p. 106)

Regardless of how accurately this tripartite classification cuts at the joints of the functional spectrum of composite use, and how legitimate is to equate “modes of transmission” to functionalist descriptions (since the former may encompass mechanisms having nothing to do with the ascribed function of a target cultural item), this account seems, unlike the previous, immune to the perils of radicalising the role of LSS. Far from providing “modes of practical and abstract reasoning”, LSS here supply a suite of social and political reasons (among which we would tentatively include the “branding” of manufacture sources for products destined to long-distance trade) that should promote the adoption and diffusion of composites in large-scale formations.

To conclude, despite Wengrow’s book represents a fresh and rigorous attempt to put the epidemiological framework to test with archeological evidence, we fear that the author’s efforts may have been partly vitiated due to a set of assumptions about cultural attraction (such as its general scope and exclusively cognitive nature), which we argued as being unwarranted. As emphasized already, cultural attractors are in fact compatible with (a) local, historical phenomena, and (b) strictly motivational factors. Admittedly, however, the lack of clear-cut diagnostic criteria for cultural attraction, such as the uniform diachronic distribution of cultural items, may run the risk of making this notion dangerously close to unfalsifiable on the basis of archeological data alone.