

## The Descent of Culture

### A Commentary on Stephen K. Davies, *The Artful Species* (Oxford: OUP, 2012).

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Do our capacities for aesthetic experience and for making art have evolutionary explanations? A thinker tackling these questions must deal with two sources of complexity that make yes/no answers unpromising. First, the focal abilities that might be candidates for evolutionary explanation are complex and varied. The appreciation and production of the aesthetic involve diverse perceptual, emotional, behavioural, conceptual and attentional capacities.

Evolutionary processes may explain some, all, or none of them. Consider our enjoyment of a verdant landscape, with beasts calmly grazing by the trees and drinking from a slow-flowing river. It is one thing, for example, to suggest that the trichromatic visual systems that help explain the perceptual character of such a scene have idiosyncrasies that are best understood as solutions to the ancient problem of how to detect ripe fruit against a dappled background.<sup>1</sup>

It is something else entirely to suggest that a de Wint painting appeals to us because our ancestors' survival depended on their finding similar landscapes beautiful. Second, the resources that might be used to fashion an evolutionary explanation are equally multifarious. Researchers on the evolution of human cognition and human culture only rarely seek to explain cultural phenomena in the classic adaptationist style: namely, as genetically inherited adaptations to stable environmental problems, favoured by natural selection for their contribution to individual reproductive fitness. Newer work in these areas appeals to evolutionary processes other than natural selection, to non-genetic inheritance processes, to

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<sup>1</sup> John Mollon, '“Tho’ She Kneeled in that Place Where they Grew” The Uses and Origins of Primate Colour Vision', *Journal of Experimental Biology* 146 (1989), 21-38.

selective processes that occur at levels above and below the individual, and to the ways in which our environment has been and is still being modified and sustained by our own actions.<sup>2</sup> In the domain of art, there are many capacities evolutionary processes might explain, and there are many ways in which they might explain them.

Stephen Davies's sensitivity to these complexities is the greatest strength of his book. He even-handedly criticises both evolutionary biologists who are naïve about art, and aestheticians and other humanities scholars who are naïvely dismissive of biological explanations—or naïvely *enthusiastic* about them, hoping to find in selective function a normative justification for art or its academic study. Much of Davies's scrupulously careful book has a negative character. He offers incisive criticism of many evolutionary efforts to explain the production and enjoyment of art, and equally criticises attempts at wholly non-evolutionary explanations, but he does not offer any detailed account of the evolutionary origins of art in their place. Instead, he leaves us with a sense of how difficult it will be to develop sensible views about these matters. Davies realizes that his refusal to come to strong conclusions will frustrate some readers, but the lack of a 'Davies thesis' does not make his book less valuable. It is an exemplar of how to occupy a reasoned middle-ground in a series of polarized debates, it shows the value of approaching aesthetic appreciation and the making of art from an evolutionary perspective, and it demonstrates an admirable ability to resist jumping to any simple conclusions. Let us focus, now, on some points of criticism.

Davies has a nuanced view of the relationship between nature and culture. Culture, he says 'is not independent of biology' and evolution is 'not necessarily separable from cultural

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<sup>2</sup> Kim Sterelny *The Evolved Apprentice: How Evolution Made Humans Unique* (Cambridge, MA: MIT Press, 2012).

processes and change'.<sup>3</sup> He is aware of important recent work on 'gene-culture coevolution', which stresses the ways in which cultural changes—such as the invention of dairying—can bring about genetic changes—such as the spread of alleles promoting lactose tolerance—and vice-versa. He is rightly sceptical of the existence of a single dominant environment in which our species acquired its characteristic evolutionary adaptations, and so of efforts to simply read off our aesthetic dispositions from knowledge of the Pleistocene savannah.

In spite of all this subtlety, Davies sometimes links the three notions of 'human nature', 'the biological' and 'evolutionary explanation' in ways that suggest a clear distinction between the natural and the cultural. Consider his comment that 'some, but not all, aesthetic interests and responses have biological underpinnings. To that extent those responses reflect our shared human nature'.<sup>4</sup> This implies that if a response has a biological underpinning then it is part of human nature, otherwise it is part of culture. Elsewhere Davies classes behaviours that do not have evolutionary explanations as 'technologies', which means they are '*enabled* by, rather than *produced* by, our biological natures. They are learned via culture and achieved by us, rather than being genetically transmitted'.<sup>5</sup> So, on Davies's view, that which is learned from others is not part of our evolved nature, while that which is acquired by genetic transmission is.

This way of thinking comes under pressure from recent work in the evolution of cognition, which suggests that some important psychological capacities—such as our ability to imitate

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<sup>3</sup> Ibid., 148-9.

<sup>4</sup> Ibid., 6.

<sup>5</sup> Ibid., 148.

others—might be acquired by learning from others.<sup>6</sup> For capacities such as these, it makes no sense to distinguish between the evolved and the cultural, or between human nature and human culture. The ability to imitate is widely distributed, it is ancient, of course it has a neurological basis, and it is of exceptional importance for the ways in which our species has changed over time. In those senses it is part of human nature and subject to evolutionary explanation. But its origins and maintenance are plausibly explained by appealing to learning processes carried out in socially structured environments. In that sense it belongs to culture. Davies tells us that human nature is ‘biologically evolved, culturally situated’, but he could just as well have said it is biologically situated, culturally evolved.<sup>7</sup>

These worries make us question Davies’s taxonomy of evolutionary processes. Although he briefly considers non-adaptive processes, such as genetic drift, the great majority of his book addresses the ways in which we might link art to natural selection. He supplies us with four possibilities for drawing such links. If those who made art had more children as a result, and if this process explains its prevalence now, then art-making is an *adaptation*. If the skills required to make art were instead selected for their roles in quite different endeavours, such as hunting or building, then art-making is a *by-product*. If art-making became prevalent because of its adaptive value, but it is no longer of service, then (like the human appendix) it is a *vestige*. And if, instead, the skills used to make art are constructed through learning, in a creative manner that magnifies, modifies or replaces traits selected for some other purpose, then it is a *technology*.

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<sup>6</sup> Cecilia Heyes, ‘Grist and Mills: On the Cultural Origins of Cultural Learning’, *Philosophical Transactions of the Royal Society B* 367 (2012), 2181-2191.

<sup>7</sup> Davies, *The Artful Species*, 6; Tim Lewens, ‘Human Nature: The Very Idea’, *Philosophy and Technology* 25 (2012), 459-474.

Aniruddh Patel, whose work Davies discusses in Chapter Ten, claims that music is a technology in this sense. Patel thinks that music is like fire. Fire provides us with things we seek, but while these goals—warmth, security and easily digestible food—may have evolutionary explanations, fire itself does not. Fire was discovered by inventive learners. Hence it would also be misleading to think of fire as a *by-product* of evolutionary processes, as though fire-making is something that comes ‘for free’ as a result of natural selection shaping other capacities. Music, too, says Patel, is not a by-product of evolution. It yields benefits for our ‘emotions, rituals, memory and sense of identity’, but it is something we have created through an effortful process of invention.<sup>8</sup> We should not be puzzled by music’s ubiquity: fire, too, exists in all human cultures, but that is because fire is a good solution to a common set of pressing problems. Fire, like music, is the sort of technology that is discovered again and again.

Davies argues that Patel has exaggerated the parallels between music and fire, and he also suggests there may be better parallels between what Davies calls ‘music behaviours’ and the ability to acquire language, which is usually regarded as an adaptation. While the benefits of fire are obvious enough to potential users to explain its widespread adoption, Davies doubts that the benefits of music are so palpable. Fire is not usually valued for its own sake, but for what it enables us to do. Not so for music, says Davies. It is also worth noting that while it is obvious how fire provides warmth and cooked food, it is much less obvious how music yields the benefits both Patel and Davies seem to acknowledge with respect to human emotions, our sense of identity and so forth. So there may be room for evolutionary explanation when we come to explain our receptivity to music.

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<sup>8</sup> *Ibid.*, 156.

Davies is not convinced by Patel's theory of music-as-technology, but he does think there is a good distinction between technological and evolutionary accounts of human traits. Davies agrees that 'the possibility of gene-culture coevolution should make us wary of regarding culture generally, including art, as technology', but that is because he thinks such work indicates that technologies might have knock-on effects on our 'biology as a species'.<sup>9</sup> Our reading of Cecilia Heyes's work makes us question the very distinction between technology and evolutionary adaptation.<sup>10</sup> If Heyes is right about imitation, then this capacity is learned, and it is not something that arises automatically as a side-effect of other selected capacities. In that sense, the capacity to imitate is a technology. But while the inheritance mechanism that explains how imitation is transmitted is cultural, imitation itself is more or less universal, it appears early in development, and it is also developmentally robust. These are all features Davies takes as signs of evolutionary origin. Heyes does not deny that the capacity for imitation is adaptive, nor does she deny that it is widespread because those who had it did well, in virtue of their capacity to acquire other useful behaviours. Some evolutionary adaptations, it seems, are cultural.

Heyes's work is, of course, contentious, but work on niche-construction and developmental systems theory has also led theorists to distinguish the question of whether a trait is subject to evolutionary explanation—roughly speaking, whether its form and distribution can be understood by appeal to iterated cycles of reproduction over fairly long periods of time—from the question of how the trait is re-constituted from one generation to the next. While these lines of thinking open up new explanatory possibilities for the descent of art, they also

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<sup>9</sup> *Ibid.*, 149.

<sup>10</sup> Heyes, 'Grist and Mills'.

muddy the epistemic picture. If evolutionary and cultural explanations are distinct, we can perhaps use markers like universality, ontogenetic robustness or early development to distinguish them. If they are not, we cannot.

Perhaps, in the end, Davies' scepticism is inescapable. It is hard to acquire information about the roles of apparently artistic behaviours in early cultural economies, about how putative examples of early artworks were used, about how they were received, and why they were produced. We can make a stab at inferring likely evolutionary histories from what we know about the functions of art today, but one person's abductive inference is another's just-so story. And since we are as yet unclear what instrumental benefit, if any, art ultimately provides, we have to infer function and history together. Nonetheless, we suspect humans are no more likely to stop trying to explain art than to stop making it. Davies' book, despite its pessimism, is the most helpful contribution to that project that either of us has yet read.

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