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Important note: This is a final draft and differs from the definitive version, which is published in **British Journal of Aesthetics**, 60 (2020): 368–370. I have been assured by the University of Auckland's research office that if they have made this publicly available then it does not violate the publisher's copyright rules.

Richard A. Richards, The Biology of Art, Cambridge University Press, 2019, isbn: 9781108727846

This eighty-page book by Richard A. Richards is in Cambridge's elements in the philosophy of biology series, which provides "concise and structured introductions to all of the central topics in the philosophy of biology." It meets these conditions admirably. As well, it is clearly written and highly accessible, avoiding jargon and explaining technical terms where required. It judiciously evaluates arguments and positions for their merits and faults. It can be read usefully by those whose interest is more in art than biology, including undergraduates.

Primary candidates for the definition of art – functional, institutional and historical theories, as well as the cluster approach – are reviewed at the outset. On balance, a cluster account is preferred, though functional definitions point to ways art is valued.

In studying art, scientists consider the determination of aesthetic preferences, the identification of factors that operate in the formation of aesthetic judgments, and the discovery of the psychological and neurobiological mechanisms that operate in the creation and experience of art. In doing so, they appeal to phenomenology or felt experience, observational or experimental studies, and neurological investigations into mechanisms. But philosophers have expressed scepticism about some of this. In particular, scientists do not explain what it is to create and appreciate art self-consciously in terms of the concept of *art*, and they do not account for the normativity of the concept, that is, for why we *should* do or value this and that kind of art as opposed to describing what we do and value in fact.

Chapters Three introduces evolution to the mix. Engagement with art seems to be universal, it emerges spontaneously, and is a source of pleasure, so art is a candidate for being an evolutionary adaptation. But on the other hand, we have too little information to reconstruct its origins and it serves many different functions. "The correct explanation of storytelling might be complex and based on multiple functions. It is possible, for instance, that storytelling began as a by-product of language skills and higher-level cognitive functions, that then became the basis for fitness display and was favored by sexual selection, after which it acquired other purposes, the education of offspring, the manipulation of listeners and the establishment of social status that might serve survival purposes. If so, we cannot explain storytelling simply as either a survival or reproductive adaptation. It may be both of these things, and in multiple ways, as well as a by-product of other adaptations" (27). The same applies to dance, music, and other arts.

Psychologists have variously stressed different forms of engagement with art – optimal arousal (Berlyne), comparison with prototypes (Martindale and Moore), and processing

fluency (Reber). That is, they consider how art and the aesthetic interact with our perceptual systems. Meanwhile, neurologists consider the underlying brain mechanisms that are thereby activated and how these stimulate the brain's reward systems. Mirror neurons are used to explain how observing art stimulates motor and emotional circuits evoking action plans, empathy, and the like.

To this stage, the material will be largely familiar to those who work in the area. And the even-handed style of argument is consistent: the strengths of each view are explained before it is criticized and ultimately found wanting, at least if it is offered as capturing all that is central to art and its appreciation. Much of what happens in the final two chapters is new, however.

Chapter Five on the ecology of art emphasizes how our species is unique to the extent that it engineers its environmental niche and goes on to explain the nature of the art niche with its various technologies (buildings, tools, theories, educational systems, forms of knowledge). Richards employs ideas derived from John Searle in describing the institutional hierarchies, roles, and conventions of the art niche.

I was expecting this to lead to questioning the usefulness of adaptation-versus-spandrel talk with respect to artistic and other human behaviours. Those evolutionary notions are typically explained in terms of how the relations between a creature's traits and its environment affect (or not) its re-productive potential, but if the organism fabricates its environment to suit itself ... Instead of this, however, Richards uses the idea of the art niche to reply to the conceptual and normativity concerns mentioned earlier.

The concept can be implicit in the practices that characterize the niche, so need not always be present in the mind of the person who operates there. That seems reasonable, but won't help us with the puzzle of the very earliest art, which was not made against an institutional background. It might be better to argue that, while art-making must be intentional, it need not always be describable by the maker in art-conceptual terms. The art maker aims at certain goals and her work can be appreciated in terms of how well she succeeds in this, but it might only be others who appreciate that these goals are art-creating ones.

Meanwhile, the collective recognition and acceptance of the relevant technologies by niche occupiers legitimize and make normative what happens within the niche, establishing what should be done or valued there. Can we adopt a niche-independent evaluation of such matters? Yes, but this perspective is individual and personal. This explains how we can say "I know it's good (on niche-dependent grounds) but I don't like it." More generally, the possibility of conflicts within niche-dependent criteria for value, as well as between niche-dependent and niche-independent criteria for value, explain why the evaluation is of art is so complicated and contestable.

Though it allows for many layers of complexity, this last argument still seems too simple. Niches are nested within niches, and we can evaluate one niche in terms of the nichedependent goals of the other to which it belongs if they do not all work in harmony. Better than appealing to personal values, the evaluation of a given cultural, sub-niche group might rather point out how its values are at odds with those of the wider niche of which it is a

part. For example, we might argue that organized racist groups undermine the values of tolerance on which the wider social peace depends. In other words, it looks as if the normativity worry has not been dispatched by arguing that niches generate normative constraints on their occupants: the niche-dependent norms of the art niche can always be interrogated for how they mesh or do not mesh with the niche-dependent norms of the wider niches that subsume them, and it is not clear that the sciences of art can contribute to this process.

Richards has an interesting suggestion for the end: that aesthetic behaviours and biotic art have emerged (like the wing, the eye, or intelligence) at different times and places on the evolutionary tree. We recognize the functional sameness of these traits, while seeing how their expression will be relative to their setting. A spider's dance might entrance its mate without appealing to human aesthetic tastes.

Here Richards seems to follow the assumption in empirical aesthetics that equates aesthetic experience with all perception-based hedonic responses (33). In doing so he rejects as too narrow the idea that the aesthetic response focuses on the beautiful and sublime (as against, say, the tasty and sexy). "On this construal aesthetic experience is rare and difficult, and typically occurs only in special places — museums, theatres and concert halls" (33). But this is hardly fair, given that nature has always been regarded as a source of aesthetic experience, that current work on aesthetic experience of the everyday is flourishing, and that the idea that aesthetic experience presupposes a special state of disinterested attention that disregards the kind and functions of its object has been challenged for decades.

Though he ultimately agrees that the equation of the aesthetic and hedonic response is too broad (33), as is the notion of biotic art (61), Richards sees benefits in these approaches because, unlike exclusively human-oriented perspectives, they allow us to recognise the biological universals and similarities that make us continuous with the rest evolved life. For my part, however, I do not see why we cannot acknowledge the sources of our aesthetic and art behaviours in other creatures while also noting the crucial differences.

Despite the quibbles a review like this is bound to raise, there is a great deal in this skilfully written book that is admirable, wise, and worthwhile. I recommend it highly.

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