

Except for Katja Mellmann's and Ellen Dissanayake's contributions, all the following essays began as presentations given at a panel discussion on Stephen Davies's *The Artful Species* at the 19th International Congress of Aesthetics in Krakow, Poland (July 21–27, 2013).

A PRÉCIS OF *THE ARTFUL SPECIES*

STEPHEN DAVIES

I first became interested in non-Western art long ago. One of my first degrees was in ethnomusicology. But analytic philosophers of art, of whom I am one, tend to focus on Western fine art, even if they acknowledge other varieties. This is the approach adopted in my introduction to the area, *The Philosophy of Art*¹ and in most of my academic writing. By contrast, *The Artful Species*² is written to be accessible to a broad audience, though the scholarly background research is retained after the book's main text.

I began thinking about connections between evolution and aesthetics and art in the late 1990s but it was a long time before I felt in a position to publish on the topic. I was prompted in my interest by two New Zealand colleagues and friends, Denis Dutton and Brian Boyd, both of whom were beginning to develop their views on the subject at that time. I was also inspired and educated by the writings of Ellen Dissanayake. Without these influences, *The Artful Species* would not have been written.

As a philosopher, I try to be non-polemical and fair-handed in my treatment of people's positions, but the outcome is often critical. To be frank, I anticipated finding more convincing arguments than I did. But in questioning common lines of thought, my aim is not only to expose unfruitful directions or moves but also, and more importantly, to stimulate a more careful and sophisticated debate on the part of those who describe art and the aesthetic as products of evolution.

The Artful Species is divided into three sections.

¹ Stephen Davies, *The Philosophy of Art* (Oxford: Blackwell, 2006).

² Stephen Davies, *The Artful Species: Aesthetics, Art, and Evolution* (Oxford: Oxford University Press, 2012).

The first introduces the key notions. I characterize our aesthetic sense as seeking the beautiful or awesome. I consider evidence for the origin of this sense in the axe-making of our hominin predecessors 400,000 years ago, indicate why it is unlikely that most other animals share this sense with us, and distinguish my account from one that is too broad in equating the aesthetic with all forms of perceptual pleasure and from one that is too narrow in equating the aesthetic with the cognitively informed but disinterested perception of form. In Chapter Two, I adopt a broad view of art and argue for its ancient origins and universality, as against a theory that sees it as an invention of the European Enlightenment and confines the notion to that of Western fine art. I review animal behaviours that have been described sometimes as artistic, but I conclude that these typically lack the generativity and flexibility that are characteristic of artistic creation. In Chapter Three, I outline the theory of evolution, consider the relation between natural and sexual selection, discuss some non-Darwinian models of evolution, such as multilevel selection, and describe the assumptions and methods of evolutionary psychology. Finally, I explain how the aesthetic, art, and evolution might be connected. I point to various aesthetic preferences and art behaviours that appear to be universal. And I identify pitfalls to be avoided in pursuing the question of whether aesthetic and art behaviours are products of human evolution.

Part Two is about the aesthetic. I first consider humans' aesthetic interest in non-human animals. Despite its intrinsic appeal, this is a subject that has been only rarely discussed before. I identify a range of possible aesthetic responses. These include ones that might be evolutionarily useful, such as when we take pleasure in the beauty with which animals are adapted to their lifeways. But they might also be maladaptive, for instance, where we overly anthropomorphize animals. And they can be entirely distanced from evolution, as when we regard ornately plumaged birds as kinetic arrays of colour and form. In Chapter Six, I criticize the idea propounded by evolutionary psychologists that many of our current landscape preferences were shaped in the Environment of Evolutionary Adaptedness, the African savannah, in which our ancient forerunners lived. Against this, I object both that our predecessors were subject to considerable environmental and climatic instability and that our knowledge of their social practices and of how these buffered them from their physical environs is too incomplete to yield a positive account. I suggest that we are generalists, able to live in most environments. Nevertheless, I acknowledge a 'low level' landscape aesthetic preference for easily negotiated, temperate, fertile, water-rich lands. The vexed subject of human beauty is the topic of Chapter Seven. There I challenge the approach in evolutionary psychology that reduces human beauty to the topic

of youthful female sexual attractiveness in the context of mate selection. I argue, instead, that beauty is more about presentation and performance in many social contexts and over long periods. It is only when seen in such terms that we can find human beauty in childhood and old age, as we do, and connect this more broadly to judgements of beauty with respect to nature, art, and abstract qualities of character and thought.

Part Three focuses on art and it reviews adaptationist theses, for the arts both collectively and individually. An alternative suggestion, that art is not directly adaptive but is instead an adventitious by-product or spandrel of other behaviours that are adaptive, is considered. The view that art is so distanced from evolution that it should be thought of as a cultural technology is also examined. Though there is much to value in the theories promulgated in advancing these various positions, ultimately I criticize most of them. In part, this is because many competing theories have been proposed as explaining the same thing, with none better established than the next. Though I think it is plausible to see art behaviours as intimately connected to evolution – and for this reason reject the cultural technology approach – it is not clear how to judge whether they are an adaptation or a by-product. Either way, they can qualify as distinctive aspects of our human nature.

In her commentary later in this issue of *Estetika*, Katja Mellmann nicely captures where I end up; that is, as subscribing to ‘the eminent proximity of art behaviours with human nature.’ These behaviours ‘directly exploit existent adaptations rather than merely building upon them for superstrate cultural reasons.’³ I regard art behaviours as unusual in being costly yet universal. They are able to signal their costliness as a result of the fact that their expressions from person to person vary significantly, even if many people attain high levels of expertise in one or another art. This means that they are complex and subtle markers of biological fitness and, hence, are evolutionarily significant, as well as securing them a central place in human nature.

Stephen Davies

Department of Philosophy, University of Auckland,
Private Bag 92019, Auckland Mail Centre, Auckland 1142, New Zealand
sj.davies@auckland.ac.nz

³ Katja Mellmann, ‘The Question of Adaptation and the Question of Structure: A Reading of Stephen Davies’s *The Artful Species* from the Viewpoint of Literary Theory’, this issue of *Estetika*, 117.

AESTHETIC PROPERTY REALISM, PROJECTIVISM, AND EVOLUTIONARY AESTHETICS: A COMMENT ON STEPHEN DAVIES'S *THE ARTFUL SPECIES*

WILFRIED VAN DAMME

Beginning with its title, many positive things can be said of Stephen Davies's new book, *The Artful Species: Aesthetics, Art, and Evolution*.¹ One may applaud, first, the conceptual distinction this work makes between art and the aesthetic – I would in this context indeed prefer using 'the aesthetic' to 'aesthetics', as occurring in the subtitle of the book, since it allows one to employ 'the aesthetic' to designate a particular subject matter and reserve 'aesthetics' as a label for its study; this proposed usage is fully in line with the text of *The Artful Species* itself, although 'aesthetics' is sometimes used there to refer to subject matter as well. Be this as it may, what is important is that Davies explicitly discerns two overlapping yet distinct domains of investigation that are all too often conflated in theoretical studies. One negative consequence of such a conflation, avoided in this study, is that it discourages the exploration of differing explanatory approaches to phenomena distinctive of these domains – human preferences for particular bodily characteristics or landscape features, say, require accounts that may overlap with, yet are different from, those explaining the human tendency, for example, to create and use images.

One should also praise the panhuman perspective in time and space that Davies's work elaborates. Such a perspective may seem an obvious prerequisite for any examination that sets out to deal with the arts and the aesthetic in general, supra-individual, and supra-cultural terms, yet among the many studies that pretend to do so only very few do indeed take an intercultural and ultimately a universal approach. Adopting a panhuman perspective in the examination of art and the aesthetic also invites an interdisciplinary approach, a much-promoted scholarly strategy that, again, few scholars dare to put into actual practice. As its title makes clear, this book specifically highlights the efforts of scholars adopting a bio-evolutionary viewpoint in the study of *Homo artisticus* and *Homo aestheticus*. Having been neglected by humanistic scholars for most of the twentieth century, this Darwinian perspective seems indeed a fruitful one both to explore and to scrutinize in relation to the topics at hand.

¹ Stephen Davies, *The Artful Species: Aesthetics, Art, and Evolution* (Oxford: Oxford University Press, 2012). The page numbers in the article refer to this book.

Finally, I agree with Davies that, especially when considering art and the aesthetic from an intercultural and interdisciplinary perspective, one must adopt a broad conception of what is considered the aesthetic and of what counts as art. As regards the notion of the aesthetic, I admit, however, that it is not quite clear to me how the author distinguishes the aesthetic from the non-aesthetic in relation to both properties and experiences (and, indeed, whether or not he sees this distinction as one of kind rather than degree). To be sure, the distinction is broached more than once in the book, yet it would seem ultimately to elude this reader – it tends each time to slip from one's conceptual grasp.

The problems I have getting clear on these matters are likely to relate as well to the question I would like to pose to the author. This question concerns 'the "location" of aesthetic properties', to cite the title of the brief paragraph (p. 21) that discusses this topic – a topic announced at the beginning of the book as of critical importance to the author's analysis (p. 5). Davies states that he disagrees with Kant's position that 'there is an element of projection [...] in our identification and appreciation of aesthetic properties'. Clearly positing himself against this view, he writes: 'I hold that aesthetic properties belong to the object in which they are detected, not that they are projected onto that object by the perceiver.' (p. 21) In other words, aesthetic properties or values, for Davies, are not ascribed to a particular object by a beholder, but are an intrinsic or inherent part of it.

This seems an unexpected position to take for an author who shows himself sympathetic to a Darwinian viewpoint and who demonstrates, more importantly, a good grasp of evolutionary theory throughout his book. For the classic evolutionary position would be not to endorse an 'aesthetic property realism', as some would call it, but to take a 'projectivist' view. Specifically, evolutionary aesthetics suggests that we have evolved to experience as beautiful, or attractive, those stimulus features that are indexes of properties which are beneficial to human survival and reproduction (or have been so in the evolutionary past). Aesthetic quality is therefore not an inherent property of a stimulus but one that an adapted brain ascribes or projects onto that stimulus. Conversely, we have evolved to regard as ugly, or repulsive, those stimulus features that are indexes of properties which are not conducive to evolutionary fitness. These evolved positive or negative affective responses to sensorial stimuli are then held to guide us economically, in a fitness-enhancing manner, in seeking out or avoiding certain mates, foods, landscapes, and objects. In Donald Symons's famous phrase, 'Beauty is in the adaptations of the beholder.'

Davies is of course aware of this widespread 'projectivist' view in Darwinian aesthetics. My question to the author would therefore be: Could you please elaborate on your 'aesthetic realist' position, specifically with reference to mainstream evolutionary aesthetics' adherence to the opposite 'aesthetic projectivist' view?

Wilfried van Damme
Centre for the Arts in Society, Leiden University,
Johan Huizingagebouw, Doelensteeg 16, 2311 VL Leiden, Netherlands
w.van.damme@hum.leidenuniv.nl

THE ARTFUL SPECIES ENGAGES IN ART BEHAVIOURS

ELLEN DISSANAYAKE

*The Artful Species*¹ is an exemplary introduction to current ideas and problems in a young interdisciplinary field that has no agreed-upon label but is concerned with the arts as products of biological evolution. The difficulty of finding a comprehensive label for the field derives from the many requisite bodies of knowledge that bear upon the subject – from the humanities, social sciences, and natural sciences.² Knowledge of evolutionary theory or the arts is not enough. Becoming conversant with the field is a challenge for critics as well as practitioners.

All in all, Davies meets this challenge and his book is commendable for its range and depth of scholarship. In addition to a text of 188 pages, there are another 40 pages of interesting and relevant endnotes, 52 pages of references and web resources, and a helpful human- (not computer-) generated index. Unless I missed something, Davies covers all the major ideas, problems, and contributors to the field. In the various endnotes, he names most if not all of the scholars who have purveyed one or another idea – an invaluable starting point for anyone interested in a particular topic. For the most part, he is judicious and careful in his assessments.

Writing not as a biologist or psychologist but as a philosopher of the arts, Davies enters the evolutionary scenario from the back door, as it were. Although he does not attempt to add his own hypothesis to those that are on offer, he performs the task of philosophers who approach any theoretical claim – dispassionately examining its foundations, evidence, and conclusions, and investigating promising connections with other pertinent and relevant ideas.

While reading the book (beginning with the descriptive blurb on the back cover), I was both surprised and delighted to find Davies using the phrase ‘art behaviour(s)’ quite naturally, particularly in the chapters specifically concerned with evolutionary matters: the conclusion to Part One (Chapter 4, ‘How Might

¹ Stephen Davies, *The Artful Species: Aesthetics, Art, and Evolution* (Oxford: Oxford University Press, 2012). All the page references in the article refer to this book.

² Among the necessary background fields that Davies mentions are philosophy, neuroscience, anthropology, archaeology, ethology, evolutionary biology, philosophy of science, philosophy of the arts, art history, musicology, and English literature. To these fields I would add human evolution, developmental and cognitive psychology, anthropology of the arts, and wide acquaintance with the ethnographic literature that describes the ceremonial behaviour of pre-modern societies, in which art behaviours are prominent.

the Aesthetic, Art, and Evolution be Related?') and in Part Three (Chapter 4, 'General Theories of Art as an Adaptation and the Origins of Art'). Newcomers to the field may not realize how rare and noteworthy the adoption of this phrase is. If I am not mistaken, this is a new departure for him and for the philosophy of art in general.³ The phrase is not used in his earlier writings about art, including *Philosophy of Art*.⁴ Indeed, in an earlier critique of my work, Davies chided me for preferring 'to emphasize art as a behavior rather than as an object'.⁵

By adopting the term 'art behaviour', Davies indicates to me that he has enlarged his understanding of what is required to put forward a comprehensive hypothesis about the origins and evolution of 'art' or arts. Evolution of course does not act on objects but on behaviours (and psychological predispositions for behaviours) that create those objects or works or performances.

I was also pleased to find other ideas or claims that we now hold in common: an aesthetic sense is universal, art making and appreciation are pan-cultural, and we might all qualify as artists (p. 7). Moreover, Davies agrees with theorists who propose that art behaviour was probably adaptive, although he does not accept any current hypothesis for how this was so. He makes the good point that alternative positions (that art was *not* adaptive) are no more strongly supported than adaptationist ones. Further, I was glad to read that we also agree that aesthetic experience does not depend on cognitively sophisticated forms of reasoning, the development of a full-blown language, or a grasp of abstract concepts and modes of symbolism (p. 11) – that is, the aesthetic sense was present in our species and its immediate predecessors from earlier times. We also agree that some neuroscientists' equation of aesthetic experience with perceptual pleasure is too broad and that some art theorists' assumption that art is necessarily nonfunctional and abstracted from practical concerns is too narrow. In other words, I found that Davies and I seem now to be much more 'on the same page' than was evident in his critique of 2005.⁶

³ To my knowledge, the only other writers to have referred to art as a 'behaviour' are the evolutionary scholars Kathryn Coe and Nancy Aiken; see Kathryn Coe, 'Art, the Replicable Unit: An Inquiry into the Possible Origin of Art as a Social Behavior', *Journal of Social and Evolutionary Systems* 15 (1992): 217–34; Nancy E. Aiken, *The Biological Origins of Art* (Westport, CT: Praeger, 1998). The cognitive scientists and philosophers De Cruz and De Smedt also refer to 'human artistic behavior'; see Helen De Cruz and Johan De Smedt, 'Toward an Integrative Approach of Cognitive Neuroscientific and Evolutionary Psychological Studies of Art', *Evolutionary Psychology* 8 (2010): 695–719. Because of my ethological approach, I used the term in my first published paper and consistently thereafter; see Ellen Dissanayake, 'An Hypothesis of the Evolution of Art from Play', *Leonardo* 7 (1974): 211–18.

⁴ Stephen Davies, *The Philosophy of Art* (Oxford: Oxford University Press, 2006).

⁵ Stephen Davies, 'Ellen Dissanayake's Evolutionary Aesthetic', *Biology and Philosophy* 20 (2005): 303.

⁶ Davies, 'Ellen Dissanayake's Evolutionary Aesthetic'.

Although Davies is more evolutionarily informed than before, I find that he is primarily a philosophical, not an evolutionary, thinker. Like his late colleague Denis Dutton,⁷ he is especially interested in aesthetic experience and devotes Part 1 of the book to 'The Aesthetic'. Neither author, despite their adherence to evolutionary ideas, emphasizes artistic *participation*, which surely is intrinsic to arts as they are experienced in traditional – and presumably ancestral – societies. Nor do they point out that in traditional (and presumably ancestral) societies, art behaviours are usually concurrent, with costumed, masked, and decorated individuals dancing and making music together, or listening to altered ('poetic') language, often in spaces that have been enhanced when used for such performances. The lone art-maker or the solitary passive appreciator who responds to beauty and sublimity would have been rare in the lives of our predecessors in which art behaviours arose, evolved, and acquired adaptive value. (Of course, neurochemicals such as oxytocin and dopamine that are released as individuals join and become rhythmically entrained with others in formalized, repetitive, exaggerated, elaborated, sensorily stimulating art behaviours can produce feelings of sublimity along with an accompanying sense of trust and unity with the group.)

The adjectives in the previous sentence are examples of what I have called 'making special' (and also, since 2001, 'artification'),⁸ which Davies continues to find inadequate. In *The Artful Species*, Davies critiques my work before 2008, and even that of twenty years before. Although of course I cannot expect him to have read work that appeared during or after the time he was writing and publishing his book, I have to say that, like his, my ideas have evolved over the years, and continue to be clarified and refined.

I regret that he could not have read my chapter, 'The Arts after Darwin: Does Art have an Origin and Adaptive Function?'.⁹ There and in subsequent writings, I have expanded, clarified, and refined my concept of making special / artification as the precursor behaviour to what became art as philosophers and others commonly think of it. I hope that as Davies becomes familiar with my later formulations and with others' recent reinterpretations of evolutionary arguments, he will find my hypothesis to be more plausible. These topics include work on gene-culture evolution, the implications of mutualistic (rather than altruistic)

⁷ Denis Dutton, *The Art Instinct: Beauty, Pleasure, and Human Evolution* (New York: Bloomsbury, 2009).

⁸ Ellen Dissanayake, 'An Ethological View of Music and its Relevance for Music Therapy', *Nordic Journal of Music Therapy* 10 (2001): 159–75.

⁹ Ellen Dissanayake, 'The Arts after Darwin: Does Art Have an Origin and Adaptive Function?', in *World Art Studies: Exploring Concepts and Approaches*, ed. Kitty Zijlmans and Wilfried van Damme (Amsterdam: Valiz, 2008), 241–63.

behaviours in group selection, and the established principle that exaptations may become bona fide adaptations.¹⁰

Ellen Dissanayake

School of Music, University of Washington,
Music Building, Box 353450, Seattle, WA 98195, USA
ed3@u.washington.edu

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¹⁰ See, for example, references and arguments in Peter Godfrey-Smith, review of *The Artful Species: Aesthetics, Art, and Evolution*, by Stephen Davies, *Notre Dame Philosophical Reviews*, August 12, 2013, <http://ndpr.nd.edu/news/41600-the-artful-species-aesthetics-art-and-evolution>.

A CRITIQUE OF STEPHEN DAVIES'S *THE ARTFUL SPECIES*

JOSEPH CARROLL

I. INTRODUCTION

Stephen Davies discusses works by most of the major players in evolutionary aesthetics and evolutionary literary studies. He is generally well informed and writes competent, professional prose. Most humanist scholars who try to integrate evolutionary ideas with their own specialized subjects will feel some internal pressure to read this book. It is not a book that I would recommend to scholars who are not already deeply immersed in this field. It gives the appearance of offering a comprehensive critical survey but fails to give a true account of the broadest and most important theory about the adaptive function of the arts: the theory that humans create imaginative virtual worlds and live in them, using the norms of these worlds to direct behaviour in the real world. Only a very few scholars and theorists know enough about this field to recognize that Davies's account is seriously misleading.

II. PASSIVE, REACTIVE CRITIQUE

The book is well informed and well written – not vividly and powerfully written, but lucid and clean; it is colourless in style, bloodless in tone, but expert in the handling of syntax. Nonetheless, I personally found it hard to read. It did not absorb my attention, catch me up, and lead me on. I had to make a constant effort to follow lines and turn pages. The main source of that problem, I think, is that the book has almost no forward motion. That's because Davies has no ideas of his own. The strategy of the book is always and only to respond in a passive, reactive, critical way to the work of other theorists. Some of Davies's critical commentaries on other theorists are thoughtful and even acute. I would single out for special praise Davies's extended critique of Aniruddh Patel's argument that music is a technology.

Through much of the book, the value of Davies's critical commentaries is diminished by his overmastering eagerness to score points off theories, not exploring any nugget of validity the theories might possess, not expanding on valid ideas, generalizing from them and synthesizing them with other ideas. His critical commentaries are merely local and fragmentary; they are not constructive in intent. Davies's implicit ambition, taken in the most generous light, is only to evaluate ideas and to judge which, if any, have achieved the standing of a firmly established scientific theory – that is, an idea so tightly knit in logical structure, so massively confirmed by empirical evidence converging from various fields, and

so universally affirmed by scientists that it can be taken not just as speculation but as fact. Not surprisingly, no theory about the adaptive function of the arts fully satisfies this set of criteria. Rehearsing that observation, though it provides no original insights, has some legitimate value as a scholarly exercise.

Taking Davies's book in this most generous light gets at its character as a passive and reactive critical survey, but that light is too generous. It leaves out the impulse of Pyrrhonic negativity, the settled disposition ultimately to spurn all large-scale knowledge claims and to come complacently to rest in vapid scepticism. 'Que çay-je?' 'What do I know?' Davies could conceivably have entertained Montaigne's motto as an epigraph for his book, tacitly implying also Montaigne's Pyrrhonic answer to the question he asks: Nothing much, nothing for an absolute certainty, and thus not much of anything at all.

III. FAILURE OF SYNTHESIS

A book that had a successful constructive purpose in evolutionary aesthetics would necessarily situate main theoretical aesthetic concepts within a framework of concepts from evolutionary theory. Evolutionary theory has a deeper and broader scope than aesthetics. Davies plausibly maintains that we should be sceptical of arguments that animals have specifically aesthetic perceptions. But even if we were to affirm that animals have aesthetic perceptions, aesthetics would still be a detail within the larger logic of descent with modification by means of natural selection. If, like Davies, we suggest that only humans have aesthetic perceptions, there is all the more reason to subordinate aesthetic concepts to concepts in evolutionary biology.

The two chief specifically aesthetic categories in Davies's repertory are the sublime and the beautiful. He picks these terms up from the tradition of aesthetic philosophy. He does not disassemble the terms within an analytic field created by evolutionary theory. Indeed, he scarcely analyses the terms at all. He merely describes them with a set of associated terms and takes them tacitly as conceptual primitives, irreducible axiomatic concepts. He makes no real effort to integrate them with terms in evolutionary psychology or in affective and cognitive neuroscience. The sublime and the beautiful are merely juxtaposed with ideas taken from evolutionary psychology – with this difference: the psychological terms are always suspended in scepticism, and the aesthetic terms are adopted in a spirit of incurious conventionalism. Reading Davies's use of these terms, I was much struck by the contrast with Edmund Burke's *The Sublime and Beautiful*.¹ With so much less psychological information at his disposal, Burke displays extraordinary intuitive insight in delineating the gendered

¹ Edmund Burke, *A Philosophical Enquiry into the Origin of Our Ideas of the Sublime and Beautiful*, in *The Writings and Speeches of Edmund Burke*, vol. 1, *The Early Writings*, ed. James T. Boulton and T. O. McLoughlin (New York: Oxford University Press, 1997), 185–320.

character of the terms. The sublime is rugged, powerful, threatening, overmastering. The beautiful is delicate, soft, mild, and graceful.

In discussing propositions about the sexual character of aesthetic judgements, Davies takes great pains to distance himself from any potentially sexist ideological implications about relations between beauty and sex. He also often expresses distaste for reductive causal attribution. One result of such dispositions is to take most of the sex out of sensory experience and all the explanatory power out of causal analysis.

IV. IMAGINATIVE VIRTUAL WORLDS

In Chapter 8, where he discusses general theories about the adaptive function of all the arts, Davies leaves out the most important general theory, the idea that the arts create imaginative virtual worlds. He says that in addition to the theories discussed in this chapter there are other theories about the adaptive function of the arts but these other theories are specific to individual art forms – especially to music and narrative fiction. When he gets to the section on narrative fiction, in Chapter 11, he finally introduces the concept of imaginative virtual worlds, with endnote references to at least some of the major contributors to this idea.

Presenting this concept as exclusively oriented to narrative fiction is a strategy of disinformation. The seminal theoretical works that propound this concept are not oriented only to narrative fiction. E. O. Wilson and I explicitly present our ideas as theories about the arts in general.² Ellen Dissanayake's discussion of art and meaning in her *Art and Intimacy* intermingles cosmological myths with the arts that are integrated into tribal lifeways and rites of passage.³ Denis Dutton's account of narrative fictions in *The Art Instinct* overlaps with Dissanayake's and can be very easily subsumed by theories about the adaptive function of the arts in general.⁴ That is true also of Jonathan Gottschall's *The Storytelling Animal*.⁵

Even within the artificially constricted scope within which Davies discusses the idea of imaginative virtual worlds, he gives a distorted and limited account of the idea. He fails to grasp, or at least to divulge to his readers, that the theory does not involve merely providing information about human psychology or

² Edward O. Wilson, *Consilience: The Unity of Knowledge* (New York: Knopf, 1998), chap. 10; Joseph Carroll, 'The Adaptive Function of the Arts: Alternative Evolutionary Hypotheses', in *Literatur und Evolution*, ed. Carsten Gansel and Dirk Vanderbeke (Berlin: De Gruyter, 2012), 50–63.

³ Ellen Dissanayake, *Art and Intimacy: How the Arts Began* (Seattle: University of Washington Press, 2000).

⁴ Denis Dutton, *The Art Instinct: Beauty, Pleasure, and Human Evolution* (New York: Bloomsbury, 2009).

⁵ Jonathan Gottschall, *The Storytelling Animal: How Stories Make Us Human* (Boston: Harcourt, 2012).

imparting practical moral lessons. (As examples of such moral lessons, Davies mentions that it is unwise to murder your father and marry your mother, and imprudent also to murder old women with an axe, thus reducing *Oedipus Rex* and *Crime and Punishment* to unintelligent truisms.) Imaginative virtual worlds involve music and the visual arts as much as narrative; they also include ideologies and religions and multi-media systems of ritual like those of the Christian and Islamic religions. Whatever the media, all such worlds are emotionally charged and aesthetically modulated. Human beings create and inhabit such worlds in order to orient themselves within the physical and social spheres – and for most people, also within an imagined spiritual sphere, that is, a realm of supernatural forces and transcendent agencies.

Fabricated virtual realities inform our values, desires, and fears. They thus ultimately help shape our behaviour. The capacity for creating and living in imagined worlds co-evolved with the extraordinary creativity and flexibility that characterizes *Homo sapiens*. Davies evidently does not recognize that imaginative virtual worlds are the most important species-specific adaptation that distinguishes modern *Homo sapiens* from its hominid ancestors.

In his conclusion, Davies says that the arts help generate 'our sense of ourselves, both as individuals and as members of communities' (p. 188). They 'transform and add meaning to our lives'. That sounds very much like a claim that art has an adaptive function. Just a few lines before, however, Davies had suggested that 'art is a spandrel that survives because it does not limit or undermine the comparative fitness of those who display it' (p. 187).

This kind of equivocation seems to have two chief sources. One is the settled habit of never thinking past the local point he is making against some more substantive and consequent writer. The other is a half-conscious dualism in which 'adaptations' and 'evolution' reduce themselves to survival and procreation. Everything else, he intimates, is part of our 'humanity', which evidently has little to do with adaptations and evolution. Whatever its causes, the result of Davies's pervasive equivocation is that his book ultimately produces no distinct vision of the relation between art and human nature.

By spuriously limiting the theory of imaginative virtual worlds to psychological information and truistic moral lessons, Davies can say that the moral influence of fiction leaves open the question as to whether fiction evolved to fulfil a moral function. 'There are many ways in which an appreciation of fiction could improve us. [...] That said, we are as far as ever from demonstrating that narrative fiction was evolutionarily selected for this purpose.' (p. 170)

The challenge Davies poses about the adaptive function of narrative fiction can be used as a prompt for a serious question: What argument might one adduce that

the capacity for creating and inhabiting imaginative virtual worlds is an adaptation?
I'll close these comments with a concise account of one such argument:

Observation 1: Imaginative virtual worlds do in fact exist. They are all around us. Gottschall's *The Storytelling Animal* does a good job of delineating the vast diversity and all-pervasiveness of imagined scenes, environments, and story lines.

Observation 2: Imaginative virtual worlds do in fact influence behaviour. Gottschall, again, is a good reference. On this matter, he summarizes large bodies of empirical and historical evidence that do not find their way into Davies's book.

Observation 3: Such worlds by definition abstract from the immediate sensory present and help make possible behaviour that is not prompted solely either by instinct or by immediate environmental triggers. The capacity to produce and inhabit such worlds thus necessarily contributes to flexible goal-directed action that involves choices among multiple alternatives extending over time and engaging multiple frames of value. That capacity is integral with any behaviour that presupposes symbolic awareness and is thus prerequisite to all forms of social organization that require symbolic identification with a social group – thus with any social group at a level of social organization more complex than that of the band.

Members of a band live in face-to-face contact and need only recognize each other as members of that particular band. This is the form of social organization among chimpanzees, gorillas, bonobos, and in all likelihood also among our hominid ancestors. Creating and living in an imaginative virtual world is a prerequisite for identification with a tribe and for identification with social groups based on religion, ideology, specific institutional structures, shared history, or shared norms of behaviour.

We can thus say with certainty that all modern human behaviour – the behaviour that distinguishes humans from their hominid forebears – depends on creating and living in imaginative virtual words. The explosive demographic expansion of modern humans and their dominance over all other species give strong evidence that this capacity was in fact, for a time at least, adaptive.

Joseph Carroll
Department of English, University of Missouri-St. Louis,
One University Boulevard, 484 Lucas Hall, St. Louis MO 63121-4400, USA
jcarroll@umsl.edu

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THE QUESTION OF ADAPTATION AND THE QUESTION OF STRUCTURE: A READING OF STEPHEN DAVIES'S *THE ARTFUL SPECIES* FROM THE VIEWPOINT OF LITERARY THEORY

KATJA MELLMANN

Stephen Davies's *The Artful Species*¹ addresses the question of art's 'nature' in its very literal meaning: it explores how art is a product of human beings taken as a biological species. Because of the recent increase of evolutionary theorizing in the human sciences, which can be said to be inspiring a second 'cognitive turn' in the humanities at the moment, the literature on that subject is abundant. This is why it is hard to believe Davies's book is actually the achievement of a single scholar. Davies brings together an awe-inspiring quantity of diverse studies – each sufficiently complex in its own right – and judiciously integrates their propositions into his own broad-based line of argument. This line of argument is mainly oriented by the question of whether art can be called an adaptation of the human species – a question indeed treated so heavily, and so diversely, that it has been urging systematic revision for quite some time now. I may be allowed to call Davies a hero for undertaking this venture, and to honestly thank him for that.

When I first started reflecting on the biological background of literature (my object of study as a literary academic), I had rather confined questions about the effects particular poetic techniques have on the reader. I found that evolutionary psychology offered very interesting ideas about basic mechanisms in human cognition which seem to play a role also in art reception. Accordingly, integrating those ideas into an eminently underdeveloped theory of the psychology of literary reading promised to be a worthwhile endeavour. While busy with that, the question of whether art and literature might themselves arise from basic mechanisms of such a kind did not really bother me. When I occasionally came across 'art as adaptation' theories in other people's writings, I initially took them for the typical early exaggerations often observed when new paradigms are established in the humanities. However, with this question gaining in presence and public interest, and monographs appearing on it, I began to take it more seriously and finally became very interested in it myself from the viewpoint of literary theory. As a literary scholar I am of course not only concerned with texts, their properties, and effects, but also with the phenomenon of literature per se.

¹ Stephen Davies, *The Artful Species: Aesthetics, Art, and Evolution* (Oxford: Oxford University Press, 2012). If not indicated otherwise, page numbers refer to this book.

What actually 'is' literature? How did it come about? How old is it, and how does it fit into the big picture (of 'culture'/'humankind'/'mind' and so forth)? I felt that the perspective of evolutionary psychology might indeed reveal something new about these philosophical issues.

I still consider the question of whether art or literature are evolutionary 'adaptations' (in the technical sense of the term)² to be of uncertain significance for literary scholars.³ I am convinced, however, that our general understanding of literature would be immensely enhanced by knowing more precisely how behaviours such as producing and consuming artworks are psychologically structured, what elements they involve, and how 'archaic' these elements are, that is, how spontaneously or rather deliberately they take place. And if, as a starting place, the terminology of adaptation versus by-product and so forth is of some help in illuminating these questions, it may well be used – but may also be abandoned when it shows that it is not. So, this is the situation in which I have emphatically welcomed Davies's book for collecting and critically reviewing suggestions on this topic from a great variety of research areas. Beside its many other virtues, Davies's book might also serve as a survey about paths already taken and thus help prevent, hopefully, the same commonplaces from being repeated over and over again without providing new evidence or improved arguments. Though I thus agree with many of Davies's criticisms as well as positive propositions, for the sake of discussion and critical exchange the following paragraphs will focus more strongly on points at which my view differs from his.

The first one is a rather political point. Davies does not state explicitly that he is following the quirky discipline-historical account of the self-declared 'new' evolutionary psychologists, but he does uncritically repeat it (pp. 40–43). There's no room here for going into detail, so I would note only that the proponents of the allegedly overcome 'capital-letter EP' are not only still alive and in academic positions, but are also authors of the most discerning contributions on theoretical issues in evolutionary psychology, whereas declarations by 'lower-case EP'

² Just a quick note on something I will not further dwell on in these remarks: Davies's and my own use of evolution-theoretical concepts are not entirely consistent with one another. I use the term 'adaptation' in the tradition descending from George Williams, *Adaptation and Natural Selection* (Princeton, NJ: Princeton University Press, 1966); for a recent definition in this line, see Leda Cosmides, Julian Lim, and John Tooby, 'Adaptation', in *The Cambridge Encyclopedia of the Language Sciences*, ed. Patrick Colm Hogan (Cambridge: Cambridge University Press, 2011), 85–86. Davies sometimes does not deem necessary all the criteria prescribed in that tradition. For example, he does not demand that adaptations reliably develop ontogenetically (p. 153), and he calls effects 'adaptive' irrespective of their causal role in population-wide genetic change (pp. 134, 153).

³ On this point, I concur with Jonathan Kramnick, 'Against Literary Darwinism', *Critical Inquiry* 37 (2011): 346–47.

proponents (such as the first chapter in *The Oxford Handbook of Evolutionary Psychology* which Davies refers to) show less ambition in theoretical expertise. They typically construe straw-man conceptions of ‘massive modularity’ and ‘biological determinism’, and by numerous misconceptions and confusions reveal that their authors have no interest in what the debates in about 1990 actually were about when ‘Evolutionary Psychology’ (under this designation) was established, not to speak of those in the mid-twentieth century when theoretical biology developed its standards. There is no value in perpetuating an unjustified story of an alleged shift from ‘old’ to ‘new’ EP around 2000, which in my understanding is rather an impending backslide into conceptual haziness.⁴

But let’s turn to subject matter now. The passages in which Davies reviews evolutionary accounts of ‘literature’ (roughly in the sense of ‘narrative fictions’, see p. 163) are for me of course the most relevant parts of his book. In one place, Davies disagrees with Paul Hernadi’s claim that the stone-age mind probably did not rigidly distinguish between ‘nonliterary and literary experience’,⁵ by objecting that early humans should have had ‘a robust interest in separating fact from fiction or conjecture’ (pp. 164–65). I think that both propositions are true in a way. In

⁴ In particular, why spread the myth of some people holding that evolution ‘ceased’ (p. 41) 20,000 years ago? At least I don’t know these people (though I know quite well which issue this myth – quite wrongly – addresses). Also, Davies argues against a naive conception of the EEA implying stable conditions. No objections from my side, but note it was stated already in 1990: ‘The “environment of evolutionary adaptedness” (EEA) is not a place or a habitat, or even a time period. Rather, it is a statistical composite of [...] adaptation-relevant properties [...]. There is no basis in the concept of the EEA for any claims of stasis, simplification, or uniform ancestral conditions in the usual sense.’ Leda Cosmides and John Tooby, ‘The Past Explains the Present: Emotional Adaptations and the Structure of Ancestral Environments’, *Ethology and Sociobiology* 11 (1990): 386–87; see also their ‘The Psychological Foundations of Culture’, in *The Adapted Mind: Evolutionary Psychology and the Generation of Culture*, ed. Jerome H. Barkow, Leda Cosmides, and John Tooby (New York: Oxford University Press, 1992), 69–73. So Davies’s emphasis on climate change and so on (pp. 95–101) seems somewhat pointless to me. If Richard Potts, as quoted by Davies (pp. 96–97), were right that changing environments are incompatible with any idea of ‘a set of specific repetitive elements, statistical regularities, or uniform problems’ and, as a consequence, necessitate discarding ‘the view that the human mind is composed mainly of innate special-purpose devices’, then this would equally necessitate assuming general intelligence / cognitive plasticity for almost all living species whose evolutionary history dates back before the last glacial age. Seriously, Bowlby’s concept of the EEA was not reanimated in order to paint simplified pictures of ancestral pasts but, on the contrary, to draw attention to the fact that we cannot deduce innate dispositions from one particular set of conditions (neither from today’s life in industrialized societies nor from nineteenth-century fiction about stone-age life), but have to identify (rather abstractly defined) *selection pressures* that were persistent over very long periods. Thus, stability is not an ex-post allegation of simple-minded scientists but an a priori standard for scientific rigour: a criterion that must be met when reasoning about selection pressures responsible for universally human traits.

⁵ Paul Hernadi, ‘Literature and Evolution’, *SubStance* 30 (2001): 62.

order to show what I mean, I would define 'fact'/'nonliterary' and 'fiction'/'literary' not as 'accurate historical accounts' versus 'invented stories' but as accounts of 'events witnessed by one of us' versus 'they say / it is said...'⁶ accounts, that is, not as factive versus fictive narratives but narrated *experience* versus *tradition/legacy*. For this is how the demarcation line is drawn, for instance, by the Kayapo people of Brazil: in their language, the word for 'hearing', besides its literal meaning, signifies the *knowledge which comes from hearing* and as such also translates into 'belief' or 'trust'; *knowledge that comes from primary experience*, in contrast, is figuratively signified by their word for 'seeing'.⁷ As I argue at length in a recent article, this is how oral cultures typically distinguish between 'fact' (regular communication about the actual world) and 'fiction' (stories, myths, history); the linguistic techniques they employ to mark the inherited knowledge as special are basically the same as the means by which both oral and literate cultures across time and place mark 'literary' narratives, thereby constituting something of a *grammatical mood* that is recognizable, for instance, also in the 'epic preterite' of realistic novels.⁸ Defined in this way, the grammatical mood of the 'mythic'/'literary'/'traditioned'/'believed' is indeed indifferent to questions of historical accuracy as we conceive of it in modern terms. This may be the reason we still create narratives that are extremely contaminated in matters of 'fact and fiction', and, moreover, why our poetological notions of the literary (such as poetic 'lies', the 'verisimilar', 'possible worlds', or 'fictionality') show notable historical variance.

I deem it possible that this mythic 'mood' was a cognitive adaptation in the context of language acquisition. This is not to say that 'literature is an adaptation',⁹ but merely that the presumed cognitive mood might be the origin of one of several biological *enablers* of literature (p. 148), or literary *proto-forms*,¹⁰

⁶ Formulas of that kind are routinely interspersed into the storytelling of many oral cultures, and also closing formulas such as 'So it is said' or 'That is how the Selknam always told it'. See Katja Mellmann, 'Gibt es einen epischen Modus? Käte Hamburgers *Logik der Dichtung* evolutionspsychologisch gelesen', in *Universalien? Annäherungen an die Natur der Literatur*, ed. Endre Hárs, Márta Horváth, and Erzsébet Szabó (Trier: WVT, 2014), 109–30.

⁷ Anton Lukesch, *Mythos und Leben der Kayapo*, Acta Ethnologica et Linguistica 12 (Vienna: Institut für Völkerkunde, 1968), 173.

⁸ Mellmann, 'Gibt es einen epischen Modus?'.

⁹ Neither is it to say that 'narrative' is an adaptation. I do not consider narrative form to be something in need of explanation; rather it is a self-evident result of language working the way our mind works, which in turn works the way the brain receives information from experience. See Katja Mellmann, 'Is Storytelling a Biological Adaptation? Preliminary Thoughts on How to Pose That Question', in *Telling Stories: Literature and Evolution*, ed. Carsten Gansel and Dirk Vanderbeke (Berlin: De Gruyter, 2012), 33–39.

¹⁰ More such possible proto-forms not yet scrutinized systematically are sketched out in Katja Mellmann, 'Evolutionary Proto-forms of Literary Behaviour', in *Art as Behaviour*, ed. Wulf Schiefenhövel et al., Hanse-Studien (Oldenburg: BIS, forthcoming).

as it were. A cognitive concept of the 'mythic' thus evolved might have served as a primal scope tag in what John Tooby and Leda Cosmides have hypothesized as cognitive 'scope syntax', that is, a cognitive architecture that allows for the administration of contingently true information.¹¹ As such, the cognitive adaptation of a scope signifier 'mythic' would serve the vital need to separate differently justified kinds of knowledge of which Davies correctly reminds us, while at the same time it explains our indiscriminate use of various instances of more or less 'true' (but, in a way, 'believed') information within the literary realm. Thus, the adaptive function of the presumed scope category would have been to reserve a separate cognitive space for *socially communicated information*, which became inevitable 'now that we can receive information through communication from others' and have to come to terms with new kinds of information that were unknown to species 'whose sole source of (non-innate) information was the individual's own experience'.¹² In contrast to adaptationist accounts that emphasize the instructive effects literature might yield by serving 'as a repository of knowledge about human nature' (p. 171),¹³ the proposed adaptation of a

¹¹ Leda Cosmides and John Tooby, 'Does Beauty Build Adapted Minds? Toward an Evolutionary Theory of Aesthetics, Fiction and the Arts', *SubStance* 30 (2001): 20; see also their 'Consider the Source: The Evolution of Adaptations for Decoupling and Metarepresentation', in *Metarepresentations: A Multidisciplinary Perspective*, ed. Dan Sperber, Vancouver Studies in Cognitive Science 10 (Oxford: Oxford University Press, 2000), 53–115, especially on the various origins of this cognitive architecture that can be hypothesized but not yet put into a clear order or hierarchy.

¹² Cosmides and Tooby, 'Does Beauty Build Minds?', 24.

¹³ I concur with Davies in dismissing those theories of 'fiction as instructive thought experiment' (pp. 168–71). Subsequently, however, he suspects the position held by Tooby and Cosmides 'is not in the end different' from those theories (p. 172), whereas I think it is. Admittedly, some of their literary examples tend to the direction Davies rightly worries about, but the core idea put forward in their essay, as I take it, is that the brain-organizing effects of art and literature *explain the pleasure* we experience by those activities. I had difficulties grasping what precisely Davies understands by 'aesthetic sense'. He repeatedly says that it is not identical with perceptual pleasures (though in Part II of his book, he allows a broad equation of the two), but he does not specify what kind of psychological structure should be assumed behind the experience when 'we relish and take delight' (p. 20), along with recognizing something either 'sublime' or 'beautiful' (p. 10). Comparing the aesthetic sense with language (p. 48), he implies something above mere pleasure, a more complex mental experience where cultural concepts may intrude and cause different results in different cultures. I claim that the idea of 'brain-targeted aesthetics' as introduced by Cosmides and Tooby ('Does Beauty Build Minds?', 14) accounts excellently for the pleasure ingredient in a more than just 'perceptual' meaning; and their reflections on literature's worth as an imaginative extension of experience (*ibid.*, 18–24) is not intended to propose an adaptive function of art ('instruction') but to explain the perceived 'deeper truth' in art (see *ibid.*, 13), that is, the cognitive little 'extra' above mere pleasure which might come from the 'abstract isomorphism' (*ibid.*, 21) between artifacts and the real world. I feel Davies slightly mischaracterizes their theory here (though in a way acknowledges it later on, p. 173). Also, he mischaracterizes their pleasure theory when he subsumes their proposition under the hypothesis that 'art is adaptive [...]

specialized cognitive mood for communicated information would place the emphasis on knowledge that is not already 'in the genes'.¹⁴ According to my theory, the specialized scope tag for the 'mythic' evolved in humans as a necessary tool for cultural transmission (social learning) when *Homo sapiens* was entering the cognitive niche and began to deal with an unprecedented amount of non-experiential knowledge. In that situation, narrative served as an efficient means of exosomatically restoring and transmitting linguistically 'reified'¹⁵ bits of information abstracted from the (otherwise non-available) experience of past generations. This is not to say that this socially accumulated knowledge itself is necessarily 'adaptive' ('instructive') in any sense, but just to argue that it was adaptive for the human species to accumulate knowledge – given that they simultaneously evolved cognitive tools that are apt passably to administer all that stuff.

Certainly, what I have construed here is a story of origin. Davies finds it 'hard to defend the relevance of the story about art's origins to our understanding and appreciation of contemporary art' (p. 134). I claim there is notable relevance, given that one is interested in how today's art behaviours are structured, what they are ultimately composed of. (In fact, drawing on evolutionary theory necessarily implies a historical way of understanding – namely, understanding a phenomenon by its genesis; if one is more interested in other ways of understanding a phenomenon, other theoretical frameworks might be more appropriate to achieve this aim.) So my story about the evolutionary origin of a cognitive scope category 'mythic' is a story about the origin not of 'art' (or solely 'literature') but of a particular prerequisite that, in combination with other human capacities, gives rise to this or that instance of the group of behaviours we conceive of as art behaviour.

for rehearsing and sharpening perceptual skills' (p. 128). An excerpt of that seminal essay by Tooby and Cosmides was reprinted under the same title in Brian Boyd, Joseph Carroll, and Jonathan Gottschall, eds., *Evolution, Literature, and Film: A Reader* (New York: Columbia University Press, 2010), 174–83. Unfortunately, however, the passages on aesthetics and the 'organizational mode' were omitted. So one has to go back to the original version (which can be easily done by visiting the web pages of the Center for Evolutionary Psychology at www.cep.ucsb.edu).

¹⁴ This is where my theory is indebted to Michelle Scalise Sugiyama's 'information transmission hypothesis', also mentioned by Davies in the context of 'knowledge repository' theories (pp. 171, 226). See Michelle Scalise Sugiyama, 'Information Is the Stuff of Narrative', *Style* 42 (2008): 254–60; 'Reverse-Engineering Narrative: Evidence of Special Design', in *The Literary Animal: Evolution and the Nature of Narrative*, ed. Jonathan Gottschall and David Sloan Wilson (Evanston, IL: Northwestern University Press, 2005), 177–96.

¹⁵ For language and narrative as a means of 'reification', see Karl Eibl, *Animal Poeta: Bausteine der biologischen Kultur- und Literaturtheorie*, Poetogenesis 1 (Paderborn: Mentis, 2004), 224–49, and Katja Mellmann, 'Voice and Perception: An Evolutionary Approach to the Basic Functions of Narrative', in *Toward a Cognitive Theory of Narrative Acts*, ed. Frederick Luis Aldama, *Cognitive Approaches to Literature and Culture* (Austin: University of Texas Press, 2010), 131–32.

It seems sensible that Davies installs the category of ‘technology’ for highly combinatorial, culturally rather than biologically stabilized forms of behaviour in order to distinguish some anti-‘adaptation’ hypotheses from a therefore more narrowly defined concept of ‘by-product’ hypotheses (though I am not sure whether Pinker’s or any recent ‘art as by-product’ theory is then rightly still classified as an instance of the latter). Interestingly, Davies ultimately opts against the ‘technology’ solution, that is, he resorts to the more strictly defined ‘by-product’ conception in order to bring out the eminent proximity of art behaviours to human nature. This unusual proximity that distinguishes art from purely cultural technologies such as reading and writing¹⁶ comes, according to Davies, from the fact that the arts as by-products directly exploit existent adaptations rather than merely building upon them for superstrate cultural reasons. More specifically, he grants art a place as a means of signalling ‘fitness’ (in a broad sense, including status, sexual attractiveness, moral integrity, intelligence, and many other kinds). Thus, art for him is not ‘incidental’, not a biologically ‘meaningless’ (pp. 144–47) enhancement of cultural life, but a heartfelt expression of human capacities.

Davies does not go so far as to consider these expressive behaviours genetic adaptations in terms of gene-culture co-evolution, arguing that, to achieve this, art would have to be unrivalled in this function, which it is not (p. 186). In other words, he does not hypothesize a hard-wired art ‘instinct’, but suggests a behaviour whose motivation goes beyond both functional urges and organizational rewards yet remains below the level of exclusively cultural incitement. Accordingly, art should take place more spontaneously (that is, less intentionally initiated or socio-culturally channelled) than regular ‘technologies’. At least that is what I conclude from his argument. As regards Davies, he is not so fond of the idea that innately biased behaviours are generally more automatic than other, more deliberate behaviours (pp. 152, 172). If, however, we ask what the perceived proximity of art to human nature actually refers to, spontaneous inclination would not, I believe, be that bad an answer. To put it differently: I do not share Pinker’s and many others’ suspicion that people arguing for art as an adaptation want to ennoble art (and perhaps also their own discipline) by this contention. Rather, I surmise that those people are inspired by the strong intuition – shared by Davies as well as

¹⁶ For the control of fire, which Davies also refers to as an example (pp. 155–57), and maybe also for clothing, the case may be different. As he observes, although the pertinent cultural practices vary greatly there is a strong fascination with the object of those practices. I suppose this fascination is instinctively biased in a way the interaction with alphabetic characters, for instance, is not. Play might be revealing of this. Children love playing with costumes (discarded garments, guises) and, unfortunately, also with fire (matches, candles, magnifying glasses). I take this thought from Josef H. Reichholf, *Das Rätsel der Menschwerdung: Die Entstehung des Menschen im Wechselspiel mit der Natur*, 6th ed. (Munich: DTV, 2004), 178–81.

by myself – that art is something so essentially ‘human’ that it must be regarded as intrinsic to human nature, that is, as ‘something biological’. They do not mean to *declare* art something biological, but rather to explain why it is, and how it can be, something biological – but then they simply fall prey to the widespread misbelief that ‘biological’ automatically means ‘adaptation’ (which fits perfectly with the values they attribute to art anyway and then carelessly mistake for biologically adaptive ‘functions’). Davies’s long and detailed examination is an excellent remedy against this popular misconception. At the same time, however, his study strives to pay full tribute to the intuition of art being not a contingent cultural form. For this purpose, he extends the technical question of ‘either adaptation or by-product or genetic noise’ (which might suffice from the perspective of biology) to a more differentiated set of categories in which different grades of ‘intrinsicness’ can be described.

I find this very convincing. But I see a parting of ways here, and future research will have to choose each time which way to proceed. First, if this more differentiated set of categories is to be meaningful, we have to substantiate what it is that different grades of biological proximity or intrinsicness refer to in psychological terms (for example, spontaneous processing, ‘neuronal recycling’).¹⁷ Or, second, if the extension of categories is meant rather to abandon the technical question from biology for ‘adaptation yes or no’ and instead focus on the properties of the investigated sort of behaviour itself, then we should remain interested in stories of origin about crucially involved elements (irrespective of whether we ultimately prefer to call the whole thing ‘by-product’, ‘technology’, or something else). This is another way of saying that many of the studies understandably criticized by Davies make important contributions to that research programme. We simply have to remain aware that by identifying the origin of one such element we have not identified the origin of ‘art’ and nothing more. Actually, I do not even believe that ‘art’ is a natural kind or a coherent class, whereas Davies seems to believe that it is.¹⁸ He is certainly aware of the historical evidence that this integral notion¹⁹ is

¹⁷ For the idea of ‘neuronal recycling’, see Stanislas Dehaene, *Reading in the Brain: The Science and Evolution of a Human Invention* (New York: Viking, 2009).

¹⁸ See pp. 26–30 and, more explicitly, pp. 155–57, for music. But think of how utterly strange and non-musical the integration of African rhythms by jazz and pop music appeared to parts of the contemporary audience. Also, the invention of mensural music was a late development in European musical history. Before then, rhythmic modes of music were largely confined to instrumental dance music, that is, a separate cultural sphere in the understanding of people of that time.

¹⁹ See Katja Mellmann, ‘On the Emergence of Aesthetic Illusion: An Evolutionary Perspective’, in *Immersion and Distance: Aesthetic Illusion in Literature and Other Media*, ed. Walter Bernhart, Andreas Mahler, and Werner Wolf, *Studies in Intermediality* 6 (Amsterdam, New York: Rodopi, 2013), 77–79. For another discussion on the fundamental incoherence (and non-distinctness) of ‘the’ aesthetic, see Paul B. Armstrong, *How Literature Plays with the Brain: The Neuroscience of Reading and Art* (Baltimore, MA: Johns Hopkins University Press, 2013), 12–18.

a rather specific cultural concept (pp. 25–30). I feel, however, that he underrates the consequence of this fact for his own conception of the ‘aesthetic sense’. Like Davies, I believe that one very basic (if not even necessary) element of aesthetic appreciation consists in ‘recognizing how [the object of appreciation] was formed’, what it was made for, how it relates to other things, and so on (p. 20).²⁰ Does it not follow that any cultural concept (however basic) of ‘art’, ‘beauty’, and so forth, inevitably intrudes on our aesthetic cognition while ‘we relish and take delight’ (p. 20)?²¹ If this is correct, aesthetic experience varies – depending on the cultural context – so much from the very outset that we should be sceptical of a common basic quality in all of its instances. As Davies says, we hardly know anything about the use of Palaeolithic paintings and carvings (p. 187). The assumption of a common structure of aesthetic experience across cultures and periods certainly is a retrospective construction based on our own comparatively recent notion of art.²² I am not saying that this construct is therefore necessarily inaccurate, but I am saying that there is no extrinsic reason why it should be accurate.

Katja Mellmann

Department of German, University of Göttingen,
Käte-Hamburger-Weg 3, D-37073 Göttingen, Germany
katja.mellmann@phil.uni-goettingen.de

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²⁰ Mellmann, ‘On the Emergence’, 74–75.

²¹ This seems positively established at least by Davies’s own definition of art (pp. 28–29).

²² And here I do not speak of modern Fine Arts, Kantian disinterestedness, or anything Davies correctly puts aside as too specific, but of his own deliberately broad concept of ‘art as such’ (p. 28).

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IS AN ANALYTICAL CONCEPT OF ART ADEQUATE FOR EVOLUTIONARY EXPLANATIONS? A COMMENT ON STEPHEN DAVIES'S *THE ARTFUL SPECIES*

JERZY LUTY

My comment focuses on the definition of art that Davies defends in his book and its relation to the evolutionary project in aesthetics. Whereas Davies seems to think that the definition should be strong and narrow (in a sense to be specified in what follows) to make the evolutionary explanations in aesthetics theoretically viable, I think that a sharp definition of art may hinder the evolutionary project. The controversy emerges most clearly in his critical discussions of two evolutionary philosophers, Denis Dutton and Ellen Dissanayake.

Dutton proposes employing an analytical 'cluster' definition of art to describe art as a naturally evolved category.¹ This definition is composed of a set of so-called recognition criteria, twelve in Dutton's version.² Dutton calls these criteria 'special features' of art, noting that each can also apply to activities unrelated to art. 'Cluster' means that the definition is disjunctive (in contrast to a 'bound' definition, which is conjunctive), and hence accepting an object as art does not require it to conform to all of the criteria (it does not require the conjunction 'and') but only to some of them (the disjunctive connector 'or'). According to Dutton, the criteria that make up the definition

are not chosen to suit a preconceived theoretical purpose; to the contrary, these criteria purport to offer a neutral basis for theoretical speculation. The list could be described as inclusive in its manner of referring to the arts across cultures and historical epochs, but it is not for that reason a compromise among competing, mutually exclusive positions.³

I thank Stephen Davies, Ellen Dissanayake, Joseph Carroll, Katja Mellmann, and the editors of *Estetika* for their helpful remarks on an earlier version of this comment.

¹ Denis Dutton, *The Art Instinct: Beauty, Pleasure and Human Evolution* (New York: Bloomsbury, 2009).

² Which are (1) direct (impractical) pleasure, (2) skill and virtuosity, (3) style, (4) novelty and creativity, (5) criticism, (6) representation, imitation, (7) special focus, (8) expressive individuality, (9) emotional saturation, (10) intellectual challenge, (11) art traditions and institutions, and (12) imaginative experience. See Denis Dutton, 'Aesthetic Universals', in *The Routledge Companion to Aesthetics*, ed. Berys Gaut and Dominic Mclver Lopes (London: Routledge, 2001), 210–12; 'A Naturalist Definition of Art', *Journal of Aesthetics and Art Criticism* 64 (2006): 367–77; *Art Instinct*. For an earlier version of the cluster concept of art, see, for example, Berys Gaut, 'Art as a Cluster Concept', in *Theories of Art Today*, ed. Noël Carroll (Madison: University of Wisconsin Press, 2000), 25–44.

³ Dutton, *Art Instinct*, 51.

Modifying his earlier, more favourable position on the cluster definition of art,⁴ which he regarded as a possible version of essentialism rather than anti-essentialism, Davies argues in *The Artful Species* that an adequate definition would have to determine which combinations of features are sufficient to constitute art.⁵ The cluster definition, according to its definition, cannot meet such a requirement (since it is a disjunctive definition) and Davies regards the intentional and subjective nature of the particular criteria as its weakness (p. 28). He argues that the cluster-definition approach is unsuitable for evolutionary analysis (contrary to Dutton's claim), for primarily two reasons: first, contrary to the declared 'universalism', it focuses on characteristics of Western art starting from the eighteenth century, such as originality, cognitive complexity, distinctness from the everyday, and expressive individuality. It ignores the characteristics relevant to the art of traditional communities such as stylistic faithfulness, deference to tradition, uncomplicated accessibility. It is therefore ethnocentric. Second, it cannot determine which objects fall under the concept of art, so it has little theoretical value: 'Without specifying exactly which combinations of the properties are sufficient for something being art and under what circumstances, which is something cluster theories never do, the cluster theory is of no help to us.' (p. 28)

Davies himself introduces another type of a disjunctive definition capable of containing both eighteenth-century art and tribal art. This definition works with far fewer and different kinds of disjunct than does Dutton's cluster account. Davies writes:

Something is art (a) if it falls under any established, publicly recognized category of art or within an established art tradition or (b) if it is intended by its maker/presenter to be art and its maker/presenter does what is necessary and appropriate to realizing that intention, or (3) if it shows excellence of skill and achievement in realizing significant aesthetic or artistic goals. (pp. 28–29)

In defence of Dutton, one should emphasize that he seeks to propose what he calls the 'recognition criteria approach', which is related to the 'folk concept of art'. That relies on the concept of 'natural category'.⁶ By natural category he means a concept that is specified in all known cultures so that we can talk cross-culturally and cross-historically about its classification and assessment, yet it takes various forms and has a culturally variable character. Dutton (weakening Davies's objection about ethnocentric bias) states the idea as follows: 'Many of the ways art is

⁴ Stephen Davies, 'The Cluster Theory of Art', *British Journal of Aesthetics* 44 (2004): 297–300.

⁵ Stephen Davies, *The Artful Species: Aesthetics, Art, and Evolution* (Oxford: Oxford University Press, 2012). The page references in the article refer to this book.

⁶ Dutton, *Art Instinct*.

discussed and experienced easily cross culture boundaries, and manage a global acceptance without help from academics or theorists. From Lascaux to Bollywood, artists, writers, and musicians often have little or no trouble in achieving cross-cultural aesthetic understanding.⁷

Now, we shall consider Davies's second objection, that is, the alleged theoretical uselessness of Dutton's concept. Recognition criteria are supposed to identify universal features of art but not to define art per se. According to Dutton, art (like other natural categories: religion, family, war, or language) is a rich, disseminated, and highly diverse territory of human activity and human experience, which existed long before the advent of philosophers and theorists. It is therefore one of the exceptionally significant and simultaneously obscure areas of human life, and at the same time incredibly tangible and permanent, while still eluding theory. As such, any attempt to grasp such a notion necessarily fails to fulfil the function of the definition, that is, 'to map the concept by indicating what falls under it' (p. 28).

Moreover, contrary to the declared critical attitude to Dutton's 'recognition criteria approach', Davies, in my opinion, supports this approach when he recognizes the existence of a pre-conceptual ability to recognize the category of art (another version of the folk concept of art), and says it can be, and originally must have been, 'made by people who either did not possess the concept of art or had only a rudimentary conception of art' (pp. 28–29).

My second remark is connected with Davies's criticism of Dissanayake. The author of *Homo Aestheticus*, Ellen Dissanayake, is recognized as a pioneer of the evolutionary trend in contemporary aesthetics. She considers herself an evolutionist. Referring to the knowledge offered by evolutionary sciences, she tries to demonstrate that the ability defined as 'artification' or 'making special' is a universal adaptive characteristic of the human mind.⁸

Davies criticizes Dissanayake for not providing an adequate definition of art (listing, among other things, the defining inconsistency),⁹ and he finds her concept 'making special' too broad (because it includes the concepts of 'game' and 'ritual', p. 131). His own definition, as we have seen, is supposed to offer a better, that is, narrower, base for any evolutionary theory of art. In my opinion, Dissanayake's conceptual inconsistencies recede into the background if we

⁷ Ibid., 51.

⁸ Ellen Dissanayake, *Homo Aestheticus: Where Art Comes From and Why* (Seattle: University of Washington Press, 1995); 'The Artification Hypothesis and Its Relevance to Cognitive Science, Evolutionary Aesthetics, and Neuroaesthetics', *Cognitive Semiotics* 5 (2009): 136–58.

⁹ Stephen Davies, 'Ellen Dissanayake's Evolutionary Aesthetic', *Biology and Philosophy* 20 (2005): 291–304.

assume that art has an evolutionary value connected with behaviour, that is, with the activity of producing and performing art. Considered as a behaviour, art does not seem to fit well with any theoretically narrow definition.

Although he rejects Dissanayake's 'ethological' definition of art as too broad, Davies uses a similar one with references to music – 'If we are to consider the connection with evolution, we must focus on human dispositions to act in certain ways, rather than on the artifacts or products'¹⁰ – calling it all kinds of 'music behaviors' (pp. 152–57). He also adopts the concept of 'aesthetic behavior'¹¹ introduced and promoted in various ways for many years by Dissanayake.¹² He thus abandons Dutton's 'object oriented' approach¹³ as well as his own, and recognizes the 'ethological' approach as more useful to the evolutionary analysis of art. It is de facto in agreement with Dissanayake's broader view of art. (Her 'ethological' approach was recently developed in an interesting way by, among others, De Cruz and De Smedt.)¹⁴

I would ask the author when he decided to accept the ethological concept of art at the cost of abandoning 'object oriented' concepts? To what extent do both concepts of art as an object and art as a behaviour coincide, and should we still analyse our evolutionarily driven abilities to create and admire art by analysing artistic objects rather than artistic behaviours? This is also a question about the usefulness of the analytical definition of art in the evolutionary approach and, more important, a question about the legitimacy of creating such definitions, since the project of defining art sometimes seems to be wrongheaded and irrelevant, ignoring core values of art and alienating other participants in the field of the arts from analytic aesthetics.

Jerzy Luty

Department of Sociology, Kościuszko Military Academy,
ul. Czajkowskiego 109, 51-150 Wrocław, Poland
jerzyluty@gmail.com

¹⁰ Stephen Davies, 'Music, Fire, and Evolution', *Politics and Culture*, no. 1 (2010), <http://www.politicsandculture.org/2010/04/29/music-fire-and-evolution/>.

¹¹ But he prefers to use its narrow version: 'art behavior' (pp. 7, 46, 49–54).

¹² See her article 'The Artful Species Engages in Art Behaviours' in this issue of *Estetika*, 101–104.

¹³ See the criticism of Dutton's approach in Ellen Dissanayake, 'Denis Dutton: Appreciation of the Man and Discussion of the Work', *Philosophy and Literature* 38 (forthcoming).

¹⁴ According to them, the abilities that typify behaviours related to art are the design stance (the recognition of intentionality), symbol-mindedness (the realization that something represents something other than itself), and aesthetic sensitivity (the qualitative appreciation of perceptual stimuli), thus abilities that decidedly transcend the notion of art as an object and are directed towards art-related activities of the human mind. See Helen De Cruz and Johan De Smedt, 'A Cognitive Approach to the Earliest Art', *Journal of Aesthetics and Art Criticism* 69 (2011): 379–89.

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RESPONSE TO WILFRIED VAN DAMME, ELLEN DISSANAYAKE, JOSEPH CARROLL, KATJA MELLMANN, AND JERZY LUTY

STEPHEN DAVIES

I wish to thank the participants in this symposium for engaging with my work.

I. RESPONSE TO WILFRIED VAN DAMME

Wilfried van Damme commends me for distinguishing the aesthetic from the artistic. Non-artworks can display an aesthetic character. Consider a sunset. And artworks are often better appreciated in terms of artistic than aesthetic properties. Artistic properties might depend on genre membership, art-historical conventions, and the like, and they can involve allusion, irony, sophisticated forms of expression, representation, and so on. Many conceptual artworks are either anti-aesthetic or have artistic meanings to which their aesthetic properties are irrelevant.

I tend to speak of aesthetic properties as 'out in the world', as belonging to their objects. Van Damme contrasts this with a view he thinks is held by evolution theorists according to which such properties are projected onto the world by the observer. He asks me to elaborate on my 'aesthetic realist' position, specifically with reference to mainstream evolutionary aesthetics' adherence to the opposite 'aesthetic projectivist' view.

I think aesthetic concepts are of the kind called (in the jargon of contemporary analytic philosophy) response-dependent. Let me explain the idea with respect to colour. Only creatures with senses capable of discriminating certain reflected wavelengths of light and with interests relevant to doing so will be aware of the greenness of grass. We attribute the greenness to the grass, rather than to the experience of the perceivers, because there is sufficient agreement in the responses of qualified observers. Their responses tell us more about the grass than about what is distinctive to them as percipients. Viewed as a power that the grass has to produce the response in suitably equipped perceivers, its greenness is an objective property of it. Colours are discovered, not invented. In other words, there are colours as well as colour sensations.

I would provide a parallel story about aesthetic concepts. Only a creature with certain cognitive capacities, perceptual powers, and interests will be affected by them. As compared to opinions about greenness, it might be thought that there is considerably less agreement among qualified observers about aesthetic properties, and that would be a reason for acknowledging a personal element in their aesthetic judgements. My own view is that there is sufficient consensus about paradigm cases

to ground the overall objectivity of attributions of aesthetic properties. And where disagreement occurs, it is typically cast as being about what exists in the world rather than as about idiosyncratic differences in phenomenological experiences.

The suggestion that greenness and beauty are projected onto their objects by the observer has been historically advocated by Continental philosophers. If this is merely a *façon de parler* about response-dependence as I have described it, then we could make an appropriate translation of what I say in *The Artful Species* to this alternative manner of speaking. But insofar as the observation that the detection of colour properties or aesthetic properties requires observers of a certain kind is assumed to entail anti-realism about the existence of such properties, these are not equivalent ways of talking and I would reject the presumed entailment.¹ I don't think we should say that ultraviolet light is projected onto its reflectors by bees, just because they detect those frequencies and we don't.

Wilfried van Damme comments: 'As regards the notion of the aesthetic, I admit, however, that it is not quite clear to me how the author distinguishes the aesthetic from the non-aesthetic in relation to both properties and experiences (and, indeed, whether or not he sees this distinction as one of kind rather than degree).'

My research field is aesthetics and the philosophy of art, so I am very familiar with the complex academic debates that surround key notions in these areas. Philosophers ask of the aesthetic if it is better characterized in terms of properties of objects or as a kind of experience. They question if there is a distinctive psychology that distinguishes the aesthetic attitude. They enquire what relation of supervenience holds between aesthetic features and the non-aesthetic features on which they are grounded. They wonder how value enters into aesthetic judgements and whether connections between aesthetic judgements and aesthetic evaluations are rule-governed. Then there are the differences in the accounts of those who first debated the relevant concepts – Burke, Addison, Shaftesbury, Hume, Kant, for instance – and the subsequent changing histories of those concepts to the present. And so on.²

Here, though, is the point. *The Artful Species* is written to be accessible to the folk, to people without specialized academic backgrounds. Had I debated the nature

¹ For a sample of relevant arguments, see Philip Pettit, 'Realism and Response-Dependence', *Mind* 100 (1991): 587–626.

² Here is a smattering of useful philosophical introductions to recent debates about the aesthetic: Alan H. Goldman, 'Aesthetic Qualities and Aesthetic Value', *Journal of Philosophy* 87 (1990): 23–37; Emily Brady and Jerrold Levinson, eds., *Aesthetic Concepts: Essays after Sibley* (Oxford: Clarendon Press, 2001); Gary Iseminger, *The Aesthetic Function of Art* (Ithaca, NY: Cornell University Press, 2004); Derek Matravers, 'Aesthetic Properties', *Aristotelian Society Supplementary Volume* 79 (2005): 191–210; Jerrold Levinson, 'Aesthetic Properties', *Aristotelian Society Supplementary Volume* 79 (2005): 211–27; Robert Stecker, 'Aesthetic Experience and Aesthetic Value', *Philosophy Compass* 1 (2006): 1–10; Noël Carroll, 'Aesthetic Experience: A Question of Content', in *Contemporary Debates in Aesthetics*

of the aesthetic in all its richness, the discussion would have soon become too arcane and complex and I would not have retained the readership long enough to get to what I really wanted to consider. So, instead, I did something fast and simple. I appealed to familiar notions, those of the beautiful and awesome, and list many ways in which these may be realized. We have aesthetic experiences when we are aware of the beautiful or the awesome, their cognates, and their opposites. In other words, I made a largely non-analytical appeal to what is an ostensive definition presupposing shared basic concepts and experiences.

Theorists who are sensitive to the nuances that are bypassed can, quite reasonably, find this approach unsatisfying. So I have sympathy with van Damme's disquiet. I should add that I approached the concept of art in a similar manner, as I will explain further below.

II. RESPONSE TO ELLEN DISSANAYAKE

As Ellen Dissanayake rightly observes, I have been influenced by her ideas and share many of them. She proposes that 'evolution of course does not act on objects but on behaviours (and psychological predispositions for behaviours) that create those objects or works or performances'. When I adopt the terminology of 'art behaviours' in *The Artful Species*, I acknowledge her as its source. She points to that as a departure from a journal article in which I critically scrutinized some of her views; I objected there that she focuses more on art behaviours than artworks.³ I certainly have changed my mind on many things since then, and I might have expressed the thought poorly, but the concern I was trying to voice remains with me. To help tease it out, consider the objections Dissanayake adds. I do not emphasize 'artistic *participation*, which surely is intrinsic to arts as they are experienced in traditional – and presumably ancestral – societies'. She adds that 'the lone art-maker or the solitary passive appreciator who responds to beauty and sublimity would have been rare in the lives of our predecessors'.

I do emphasize that we all achieve art-behavioural competence in one or another art form (pp. 52–54)⁴ and in that sense I talk about artistic participation. But I assume that what Dissanayake wants stressed is participation in a *group* of

and the Philosophy of Art, ed. Matthew Kieran (Oxford: Blackwell, 2006), 69–97; Gary Iseminger, 'The Aesthetic State of Mind', in Kieran, *Contemporary Debates*, 98–110; Noël Carroll, 'Recent Approaches to Aesthetic Experience', *Journal of Aesthetics and Art Criticism* 70 (2012): 165–77; Alan H. Goldman, 'The Broad View of Aesthetic Experience', *Journal of Aesthetics and Art Criticism* 71 (2013): 323–33; James Shelley, 'The Concept of the Aesthetic', in *Stanford Encyclopedia of Philosophy*, fall 2013 ed. (Stanford University, 1997–), <http://plato.stanford.edu/archives/fall2013/entries/aesthetic-concept/>.

³ Stephen Davies, 'Ellen Dissanayake's Evolutionary Aesthetic', *Biology and Philosophy* 20 (2005): 291–304.

⁴ All the page references in the article refer to Stephen Davies, *The Artful Species: Aesthetics, Art, and Evolution* (Oxford: Oxford University Press, 2012).

others. In traditional societies, art plays an important role in rituals that involve the whole community. I accept that this is the case. Nevertheless, I think some art is, and always was, personal and private. Take the cave art of the Ice Age. A few sites – the Great Hall of the Bulls in Lascaux and the main gallery in the Niaux Cave – would have allowed for group ritual.⁵ And we know that adolescents and children, as well as men and women, visited some caves. But the majority of examples of cave art are difficult to access and observe, and many are in cramped spaces. Christine Desdemaines-Hugon writes: ‘Was the art intended to be seen? It is now thought that it was meant to be seen by very few, if at all. Recently discovered caves, where great care has been taken to avoid trampling on the soil, show few traces of human visitors. In Chauvet, for instance.’⁶ So, much of the earliest art that we know was not intended for the group’s participation and presumably was about personal expression and identity.

This takes me back to the concern I mentioned earlier. For the most part, Dissanayake thinks that art makes its evolutionary contribution to the fitness of individuals through how it strengthens the group and lowers levels of anxiety. By contrast, I think it is plausible that it affects individuals in other ways that might impact on their fitness. And, when it comes to the one-on-one interaction between a person and an artwork, it will be the specific content of that particular work that makes the contribution. Whereas Dissanayake has explicitly stated that her theory does not consider the actual content of artworks and she repeatedly stresses the affective power of art over (when it has them) its symbolic meaning or propositional content.⁷ I take it that this is because, within broad limits, many otherwise different artworks could make the relevant contribution to group ritual. When I earlier complained that she neglects artworks in favour of art behaviours, it was her downplaying of artistic content and how it might affect the individual that I was trying to get across.

⁵ See Gregory Curtis, *The Cave Painters: Probing the Mysteries of the World’s First Artists* (New York: Anchor Books, 2007); Christine Desdemaines-Hugon, *Stepping-Stones: A Journey through the Ice Age Caves of the Dordogne* (New Haven, CT: Yale University Press, 2010); Brian M. Fagan, *Cro-Magnon: How the Ice Age Gave Birth to the First Modern Humans* (London: Bloomsbury, 2010); Jill Cook, *Ice Age Art: Arrival of the Modern Mind* (London: British Museum, 2013).

⁶ Desdemaines-Hugon, *Stepping-Stones*, 187. For more on the human use of Chauvet, see Maurice Arnold, Paul G. Bahn, and Jean Clottes, eds., *Chauvet Cave: The Art of Earliest Times*, trans. Paul G. Bahn (Salt Lake City: University of Utah Press, 2003); Curtis, *Cave Painters*; David Whitley, *Cave Paintings and the Human Spirit* (Amherst, NY: Prometheus Books, 2009).

⁷ Ellen Dissanayake, *Homo Aestheticus: Where Art Comes From and Why* (Seattle: University of Washington Press, 1995), 85–91. This theme continues in her later work. For instance, see Ellen Dissanayake, ‘The Artification Hypothesis and Its Relevance to Cognitive Science, Evolutionary Aesthetics, and Neuroaesthetics’, *Cognitive Semiotics* 5 (2009): 136–58, and ‘Prelinguistic and Preliterary Substrates of Poetic Narrative’, *Poetics Today* 31 (2011): 55–79.

III. RESPONSE TO JOSEPH CARROLL

In *The Artful Species* I think I treated Joseph Carroll's published views with honesty and respect, citing no less than thirteen of them. I'm not sure that he reciprocates in the same spirit. He belittles and derides my book. It is unoriginal, dull, passive, and beside the point. I sometimes encounter people who are deeply intolerant of close analysis and careful criticism. They regard these as nitpicking, rather than as a crucial means to improving and developing academically respectable positions. They prefer the 'courage' of fanciful vision. I guess Carroll is their ally.

The glaring fault detected by Carroll in my book, one that has been missed by everyone else so far, is that I ignore the idea that the arts create imaginative virtual worlds. Is this claim true of all the arts, as Carroll suggests? I'm not sure that it applies to abstract painting, sculpture, and dance, to memorial sculpture, to instrumental music, or to architecture. I doubt that patterned wallpaper and elaborate lace – recall that I consider decorative and domestic arts as covered by the argument – create virtual worlds. And even where depiction is involved – the willow tree pattern on a plate, say – it does not strike me as always plausible or useful to maintain that an imaginative virtual world is created.

Carroll offers a three-step argument suggesting that the capacity for creating and inhabiting imaginative virtual worlds is an adaptation. Suppose this argument succeeds. So far as I can tell, nothing in it shows that the arts are the source of the relevant adaptation. More likely they feed off it.⁸

In *The Artful Species* (pp. 175–76), I allow that our propensity to narrativize is likely to be adaptive, that fictional thinking (for example, about the future or about how the past might have been different) is adaptive, and that our capacity to project into the minds of others is adaptive. In those terms, I agree that we create virtual imaginative worlds. But the arts are not the only, or even the main, place where these abilities come into play. They are essential, for instance, in all practical reasoning about social situations. All causal and counterfactual thinking takes us beyond the immediate present and are ventures into virtual reality. The basics of these capacities are acquired very early in life, before engagement with the products of sophisticated arts. And even if it were true that exposure to art later helps refine the relevant talents, that would not explain the value and interest that the arts have for fully developed adults. To show that the arts

⁸ Carroll's three-step argument is acknowledged as deriving from Jonathan Gottschall, *The Storytelling Animal: How Stories Make Us Human* (Boston: Harcourt, 2012). But notice that Gottschall admits that he is not sure whether storytelling is adaptive or a by-product (see p. 30) and that he defends the thesis as about storytelling in general, not as about literature or the other arts.

frequently call on our creative imagination is not to prove that they are adaptations to that end.

Joseph Carroll seriously misrepresents my views. For instance, he observes:

Davies's implicit ambition, taken in the most generous light, is only to evaluate ideas and to judge which, if any, have achieved the standing of a firmly established scientific theory – that is, an idea so tightly knit in logical structure, so massively confirmed by empirical evidence converging from various fields, and so universally affirmed by scientists that it can be taken not just as a speculation but as a fact.⁹

This statement takes no account of the following, which appears in a section titled 'The Standard of Proof':

Most theorists attempt to say how the behavior improved the evolutionary success of our ancestors and why, or why not, we are also affected. Almost inevitably, this extension of the theory involves conjecture. We are too ignorant about the lives of our forebears to avoid this. Of course we should avail ourselves of the latest scientific information on the matter, but this generally leaves answers to crucial questions under-determined. I am sympathetic to this difficulty. I don't mean to fault theories for being speculative in part, especially if they acknowledge the extent to which they go beyond the evidence. But where a range of very different proposals about the evolutionary significance of some behavior are in competition, with none clearly established as superior to all others, which is often the case where aesthetics and art are the topic, it will be more appropriate to reserve judgment than to opt for what we might like to be true. (p. 43)

When Carroll quotes me, he often mistreats what I say. For example, he claims that I equivocate between regarding art as a by-product and as an adaptation. 'Davies says that the arts help generate "our sense of ourselves, both as individuals and as members of communities" (p. 188). They "transform and add meaning to our lives". That sounds very much like a claim that art has an adaptive function. Just a few lines before, though, Davies had suggested that "art is a spandrel that survives because it does not limit or undermine the comparative fitness of those who display it" (p. 187).¹⁰ The sentence fragment from p. 187 is taken out context. The point I am making is that, even if art is universal, ancient, and intrinsically pleasurable, this is no less consistent with its being a by-product (or spandrel) than with its being an adaptation. Here is the close of the passage: 'But we can accept that art behaviors are deeply rooted in human nature and depend ultimately on evolution while adopting weaker views [than the adaptationist one]: for example, that art is a spandrel that survives because it does not limit or undermine the comparative fitness of those who display it.' (p. 187) Plainly, the view that art is a

⁹ Joseph Carroll, 'A Critique of Stephen Davies's *The Artful Species*', this issue of *Estetika*, 105–6.

¹⁰ *Ibid.*, 108.

spandrel is not endorsed here. In fact, I'm not sure whether art is an adaptation or a by-product. I argue, however, that it can be central to human nature either way.

Carroll claims that I reduce *Oedipus Rex* and *Crime and Punishment* to unintelligent truisms. He deliberately ignores the adjacent sentence: 'In the context of the fiction all the rich details and subtle nuances count, but when we export what we have acquired to the actual world where the details and nuances are not the same, we may be left with truisms.' (p.170)

Compare Carroll's claim that I aim to distance human beauty from sex and that I take 'most of the sex out of sensory experience' with this:

Nor do I mean to anesthetize the notion of physical beauty by separating it completely from sexual attraction. That is to say, I am not convinced by the suggestion that we are now discussing a de-sexed kind of attractiveness. No one fails to notice the sex of the person with whom he or she is talking. And when they beautify themselves in ways that are socially accepted, people often want to be thought of or recognized as sexually attractive, which is of course quite different from wanting to elicit an overtly sexual response. (p. 116)

Carroll represents himself as an expert on writing style and syntax, so one would expect him to be a careful reader. But then, why is he so careless in characterizing what I say? In any case, it is likely that the distorting lens through which he chooses to view my work explains why I find it hard to recognize my arguments in the position he attacks.

IV. RESPONSE TO KATJA MELLMANN

In *The Artful Species*, I distinguish factual from (deliberatively) fictive modes of discourse, though I concede that historical narratives are 'constructive' and that many fictions accurately describe the world and often are written with polemical goals. I also point out that outsiders are bound to take the creation myths and religious tales of other cultures as fictional, though insiders often take them to be literal. The issue behind the drawing of such distinctions was to try to locate the hard-to-pin-down subject matter of literary Darwinism.

Interestingly, Katja Mellmann sets up an orthogonal distinction, based on how some traditional societies speak, between third-person received knowledge (or myth, literature, and history) and first-person experienced knowledge. The former is 'indifferent to questions of historical accuracy as we conceive of it in modern terms. This may be the reason why we still create narratives that are extremely contaminated in matters of "fact and fiction"'.¹¹ She proposes that 'mythic' is an operator designating the space of socially communicated information, which in

¹¹ Katja Mellmann, 'The Question of Adaptation and the Question of Structure: A Reading of Stephen Davies's *The Artful Species* from the Viewpoint of Literary Theory', this issue of *Estetika*, 114.

our species was a new and increasingly dominant domain of knowledge. We acquired this mode of thinking in a context in which it was adaptive to accumulate and store such knowledge, which we did in the form of narrative. As she acknowledges, this does not provide an account of art-literature as such, but rather of the proto-literary behaviours from which art-literature subsequently emerged.¹²

I agree that the neural management of new kinds or greater quantities of information must have gone hand in hand with the development of language (or, at least, of socially sophisticated means of communication). Current theories tend to push the date of this well before the appearance of our species,¹³ but I don't think that need be problematic for Mellmann. The real test of the hypothesis, I suppose, hinges on how memory operates and on whether, among the various kinds of memory, a neurally significant distinction can be drawn about kinds of knowledge based on whether their sources were first-person or third-person. I don't think that is the case, but the neurophysiology of memory is far beyond my expertise!

A more relevant point, for my purposes, is the claim that the mythical mode is 'indifferent to questions of historical accuracy'.¹⁴ I doubt that this is right. Try telling a Jewish person that the Holocaust myth is interesting, whether or not it is true! I suspect that, even if we separate received third-person knowledge from knowledge gleaned at first hand, within the mythic mode of the former we are careful to distinguish kinds of utterances in terms of their goals. There is a huge difference in purpose between historical and fictive storytelling, even if both contain elements of fabrication and fact. Some people who missed that distinction worried unnecessarily about what was harmless and walked into the path of what was not.

I certainly concede this much: we are an error-prone species rather too inclined to invent facts if none come readily to hand. And we are no less inclined to cling to the false 'facts' as to the established ones. After describing sacred myths local to a part of Queensland, Australia, the geneticist Spencer Wells writes:

Like many indigenous peoples around the world, the Aborigines believe that they have always lived on their land. [...] The genetic results, though, clearly show that Australians – like everyone else alive today – trace their ancestry back to Africa. The Australians have an answer for this. Greg Singh, an aboriginal artist living in Cairns, suggests that the world was actually settled from Australia, explaining the genetic connection between the [peoples of] Oz and Africa.¹⁵

¹² A similar approach – taking very early constraints on language and communication in order to see how they might later have been co-opted to the ends of art-literature – is offered in Christopher Collins, *Paleopoetics: The Evolution of the Preliterate Imagination* (New York: Columbia University Press, 2013).

¹³ See *ibid.*, for instance.

¹⁴ Mellmann, 'Question of Adaptation', 114.

¹⁵ Spencer Wells, *The Journey of Man: A Genetic Odyssey* (New York: Random House, 2002), 80. (In Wells's defense, let me point out that the title is not egregiously sexist. He traces the journey in terms of the chronology of mutations on the Y, that is, male, chromosome.)

V. RESPONSE TO JERZY LUTY

Jerzy Luty asks how I conceive my task in *The Artful Species* and how this relates to the 'evolutionist' approach. I think of myself as applying philosophical methods to the evaluation of current theories about the evolutionary origins and significance of aesthetic and art behaviours.¹⁶ Obviously, I make no contribution to the empirical study of these issues. I am more concerned with the assumptions, the interpretations of the data, and the arguments used by theorists in this area to support their conclusions. To be frank, I anticipated finding more consensus than I did and I expected to be able to agree on many substantial theses. As it turned out, though, I am critical of scientists whose views on art and the aesthetic are simplistic and of humanists whose grasp of what the theory of evolution requires by way of demonstration is tenuous. The extent of cross-disciplinary knowledge required adequately to theorize in the area and the very different backgrounds of those who publish on these topics should lead us to expect these inadequacies and difficulties. But this is a newish field. I hope that the challenges I raise will be answered through the development of more sophisticated accounts. Meanwhile, the fast rate of scientific advance in our understanding of our hominin ancestors and of human prehistory is bound not only to close crucial gaps in our knowledge but also to stimulate further theorizing.

The past half-century or more have seen a lot of interest in the project of defining art by philosophers of art. Influenced by the anti-essentialism of Wittgenstein's *Philosophical Investigations*,¹⁷ a number of philosophers argued in the 1950s that art cannot be defined or, in Kennick's case, that doing so is unnecessary because we can identify art without the help of a definition.¹⁸ But from the 1980s, others attempted to provide adequate definitions and these took functional, procedural, historically recursive, and cluster forms. I discussed such definitions in my first book and I continue to publish on the topic.¹⁹ Much of the writing of the 1980s and 1990s was more concerned with whether (and how) to reject or enfranchise the claim to art-status of avant-garde art than with traditional notions of art in non-Western societies.²⁰ I agree with Denis Dutton that this focus is counter-productive in the context of debating art's connection with evolution.²¹

¹⁶ And let me again note, I adopt talk of art *behaviours* from Dissanayake because I agree that evolution works on cognitive and behavioural dispositions, not on the material products they give rise to. This is not to say, however, that the content of art has to be irrelevant to its effects on human fitness.

¹⁷ Ludwig Wittgenstein, *Philosophical Investigations*, trans. G. E. M. Anscombe (New York: Macmillan, 1953).

¹⁸ William E. Kennick, 'Does Traditional Aesthetics Rest on a Mistake?', *Mind* 67 (1958): 317–34.

¹⁹ Stephen Davies, *Definitions of Art* (Ithaca, NY: Cornell University Press, 1991).

²⁰ But see Stephen Davies, 'Non-Western Art and Art's Definition', in *Theories of Art Today*, ed. Noël Carroll (Madison: University of Wisconsin Press, 2000), 199–216.

²¹ Denis Dutton, *The Art Instinct* (Oxford: Oxford University Press, 2009).

With *The Artful Species*, I wasn't sure how much attention to pay to definition.²² Both Dutton and Berys Gaut had defended cluster accounts and claimed as a virtue of the approach that it accommodated non-Western art.²³ Yet I was doubtful that their theories were helpful or even relevant for considering the evolutionary status of the arts, which is why I interrogated them.

When it came to the characterization of art, I adopted a strategy not unlike that used for the aesthetic. I sidestepped the difficulties and distractions that would have gone with presenting and defending a fully developed definition and opted instead to enumerate a list of the kinds of art that I acknowledge: decorative, folk, domestic, popular, and mass art, as well as Fine Art. Given that the goal was to seek ties between art and evolution, I agree with Dissanayake that a generously inclusive approach to art is appropriate; a more circumscribed account would be vulnerable to charges of begging the question. I went so far as to sketch the kind of definition I think might work (pp. 28–29), but left this largely undefended. Of course, this method is inadequate and leaves controversial cases unmentioned and unresolved. But those kinds of loose ends are unavoidable in framing the parameters for a book of this kind.

Stephen Davies

Department of Philosophy, University of Auckland,
Private Bag 92019, Auckland Mail Centre, Auckland 1142, New Zealand
sj.davies@auckland.ac.nz

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²² At least one reviewer thinks I gave the subject more pages than it needed: Peter Godfrey-Smith, review of *The Artful Species*, by Stephen Davies, *Notre Dame Philosophical Reviews*, August 12, 2013, <http://ndpr.nd.edu/news/41600-the-artful-species-aesthetics-art-and-evolution/>.

²³ Dutton, *Art Instinct*, and Berys Gaut, 'Art' as a Cluster Concept', in Carroll, *Theories of Art Today*, 25–44.

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