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Editorial

Evolution and Aesthetics

Mandy-Suzanne Wong

Is aesthetics a product of evolution? Are human aesthetic behaviors in fact evolutionary adaptations?

The creation of artistic objects and experiences is an important aesthetic behavior. But so is the perception of aesthetic phenomena *qua* aesthetic. The question of evolutionary aesthetics is whether humans have evolved the capacity not only to make beautiful things but also to appreciate the aesthetic qualities in things.¹ Are our near-universal love of music and cute baby animals essential to our species' evolutionary development, which took place over thousands of years? Or are such traits more recent products of cultural conditioning?

For that matter, what makes a trait essential to the evolution of the species? What counts as an evolutionary adaptation? According to Denis Dutton, "The gold standard for evolutionary explanation is the biological concept of an adaptation: an inherited physiological, affective, or behavioral characteristic that reliably develops in an organism, increasing its chances of survival and reproduction."² A characteristic of an organism is an evolutionary adaptation if it bears some relation to the organism's biological conditions or requirements, passes from generation to generation, and helps the organism to survive or reproduce. The survival of individuals well adapted to their particular conditions of life and such individuals' production of offspring are the mechanisms of natural selection: the process by which a species evolves over time.

Do aesthetic practice and appreciation help people to survive or reproduce? Do aesthetic behaviors help to propel natural selection?

If so, what does that tell us about ourselves as human beings? What does it tell us about art, our other aesthetic practices, and aesthetic experience? These are the driving questions of evolutionary aesthetics.

Charles Darwin believed that aesthetic practices and tastes are vital to reproduction. Birds, for example, attract mates "by singing." Male peacocks and birds of paradise "display with the most elaborate care, and show off in the best manner, their gorgeous plumage; they likewise perform strange antics before the females, which, standing by as spectators, at last choose the most attractive partner." Darwin saw "no good reason to doubt that female birds, by selecting, during thousands of generations, the most melodious or beautiful males, according to their standard of beauty, might produce a marked effect" on the evolution of their species.³ In his writings on botany, he

also argued that the colors and scents of flowers excite the aesthetic sensibilities of insects, who help the plants to reproduce by pollination.

Darwin's theory of beauty as biological, sexual, utilitarian, and appreciable by nonhumans met with adamant opposition from aesthetic theorists of his time. In an assessment of Darwin's relationship with Victorian visual cultures, Jonathan Smith observes that "it is only in recent years that Darwinian accounts of beauty can be said to have garnered a truly significant intellectual and cultural following."⁴ Despite its early detractors, the idea that aesthetic behavior has some relationship with evolution is now a topic of enthusiastic interdisciplinary research and discussion.

In 2009, for example, Dutton argued that an "art instinct" peculiar to the human species helps our species to survive. The art instinct is "a complicated ensemble of impulses — sub-instincts, we might say — that involve responses to the natural environment, to life's likely threats and opportunities."⁵ Driven by this aesthetic instinct, when we look at landscape paintings and photographs, we enjoy them more when they depict places that even the most primitive hominid would want to live in because they offer our kind the best chances at survival. Dutton felt that the same instinct, common to every human since the very first, also influences how we manage and curate actual landscapes. He believed that just as fishes evolved to live in water and not on land, humans evolved "for" a particular habitat:

African savannas are not only the probable scene of a significant portion of human evolution, they are to an extent the habitat meat-eating hominids evolved for: savannas contain more protein per square mile than any other landscape type. Moreover, savannas offer food at close to ground level, unlike rain forests ... The type of savanna that is ideal appears to be the very savanna imitated not only in paintings and calendars but in many great public parks, such as portions of New York's Central Park. The modern design of golf courses can make stunning use of such savanna motifs.⁶

A premise of Dutton's argument is that if our most primitive ancestors displayed a certain behavior or preference, then it's likely to be an evolutionary adaptation. This is a central premise of evolutionary psychology, which wields a heavy influence over several philosophical theories of evolutionary aesthetics. As Dutton put it, "a Darwinian aesthetics will achieve explanatory power ... by showing how [art forms'] existence and character are connected to Pleistocene interests, preferences, and capacities."⁷ Although we must consider "the effects of history and culture on how evolved adaptations, strictly conceived, are modified, extended, or ingeniously enhanced — or

even repressed — in human life,” the starting point of “Darwinian explanation is always looking back into the past to adaptations that come to us from the ancestral environment.”⁸

Ellen Dissanayake bases her ethological argument on the same premise. In her view, art-making and aesthetic appreciation are manifestations of our species’ “universal ability ... to recognize that some things are ‘special,’ and even more, to *make things special* — that is, to treat them as different from the everyday.”⁹ Humans also make things special when we play with them or engage with them in ceremonial rituals, which Dissanayake seems to consider proto-aesthetic behaviors. She implies that our prehistoric ancestors acquired the ability to experience things aesthetically during ceremonies aimed at destroying evil forces or attracting prey. Because these ceremonies were aesthetically interesting, large numbers of people would participate in them, forming communal bonds. Belonging to cohesive groups improved our species’ chances of survival. Dissanayake writes:

natural selection favored groups that performed long complex rituals not because such ceremonies really produced more game or more capably destroyed evil forces, but because they more effectively contributed to social cohesion and group solidarity ... and perpetuate[d] the knowledge that was essential for group maintenance and survival. Yet in order to achieve these benefits a way had to be found that would encourage people to engage in time-consuming and often arduous ceremonies rather than in shorter, less socially-advantageous ones. I believe that an important factor contributing to successful ritual ceremonies would have been their incorporation of what are now called *aesthetic* elements.¹⁰

Because our production and appreciation of “aesthetic elements” is “universal,” having “evolved” from similar or equivalent behaviors in our prehistoric ancestors — behaviors which, like tool-making and language, make “use of a number of fundamental human attributes and tendencies” — Dissanayake believes that aesthetic behaviors are “bioevolutionary” adaptations.¹¹

But in *The Artful Species*, Stephen Davies takes issue with both of the preceding views as well as certain of their underlying premises, including the assumptions of evolutionary psychology. In his criticism of Dissanayake, Davies notes that not all aesthetic practices and experiences promote group solidarity. Creating and listening to music, which often go on in solitude, are equally likely to discourage social interaction.¹² In fact, evolutionary and musical psychologists tend towards self-contradictory arguments in which

music is both a socially alienating practice that promotes competition between individuals and a socially cohesive practice.¹³ Davies also points out that if social cohesion helps our species to survive and “making things special” encourages social cohesion, but “making-special” includes non-aesthetic activities such as play and ceremonial ritual, then it’s not aesthetic practices that are likely to be evolutionary adaptations. Rather, “what is adaptive is the tendency to make things special, with art [or aesthetic behavior] only one among many ways of giving effect to the tendency.”¹⁴

Davies’ point is that if aesthetic behaviors really are germane to natural selection, they must help our species to survive and reproduce in ways that nothing else can.¹⁵ Evolutionary theories of aesthetics must be specific to aesthetics. This argument is related to Davies’ criticism of Dutton’s view and his concerns about evolutionary psychology.

Davies concedes evolutionary psychologists’ basic premise: “we have inherited (some) ways of thinking and perceiving, emotions, personalities, and values because those behaviors and attributes promoted the survival and reproduction of our distant forebears.”¹⁶ But he is wary of assumptions about what our ancestors’ values, ways of thinking, and so on actually were. Dutton’s argument that our aesthetic preferences for certain landscapes evolved from our species’ biological adaptation to a particular habitat relies on the assumption that our species really did evolve “for” some particular habitat. As Davies points out, however, the most compelling scientific evidence indicates that no such habitat existed. The Pleistocene landscape underwent frequent, major upheavals; so according to Davies, those who survived were those able to adapt to all kinds of living conditions—which humans eventually did.¹⁷

Davies is also suspicious of evolutionary psychologists’ assumption that human behaviors are fixed responses to fixed conditions.¹⁸ This assumption is in keeping with the unrealistic dichotomy between biology and culture that Davies identifies in many evolutionary psychological perspectives. Such a dichotomy precludes the possibility that, for example, humans in our time view the African savanna very differently from Pleistocene, Elizabethan, or Meiji-period humans even though many of our biological characteristics are the same. Davies cannot hold with the idea that human behavior is completely “modular,” “automatic,” or biologically determined.¹⁹ Nor does he believe that all our tendencies and values are products of “arbitrary cultural conditioning.”²⁰ Instead, he subscribes to a

version of “gene-culture coevolution” that “recognize[s] not only that culture is affected by biology but also how cultural change can bring about genetic change.”²¹

Given his commitment to biology and culture as mutual contributors to the development of human behavior, Davies cannot entirely dismiss the argument that our biological requirements to some extent influence our aesthetic preferences, which in turn may help us to fulfill our biological requirements, encouraging our survival and hence that of our species.²² But the apparent fact that biology influences aesthetic preference isn't enough to guarantee that aesthetic behaviors are evolutionary adaptations. The latter argument requires more evidence.

However, from his comprehensive survey of relevant scientific and humanitarian research, Davies is forced to conclude that there is “no hard evidence to suggest that [aesthetic behavior] made our ancestors fitter” for survival, and there are no convincing arguments that aesthetic abilities and propensities are inheritable.²³ For example, the musicological, psychological, and neuroscientific arguments currently offered in favor of music as an evolutionary adaptation are “at best incomplete and unsatisfying.”²⁴

That said, “alternative positions — that art is a by-product of evolution or, alternatively, that it has so little to do with evolution that it must be counted as a non-biological invention of culture — are not more strongly supported.”²⁵ Aesthetic behaviors are virtually universal among members of our species, and they seem “peculiarly central to our humanity as such.”²⁶ Indeed, it seems only to make sense that aesthetic behaviors must be evolutionary adaptations — as many of us would desire them to be. Davies “recognize[s] the tantalizing appeal and plausibility of claiming art as a central aspect of our common biological inheritance.”²⁷

Nevertheless, he concludes, claiming that aesthetics is an evolutionary adaptation “depends ultimately on a leap of faith, rather than on appeal to incontrovertible scientific fact.”²⁸ The dearth of scientific evidence for evolutionary aesthetics does not impel Davies to give up on it. While the lack of evidence deters him from the decisive position championed by Dutton and Dissanayake, who are convinced that aesthetics are evolutionary adaptations, Davies retains a positive view of the matter from a more open perspective. He agrees that aesthetic behaviors are not “purely cultural technologies,” that they are instead “biologically rooted,” and that to some extent they indicate an individual's ability to survive — which means that

aesthetic behaviors are *somehow* “connected to evolution.”²⁹ It does not mean, however, that aesthetic behaviors are necessarily adaptations.

In sum, Davies seems committed to the view that aesthetic behaviors “cannot be incidental to our biological agendas.” He believes aesthetic behaviors “are part of human nature, and not in the trivial sense in which whatever we do gives expression to our species’ character.”³⁰ But the nuances of Davies’ view in comparison to his contemporaries’ include a generally more open perspective and more demanding appeal to empirical and argumentative evidence, which preclude a strong commitment to the theory that aesthetic behaviors are evolutionary adaptations.

The evidence may be a long time in coming. How did our prehistoric ancestors, who in many ways seem completely unlike ourselves, give rise to our familiar values and ways of thinking? How did our species survive environmental upheavals? For a while yet, given the relatively scant physical evidence, we may only be able to speculate on these questions. Yet the questions at the heart of evolutionary aesthetics remain vital questions to scientists, aestheticians, and other aesthetic practitioners as this issue’s contributors demonstrate in the following pages. The research I’ve described so far is only a small sampling of the most prominent ideas in circulation.

Why are these questions vital and fascinating: Is aesthetics a product of evolution? Are human aesthetic behaviors in fact evolutionary adaptations?

Why are these questions interesting? Why are our contributors driven to pursue evidence for evolutionary aesthetics and look towards its implications? I’ll offer a few suggestions in no particular order.

Things of interest to artists are in turn of interest to aesthetic scholars and philosophers. The connection between aesthetics and evolutionary theory, the processes of natural selection, and the methods, rhetoric, and illustrations used in evolutionary science have inspired artists since Darwin’s day. A recent anthology entitled *Endless Forms: Charles Darwin, Natural Science, and the Visual Arts* discusses the influence of Darwin’s ideas about ancestry and pre-history on Western visual art in the nineteenth century, including impressionism.³¹ Among other ideas, the same anthology addresses how popular or “coarse” Darwinism — which reduces natural selection to a crude matter of typology, “series of oppositions,” and “inevitability” — influences photographic portrayals of non-Western people.³²

In turn, aesthetic and creative thinking certainly influenced Darwin's study, theorization, and documentation of natural selection.³³ Jonathan Smith analyzes the aesthetic choices Darwin made as he attempted to articulate and disseminate his evolutionary theories. The illustrations in his books deliberately avoided the appearance of "fine art," for example.³⁴ Such decisions reflected Darwin's de-anthropocentric aesthetic theories, which flew in the face of the artistic trends and aesthetic values that prevailed in his Victorian milieu: the idea that our sense of the beautiful and love of beauty are naturally selected biological adaptations entails that they are not God-given gifts.

In fact, in *The Descent of Man*, Darwin's objective "was to demonstrate not merely that humans were physically descended from animals, but that the supposedly unique features separating us from animals — our mental powers, moral sense, and aesthetic sense — were different only in degree from those of animals, and had been inherited from them."³⁵ For Darwin's conservative detractors, this idea was intolerable. The premise of evolutionary aesthetics was considered an affront to art; for if art is just another process of natural selection — which is something even ants and trees can do — then art isn't an elite practice of God's chosen species. In fact, the implication is that there is no "chosen species"; compared to other living beings, humans are nothing special. And this, for Victorians, was a depraved insult to God and all humanity. In the unthemed section of the present issue, **Eoin O'Connell** questions whether artworks, art forms, and God can incur moral harm.³⁶ But for Darwin's opponents, evolutionary aesthetics was atheistic, materialistic, and thus indeed morally wrong.³⁷

Thankfully, more recent views have moved beyond Christian prejudices. Theories like Dutton's, Dissanayake's, and Davies' prefer to focus on the positive implication of evolutionary aesthetics: if aesthetic behaviors are evolutionary adaptations, then they are essential to our survival and that of our species. For us aesthetic practitioners — artists, aestheticians, aesthetic scholars, and seekers of aesthetic stimulation — it would be a very nice feeling if our beloved sphere of interest, for the sake of which we all struggle for recognition and the means to eke out a living, actually turned out to be as integral to humanity's survival as bipedalism and a certain cellular structure. If aesthetic practices turned out to be as indispensable as sexual reproduction or medicine — which are some other means of ensuring our species' survival — then our work would be just as indispensable as these

other practices upon which our society places a much higher value. Aesthetic research would pursue some of the same questions as the “hard” sciences of evolution, which are generally more respected and better funded. If aesthetic behaviors are bioevolutionary adaptations, then those of us who live for aesthetics, even though we’ll never be as influential as John Lennon or Leonardo DiCaprio, do so because we have to — and we have to for very good reasons. If solid evidence in favor of evolutionary aesthetics was discovered, then our compulsion to practice aesthetics despite the countless uphill battles involved therein would be a scientifically verifiable contribution to society.

But social legitimation and recognition, however much we crave them, do not seem to me the best reasons to go after something. Throughout history, most aesthetic practitioners have had to survive without them. Nevertheless, there’s something to be said for the possibility that if aesthetics are evolutionary adaptations, then aesthetic drives and preferences aren’t mere whims but geneti-cultural characteristics with at least some biological basis. Aesthetic perceptions, interpretations, and tastes are not “purely subjective” in that case but biologically and thus objectively grounded. In other words, from this perspective, the partially objective nature of human subjectivity — its foundation in our characteristics as living physical objects — is more apparent. Our aesthetic creations and ideas are deeply rooted in our bodies, the things that constitute our bodies, and our ancestors’ bodies.

In the following pages, **Mariagrazia Portera and Mauro Mandrioli** suggest that epigenetic science — the study of how learned responses to environmental stimuli might be genetically transmitted to subsequent generations — may have something to say about aesthetic taste.³⁸ The authors relate biochemical findings to Immanuel Kant’s and John Dewey’s philosophical theories of aesthetic experience. In my opinion, Portera and Mandrioli’s analysis is important not because it implies that aesthetic preferences may be scientifically verifiable — ergo objective and legitimate according to contemporary Western ideologies and values — but because it implies that human aesthetic behaviors may be intimately connected to the nonhuman aspects of being-human: our genes (which are not in themselves human beings); our thingly and animalian characteristics as biological entities.

In fact, if human aesthetic behaviors are evolutionary adaptations, then perhaps there is all the more reason to suspect that aesthetic behaviors

are not exclusively human. This idea is consistent with Darwin's theories. But many others, including the eminent nineteenth-century theorist John Ruskin as well as Dutton and Dissanayake, would not agree. Dutton was particularly adamant that the "art instinct" is "distinctly human" and does not exist in other animals.³⁹ And for Ruskin, to "treat beauty as utilitarian, to make it part of the sexual 'family affairs' of flowers, was unbearable."⁴⁰ However, in a new essay that this journal is privileged to host, **Stephen Davies** argues that the ancestral species *Homo heidelbergensis* had all the physical and communicative capacities necessary for aesthetic practices, including music, dance, and visual design, even though these animals lacked the mental complexity that we consider definitively human.⁴¹ So it is possible that the evolution of art preceded that of humans, *Homo sapiens*, the exclusive characteristics of which are not necessarily essential to aesthetic practice and appreciation.

Even if we can do no more than speculate that nonhuman species create aesthetic phenomena and appreciate them as such — just as we can really only speculate on what beauty may have meant to our prehistoric ancestors — the possibility that nonhumans may have aesthetic experiences or practices complicates our species' aesthetic relationships with nonhumans, adding a dimension of potential reciprocity to such relationships. As **Christina Colvin** points out in this issue's unthemed section, how we represent nonhuman animals or use their bodies to create aesthetic displays may misrepresent those animals as consumable products or call attention to the animals' own creative, productive abilities.⁴²

The possibility that aesthetics are evolutionary adaptations implies a complex connection between ourselves, ancient proto-humans, and nonhumans: a connection with beauty in or very near its heart, which is therefore an emotional connection as well as a physical one. The profound sense that for millions of years, so many different beings have participated in beauty, the sense that we are part of that movement, is as awesome as the idea of hyperobjects or spooky quantum actions at a distance. The first stirrings of this sense — the realization that aesthetic behaviors are universal among humans — is a starting point for most of the evolutionary theories I've touched upon here, including Davies', Dutton's, and Dissanayake's.

But this is not to suggest that any of our behavior is purely biologically determined, that every human everywhere for evermore will always behave in exactly the same way under certain conditions, that any kind of human being or way of being is more "authentically" human than any other. Nor does


the idea that aesthetics may be evolutionary adaptations necessarily entail that we evolve according to some grand design. Furthermore, although evolutionary aesthetics may have something to say about the evolution of aesthetics — Davies suggests, for instance, that written literature may have become as widespread as oral storytelling because each of these forms of storytelling “displays evolutionarily relevant traits” that the other does not — this does not mean that the only “correct” narrative of aesthetic history is that which connects every aesthetic work to biological features and requirements or suggests that each aesthetic practice must be or evolve in a particular biologically relevant way.⁴³

In an almost Epicurean manner, natural selection depends as much on contingency as on any kind of determination. A peahen may choose the peacock with the largest number of colorful circles in his tail, but she need not necessarily do so. I by no means intend to undermine the importance of subjectivity, as it is commonly understood, to aesthetic practice and experience. However, I am not a relativist either. I would rather suggest that we cannot adequately think about aesthetics or evolution without considering contingency: the fact that anything could be otherwise. We cannot consider arguments grounded in the basic premise of evolutionary psychology without considering that any apparent fact about our distant ancestors may in fact have been otherwise. We cannot irrefutably verify our ideas about them, especially about their ways of thinking, through either empirical observation or intersubjective agreement among ourselves.⁴⁴

So in evolutionary aesthetics and art-historical narratives based on evolutionary ideas and processes, contingency will always be influential. In this issue, for example, **Trevor Mowchun** considers how cinema may have evolved in response to widespread secularization which, by undermining notions of divine providence, brought contingency to the foreground of thought in certain Western visual-artistic spheres.⁴⁵ In a different but related vein, **Dominic Smith's** discussion in the unthemed section analyzes the work of Torsten Lauschmann, who demonstrates through art that many of our aesthetic and non-aesthetic behaviors would not be as they are if the technological objects that we've come to take for granted were not as they are.⁴⁶ Smith examines Lauschmann's oeuvre through the critical lenses of phenomenology and the philosophy of technology.

Is aesthetic behavior an evolutionary adaptation?

Editorial

One thing I can say, which is evident throughout the targeted and unthemed sections of this issue of *Evental Aesthetics*, is that the issues at stake in evolutionary aesthetics— from questions about morality to interrogations of human-nonhuman relations, from questions about history and inheritance to speculations on the functions of contingency— are in some manner vital to many aesthetic inquiries. 

Notes

- 1 For a nuanced discussion of aesthetic behavior, see Ellen Dissanayake, *What is Art For?* (Seattle: University of Washington Press, 1988).
- 2 Denis Dutton, *The Art Instinct: Beauty, Pleasure, and Human Evolution* (New York: Bloomsbury, 2009), 90-91.
- 3 Charles Darwin, *On the Origin of Species: A Facsimile of the First Edition* (Cambridge: Harvard University Press, 1964), 88.
- 4 Jonathan Smith, "Evolutionary Aesthetics and Victorian Visual Culture," in *Endless Forms: Charles Darwin, Natural Science, and the Visual Arts*, eds. Diana Donald and Jane Munro (New Haven: Yale University, 2009), 245.
- 5 Dutton, 6.
- 6 *Ibid.*, 19-20.
- 7 *Ibid.*, 97.
- 8 *Ibid.*, 98.
- 9 Ellen Dissanayake, "Aesthetic Experience and Human Evolution," *Journal of Aesthetics and Art Criticism* 41, no. 2 (1982): 148. Emphasis in original.
- 10 *Ibid.*, 150. Emphasis in original.
- 11 *Ibid.*, 148-149.
- 12 Stephen Davies, *The Artful Species* (Oxford: Oxford University Press, 2012), 133.
- 13 *Ibid.*, 132.
- 14 *Ibid.*, 124.
- 15 *Ibid.*, 123. Emphasis in original.
- 16 *Ibid.*, 42.
- 17 *Ibid.*, 95-100.
- 18 *Ibid.*, 41.
- 19 *Ibid.*, 152.
- 20 *Ibid.*, 147.
- 21 *Ibid.*, 134.
- 22 See for example *Ibid.*, 101.
- 23 *Ibid.*, 129.
- 24 *Ibid.*, 182.
- 25 *Ibid.*, 6.
- 26 *Ibid.*, 182.
- 27 *Ibid.*, 6.
- 28 *Ibid.*
- 29 *Ibid.*, 186.
- 30 *Ibid.*

Editorial

- 31 Rebecca Bedell, "The History of the Earth: Darwin, Geology, and Landscape Art," in *Endless Forms*, 49-80.
- 32 Elizabeth Edwards, "Evolving Images: Photography, Race, and Popular Darwinism," in *Endless Forms*, 174.
- 33 Diana Donald, "Introduction," in *Endless Forms*, 1.
- 34 Smith, "Evolutionary," 237.
- 35 Ibid., 239.
- 36 Eoin O'Connell, "Can We Wrong a Work of Art?" *Evental Aesthetics* 4, no. 2 (2015): 116-137.
- 37 Smith, "Evolutionary," 245.
- 38 Mariagrazia Portera and Mauro Mandrioli, "Tastes of the Parents: Epigenetics and its Role in Evolutionary Aesthetics," *Evental Aesthetics* 4, no. 2 (2015): 46-76.
- 39 Dutton, 7.
- 40 Smith, "Evolutionary," 240, quoting Ruskin's *Proserpina*.
- 41 Stephen Davies, "How Ancient is Art?" *Evental Aesthetics* 4, no. 2 (2015): 22-45.
- 42 Christina Colvin, "Bass Pro Shops, Environmental Thought, and the Anima(l)tronic Dead," *Evental Aesthetics* 4, no. 2 (2015): 105-115.
- 43 Davies, *Artful*, 134.
- 44 In this idea, I'm following Quentin Meillassoux although I might not embrace his argument in its entirety. Quentin Meillassoux, *After Finitude: An Essay on the Necessity of Contingency*, trans. Ray Brassier (London: Continuum, 2008).
- 45 Trevor Mowchun, "A Machine's First Glimpse in Time and Space," *Evental Aesthetics* 4, no. 2 (2015): 77-103.
- 46 Dominic Smith, "On Technological Ground: The Art of Torsten Lauschmann," *Evental Aesthetics* 4, no. 2 (2015): 138-170.

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