ON THE ORIGIN OF ART

5 NOVEMBER 2016—17 APRIL 2017

Art is cultural, because it is made and judged by (cultural) people. But it is also a human universal, produced in some form in all human societies past and present; it develops spontaneously in infants and elicits strong emotion: all indicators that art might be a biological adaptation, or a by-product of a properly adaptive trait. This hypothesis forms the heart of Mona's upcoming exhibition On the Origin of Art.

It's easy to pay lip service to science, and to view it as 'just another ideology', a framework among many, with which to build your case. This common misunderstanding of what science is — the systematic, self-sanctioning accrual of knowledge — gives lie to miscommunication between the sciences and those of us who work in the so-called humanities. Worse: it denies us use of the most solid, valuable tool the astonishing human mind has created to understand the world (and to understand itself).

Mona will be the first art institution (to our knowledge) to apply that tool to the question of art. We've asked specialists from diverse fields to guest-curate the exhibition with us, to peel back art's cultural layers and peer at its biological origins. They are:

BRIAN BOYD

Professor of literature at the University of Auckland, who argues that art is cognitive play with pattern, for shaping and sharing attention. Art 'binds social groups' says Boyd in *On the Origin of Stories* (2009). It also 'increases our sense of control, and expands creativity'.

MARK CHANGIZI

American evolutionary neurobiologist and cognitive scientist. He argues that art is a cultural phenomenon, but that it has developed in response to our innate biological preferences. In *The Vision Revolution* (2009), he builds his case via fascinating studies of how and why humans see in colour, and why we see illusions and have forward-facing eyes.

GEOFFREY MILLER

American professor of psychology and author of *The Mating Mind* (2000) Miller argues that art is an outcome of sexual selection – like the splendid (and otherwise useless) feathers on a peacock.

STEVEN PINKER

Canadian-American psychology professor and an experimental psychologist, cognitive scientist and linguist, whose influential publications include *The Language Instinct* (1994) and *How the Mind Works* (1997). Pinker believes that art-making is a pleasurable by-product of human cognition — 'cheesecake' for the mind — rather than an evolved trait shaped by natural or sexual selection with usefulness in itself.

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Each curator will create ‘an exhibition within an exhibition’ in separate spaces across the museum, selecting works to support his position. Ancient and contemporary artworks from multifarious cultural sources will be selected from Mona’s collection and from public and private collections around Australia and internationally; several important new commissions are also planned. Buttressing the exhibition proper will be a lecture and symposia series comprised of some of the world’s most exciting thinkers, such as (possibly): Umberto Eco, Sarah Hrdy, Jared Diamond, Paul Bloom and Thomas Suddendorf.

This is not an exhibition about art and science. It is an exhibition that looks at art through scientific eyes. We want to cut to the core of why humans make art—and in doing so, shed some light on what makes us human in the first place.

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I WANT TO KNOW WHAT LOVE IS

DAVID WALSH, MARCH 2015

Foreigner's hit 'I Want To Know What Love Is' is one of the worst songs I've ever heard. It was replaced at the top of the Billboard charts in February 1985, ironically, by another bad one, Madonna's 'Like A Virgin'. Foreigner's title must have been rhetorical, as no conclusion is reached in the lyrics, except that they 'want you to show' them.

I've wanted to know what art is for some time. I've made some progress. For example, I'm pretty sure it isn't a cultural phenomenon, despite what post-modernist theoreticians might have me believe. And I'm pretty sure it's universal – both Foreigner and Madonna make art. I did too, when I drew in the sand as a child, or when I tunelessly parodied 'I Want To Know What Love Is' in the shower this morning ('I want to know what art is, I want you to blow me'). There are some people who have insight into what art is, but they aren't artists. Artists work in a narrow band of creativity. Though they may make great things, they make specific things. They also make them without reference to their motives – they may say things like 'I want to create beauty', or, 'I want to know what love is', but they don't say 'I'm compelled by my biological history to seek mates, and painting pretty pictures helps', or, perhaps, 'Creating narrative fictions helped my ancestors to learn to plan and thus those with a propensity for fiction were selected for through differential survival rates'. And until very recently no one thought, 'The tools I use to navigate my physical environment might have been co-opted to enable my exploitation of social environments to achieve the sort of goals that my biology compels me to attempt (survival, reproduction etc.)

All that might not be clear, and it isn't meant to be. I'm setting up a framework for asking interesting questions like 'Why do we make art?' and I'm asking these questions of people who aren't usually engaged in an art setting (evolutionary biologists, social scientists, neurologists). I'm not asking art academics — they have been asking themselves and each other for some time, and the answers rarely extend beyond the cultural. Art has a cultural component of course. It is often made and judged by people, and people are cultural. But art is universal, and modalities of art cross cultural boundaries. That's an indicator that the roots of art lie beyond, and possibly before, culture. Art also often engenders emotional responses, and anything that engages emotions has an evolutionary component.

I recently explored the definition of life. I eventually alighted on 'A system that can undergo Darwinian evolution'. That's succinct, and it gives evolution the primacy it deserves. Of course, it has a touch of finality about it. Future discoveries might provide new insights. But science is relentlessly tentative, error-correction is part of the definition of learning. I've learned some new stuff concerning life. I'll get back to that. For now, let me point out that as we sought to understand life, we reached other tentative definitions. One used the characteristics that life exhibits: response to stimuli, growth, reproduction, and some others. The problem was that not all living systems exhibit all of those characteristics (priests don't reproduce, emperor penguins get smaller) and non-living systems are not necessarily excluded (crystals grow, computer viruses reproduce). One of the Wiki definitions of art uses this sort of characteristic definition: ritualistic and symbolic functions, communication, entertainment and others. This decision suffers from the same problems.

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A Catholic mass has ritualistic and symbolic functions but few contend that mass is art. And a Foreigner song is definitely art, but is it entertaining?

I contend that defining art suffers from the same problems as defining life because they are similarly scaled problems (vast and heterogenous); but unlike the evolutionary-based definition of life, no overarching principle that encompasses all art has, as yet, emerged. To understand what art is, we first have to understand why it is that we make it.

Earlier I said I've learned some new stuff concerning life. Erwin Schrodinger and Pascual Jordan had a few insights in the 40s that are worth taking note of because they predicted some of the properties of genes. Prediction is a worthwhile test of merit. Jordan noted that things built out of molecules derive their properties by the statistical inputs of those molecules. Water is made from, mostly, H_2O molecules, and it behaves in a way that the majority of its components do. Life isn't like that. A tiny fraction of the molecules of a living system generate most of its properties. My eye colour is the result of genes (about fifteen have been identified) that were present in the ovum and spermatozoon that combined at the beginning of my history. Jordan called this asymmetric (non-statistical) way that life accrues its properties amplification, and it provides a mechanism by which variation is induced, and that variation is crucial to the evolutionary mechanism that life is predicated on, and defined by.

Is an analogue of amplification a property that art has, that craft, for example, does not? Non-art derives properties statistically, plates might be decorated differently but they derive their characteristics by statistical similarities with other plates. When a plate is art, and few dispute that a Picasso plate is art, the differences from other plates are amplified asymmetrically.

I'm not trying to show that art is this or that thing. And I'm not trying to show that we make art for this or that reason. For the moment I'm just trying to show that art is a complex thing and its characteristics multifarious. Curators, typically, weave a cultural web. But the web of art, like the web of life, has evolution at its genesis. Let's see if those who have insights into evolution can tease out something about the nature of art. If they can, we should see a good show. Because sometimes newcomers to a field, virgins if you will, make it feel shiny and new.

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I WANT YOU TO SHOW ME

Why do we need great artworks for this exhibition?

One of the underpinnings of evolutionary theory, at least in species that reproduce sexually, is mate choice. We have a peahen/cock pair wandering around Mona. Many argue that the cock's enormous biological investment in plumage shows that he has excess capacity and thus can look after a partner and potential offspring better than his competitors. It's mostly females that get to choose: in general the sex that invests the most in breeding and caring for offspring does the choosing. It is more important to them that they make a good choice than it is to a male, who can, potentially, have many partners.

A red Ferrari and a painting by Picasso might imbue the possessor with attractiveness for similar reasons (apart from being, as one of our evolutionary scientist-curators puts it, pleasure-bombs of visual experience in themselves). That's why the desire to possess such things is biased towards males. But it is only a small part of the story.

How does an animal recognise good breeding stock? One key way is the expression of symmetry. If you are the same on the left- and right-hand sides of your body (you are bilaterally symmetrical, or should be) then, most likely, you are correctly expressing your genes. Anything that goes wrong is unlikely to be duplicated on the other side of your body. But that isn't the whole story either.

Good symmetry attracts all potential mates. As a potential breeder you want to filter the field so that mostly appropriate mates are attracted to you. You don't want to waste time and energy sizing up every potential suitor. Introduced symmetry-breaking can achieve this. If your symmetry is just a little bit broken, then there are still very few ways it could be introduced at random, but now some biological capacity is required on the part of the suitor. Is this a random symmetry-break, or does it express a desirable characteristic? A sexual organism 'wants' to possess characteristics that identify not just any potential mate, but potentially appropriate mates.

Thus, 'hoon' cars require all sorts of expertise on the part of the owner/manufacturer. But the identification of quality is only available to one with similar interests, and who is therefore much more likely to be an appropriate mate for a hoon-car aficionado than a Picasso expert, who will himself (and here I do mean 'him', female Picasso experts mostly have different motives, although biology connives to keep you unaware of your ultimate motives) be more adept at attracting those interested in art. It is a subtle and elegant mechanism, but because evolution is so pragmatic, it is an inevitable mechanism.

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An individual can invest an enormous amount of effort (either through the accrual of expertise, or through the statistical effort within the mechanisms of evolution) to become 'knowledgeable' in a field. And it isn't just about mutualising mate selection. It also enables more rapid cultural assimilation, better choices of friends (which in the long run will contribute to survival) – it may well be part of the process that lead to the invention of societies.

So if you like (or better yet, can play) Bach's 'Toccata and Fugue in D Minor' you will be attractive, but only to the right folk. And if you like Foreigner's, I Want To Know What Love Is', (and it isn't due to surgical removal of part of your prefrontal lobe), you will, likewise, have a better chance of finding an appropriate mate.

And that's why we wouldn't, for example, want to borrow many Picassos from beyond 1970. Our mating strategies, and our societal processes, depend on our expending time and effort to acquire expertise. Some evolutionary biologists think they do know what love is. It is structured around our biological nature, and our ability to know what 'good' is. Mona is working with some of the world's most respected evolutionary thinkers to bring this exhibition into being. Our guest-curator scientists, needing to show why they think we make art, need bloody good art to make their point.

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AND NEW ART

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