

Chapter 1

The Dinosaur as Cultural Symbol and Totem

W.J.T. Mitchell in Conversation

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Valérie Bienvenue and Nicholas Chare: In *The Last Dinosaur Book*, you trace the changing cultural function of the figure of the dinosaur from the nineteenth to the late twentieth century, identifying three distinct stages of dinosaurology (those of the creationist dinosaur image, the modernized evolutionary image and the revival of the bird model of the dinosaur).¹ Are we still in the third stage, or does the twenty-first century dinosaur form a new departure?

W.J.T. Mitchell: I think most palaeontologists are still in the third stage, seeing dinosaurs mainly as flightless birds rather than walking reptiles. But the ‘stages’ operate at more than one level, depending on whether we are talking about narratives of extinction or cultural symbolism. The Victorian story of extinction was centred on air pollution, understandable in the unbreathable air of nineteenth-century London. The modern story was a hodgepodge of stories: entropy (loss of energy); stupidity and failure to adapt; drought and the Dustbowl of the 1930s, the contemporary frame for Disney’s *Fantasia*. The third, ‘postmodern’ stage was probably launched by the onset of the nuclear age, which links dinosaur extinction to the atomic bomb via the bombing of the earth by a giant meteorite – in short, a ‘catastrophic’ narrative blaming extinction on a single event. Contemporary extinction stories rely on a fourth phase that emphasizes the gradual disappearance of the dinosaurs as a result of multiple factors: climate change and disruptions to the food chain (low calcium intake makes dino-

saur eggs vulnerable to hungry rodents), coupled with catastrophic events. The fact is that not all the dinosaurs were wiped out at the same time. And of course, the bird model suggests that they never really died out – they adapted and evolved.

I am most interested in the cultural symbolism of the dinosaur, both in its continuities and deviations. The stage we are in was inaugurated by *Jurassic Park's* portrayal of the dinosaur as revivable by means of genetic engineering, the onset of cloning technologies. The old dream of reviving the dinosaurs with sculptural, pictorial and cinematic representations was replaced by a new fantasy of literally bringing them back to life. I think it is no accident that this dream of resurrection is accompanied by an increasingly widespread awareness that climate change in our time is no longer a distant danger, but an imminent threat. Hundreds of species are disappearing from the planet every day, and it is no longer possible to deny that human beings may be the first species in the cosmos to bring on its own extinction. The dinosaurs died out through no fault of their own. We have no such excuse.

VB & NC: A powerful dimension of *The Last Dinosaur Book* is your willingness to engage with how the dinosaur has been employed and understood across a variety of forms of cultural expression, including art and science. At one point you affirm that 'Nature *is* culture; science *is* art', openly challenging efforts to set the domains of culture and science in opposition to each other.² Dialogue across the humanities and the natural sciences is, however, unfortunately still uncommon. Collaborations of the kind you have engaged in with Norman MacLeod, for example, remain rare. Why do you think that is? Should it be a cause for concern?

WJTM: The old 'two culture split' (C.P. Snow) is far down the list of contemporary concerns in my view.³ To the extent that both science and the humanities are today under assault by forms of know-nothing populism, climate change denial, and hatred of intellectual elites, we humanists have found a common cause (and a common enemy) in solidarity with scientists. The 'post-truth' era of 'alternative facts', and the gaslighting of large populations, is the bigger concern that we share with all intellectuals engaged in the production of useful, reliable knowledge. There is still a danger that the preference of capital for the STEM disciplines (Science, Technology, Engineering, Mathematics) is leading to a decline of the humanities and social sciences, but this is a quite different issue from the traditional two culture divide.

VB & NC: Yes, the emphasis placed on STEM is certainly a concern. In some countries, however, women are still not encouraged to pursue tertiary

education in STEM disciplines because of gender inequality. Could we turn to gender issues as they link with the dinosaur as metaphor, a theme that forms a common thread running through *The Last Dinosaur Book*. You compellingly tease out how an interest in dinosaurs has traditionally been aligned with a particular kind of (phallic) masculinity, a form of masculinity buttressed by an interest in finding and possessing big bones. The 1995 artwork *Brontosaurus* by Sam Taylor-Johnson (née Taylor-Wood), in which a naked man dances to techno music (the sound of which the artist has removed) while a soft toy stegosaurus perches on one of the stereo speakers, seems to expose and undermine connections between male potency and dinosaurs. What is the relationship between dinosaurs and masculinity today?

WJTM: I think they are still primarily coded as male/female=predator/prey, in a taxonomy dominated by *T. rex*. But the women are gaining, as the ‘clever girls’ of *Jurassic Park* showed long ago. The female velociraptors of Spielberg’s dinosaur park are an apt expression of male hysteria about the ‘new women’ invading the old political and economic preserves of male dominance. Spielberg succeeded in adding a new ‘folk taxon’ to the bestiary of extinction, so that the city of Toronto could adopt the raptor as the totem animal of its NBA championship team. The raptors are fast-moving, clever with their hands (they open doors in *Jurassic Park*’s control room), and they are highly adaptable, hunting in packs, and ‘figuring things out’ fast enough to take control of their own reproductive processes.

VB & NC: Staying with your description of the velociraptors as ‘clever girls’, in *The Last Dinosaur Book* you read this gendering as symptomatic of a patriarchal backlash against third-wave feminism, against ‘the arrival of career women and “clever girls” in multinational corporations’.⁴ In a profession such as palaeontology, however, women still lack career visibility despite a long history of contributing to the field. The film *Ammonite* about Mary Anning (who you mention in *The Last Dinosaur Book*) may help to raise visibility in this context. In the United States, Annie Montague Alexander (who, like Anning, contributed to our knowledge of ichthyosaurs) merits mention. Are there alternative histories of palaeontology to the one of the macho male dino-hunter?

WJTM: Most definitely. One symptom of this is the emphasis on dinosaur reproduction, with the ‘good mother’ *Maiasaurus* portrayed as a protectively nesting herbivore. A feminist history of palaeontology needs to be written, and the dinosaur’s function as a totem animal will no doubt begin to reflect the contemporary deconstruction of gender binaries, and replace

them with a host of ‘trans’ figures of indeterminate or mutable gender. The crazy female scientist in the B-movie *Carnosaur* (1993) is one indication that the dominance of the patriarchal *T. rex* is in serious danger. Even in all-male corporate boardrooms, the CEO is urging his colleagues to ‘trade in the brute force of the *T. rex* for the cunning of the raptor’.⁵

VB & NC: What is now referred to as the Sixth Extinction has become one of the most pressing concerns of our time. Writing twenty years ago, you already draw attention to fears about contemporary extinction. More recently, in ‘Planetary Madness’, you invoked the modern cult of the dinosaur as part of a discussion of current anxieties about extinction.⁶ Now that the alarming rate at which species are disappearing has become more broadly known, what role does the figure of the dinosaur have to play in contemporary extinction debates?

WJTM: I think it remains central as the totemic cultural icon. But from a scientific standpoint, we learn more from micropalaeontology and the evolutionary development of the small critters. The fossil record is more continuous with clamshells, and gives us much more insight into evolution.

VB & NC: Continuing with the theme of extinction, you discuss the greater degree of imaginative activity required to represent dinosaurs because of the absence of what might be referred to as ‘life models’, the fact they are extinct, and the need to work from ‘fragmentary traces and fossil remains’.⁷ Do you see the representation of more recent extinct species as qualitatively different in nature from that of dinosaurs?

WJTM: Yes. The first thing that comes to mind is Joel Sartore’s *National Geographic* ‘Photo Ark’, which emphasizes the thousands of endangered species that will soon only be known by way of their photographic effigies.

VB & NC: That’s a remarkable project. What do you make of the images that are used to form the ‘Photo Ark’? As you know, Sartore always photographs the animals against black or white backgrounds, decontextualizing them. He also selects a particular shot to showcase each species. What kind of effigies does Sartore leave us with?

WJTM: I think Sartore is very faithful to the concept of the *ark* and the *archive*. The images of the animals are preserved in amber, as it were, deliberately removed from context, from a living environment. There is no attempt to put them back into their world, into the habitat that made them possible. It is a rescue operation only of images; a melancholy reminder

that these living creatures represented are vanishing or vanished. There is no attempt to fool the beholder with a simulation of the habitat, as in the dioramas of natural history museums. Sartore's genius is to insist on the ghostly presence of an absence. Every photograph, of course, removes its subject from its context. As Roland Barthes notes, family photographs are always associated with the departed, with the vanishing of grandparents into albums. But Sartore's photos are even more radical in their insistence on absence. No offspring of these gorgeous creatures will be around. Their biological lineage has given way to a purely iconological survival.

VB & NC: Coming back to fossils, in *What Do Pictures Want?* you describe them as 'melancholy figures'.⁸ We can't help hearing Freud in that description; fossils register a loss but not one we can come to fully know. In that sense, they leave us *wanting*. You also describe fossils as 'natural images'.⁹ Could you tell us more about the kinds of insights that fossils as things and as metaphors permit regarding other forms of image?

WJTM: In semiotics, the theory of signs, images have always been contrasted with words as 'natural' signs, with words playing the role of arbitrary, conventional symbols. This contrast is a bit reductive, however, and it begs the question of what we mean by 'natural' in the first place. How is it that we speak of 'natural languages' like English, French, Chinese, etc. if language is 'artificial'? To claim something is natural is often only a way of saying it is conventional, customary, or 'normal'. I follow Charles Sanders Peirce's semiotics, which divides sign-functions into the iconic, indexical and symbolic (signs by similarity or analogy; signs by pointing, tracing, proximity, or cause and effect; signs by convention). All signs are mixtures of these functions, so that fossils, for instance, are clearly the result of a long process of petrification of some part of a plant or animal. The fossil is a trace or index (e.g. a footprint), but it is also an icon in that it resembles a foot. And it is easy for a fossil to move into the realm of the symbolic, as it becomes associated with cultural values. Of all the images we deal with, fossils seem to be the most deeply embedded in non-human, natural processes – life, death, and the species death known as extinction.

VB & NC: In *Image Science*, you suggest that it 'is no accident that most palaeontologists have highly developed visual acuity and . . . many of them are artists and image processors'.¹⁰ Could you expand on this a little for us? Why are visual skills and image sensibility so crucial for palaeontology?

WJTM: My remark was based mostly on my conversations with palaeontologist Paul Sereno, who teaches biological drawing at the University

of Chicago. Palaeontologists strike me as imaginative detectives, watching for evidence, and assembling their images out of fragments. Ever since Waterhouse Hawkins brought Richard Owen's terrible lizards to life in reinforced brick and concrete sculptures, and Charles Knight's paintings unveiled their worlds to audiences in New York and Chicago, palaeontology has been in a love affair with the visual arts.

VB & NC: And, as *The Last Dinosaur Book* ably demonstrates, artists have been in a love affair with palaeontology. Could we ask you about what is, perhaps, one of your own loves, a particular scene in *Jurassic Park* in which a velociraptor inadvertently starts a film projector that screens a film describing how dinosaurs in the titular park were resurrected from ancient DNA? In *Image Science*, you read this scene as 'a nexus point for [your] speculations on the science of images' and as an allegory for the end of the odyssey of the image.¹¹ In *What Do Pictures Want?* you also discuss the scene, this time as part of a reflection on the relation of analogical and digital codes.¹² You include a still from the scene in *The Last Dinosaur Book* as part of an observation regarding the dinosaur as a cyborg 'in both the story [of *Jurassic Park*] and the medium in which the story is represented'.¹³ These varied readings, each persuasive, show how aspects of *Jurassic Park* have continued to resonate with you over time. Why do you feel the film has been so intellectually stimulating for you over the years?

WJTM: I think *Jurassic Park* was a brilliant synthesis of themes and technologies that captured the imagination of an entire epoch. The fact that its biocybernetic premise (cloning of dinosaurs) was accompanied by a momentous shift in animation techniques from animatronics and robotics to digital animation is one symptom of this timeliness. Its clever linking of these themes to the modern phenomenon of the theme park, and the spectacular revival of a 'cinema of attractions' organized around speculative capital, made the film a global sensation. The funniest moment in the film is the scene of the corporate lawyer who promises to make billions from the park being snatched off the toilet by the *T. rex* and devoured in a single gulp. As a metapicture, a story about image-making, and the realization of the ancient dream of making images come to life, it played a central role in my thinking about images as such. I could not have written a book like *What Do Pictures Want?*, an exploration of the survival of animist and vitalist mythologies around image-making, without passing through this fantasy of the resurrection of extinct animals.

VB & NC: We wanted to ask you about your understanding of extinction in *What Do Pictures Want?* It's there that you pose the fascinating question

as to whether images can become extinct (p. 91). As you know, our volume is mainly concerned with images of extinct species, but can you tell us a little about how images themselves can sometimes be thought to (figuratively) die out?

WJTM: I am still puzzling over this question. On the one hand, I want to say that images can never become extinct. They may disappear, be buried, destroyed. But that only means they may come to life later. This is why I distinguish images from ‘pictures’ – the concrete, material vessels in which images appear. You can destroy a picture, tear it to pieces. But that does not destroy the image that appeared in it if (for instance) you *remember* the image that was in that picture. Or if there is some other picture that contains the same or a similar image. On the other hand, I suppose that a thorough purging of all images of something (‘down the memory hole’, as Orwell puts it in *1984*) is conceivable. It’s the sort of thing that totalitarian regimes always try, but usually fail, to achieve. Let me just compromise and say that images are extremely difficult to kill. They have a way of coming back to life, and palaeontology is a science devoted to exactly that task. It is a way of bringing dead images back to life.

VB & NC: In *What Do Pictures Want?* you also compare the iconologist to a natural historian, suggesting that both professions primarily seek to ‘explain why things are the way they are’ rather than engaging in value judgements.¹⁴ In that context, you suggest ‘a species is neither good nor bad: it simply *is*’ (p. 86). Is a natural historian’s encounter with a species ever unmediated though? Aren’t they beset with the same issues an iconologist faces? Naturalists have, historically, often unconsciously engaged in value judgements about species that have indirectly contributed to their extinction through influencing perceptions of them. To give an example, George Prideaux Robert Harris compared the thylacine [referred to by him as *Didelphis cynocephala*] to a wolf and described them as ‘stupid’.¹⁵ That was in 1807 but, more recently, tremendous sums of money have been invested in science to try and clone this now extinct mammal. Such efforts also don’t seem value-free. Why clone the thylacine and not another extinct species – a rodent, for example? Isn’t natural history, and natural science more broadly, also value-laden? Aren’t aesthetic judgements, for instance, potentially made about species within scientific contexts? Perhaps some scientists could learn from the self reflexivity and/or critical reflexivity of iconologists?

WJTM: This is a very good point. Of course palaeontologists, like other scientists, are constantly making value judgements. You rightly point out that we need to specify exactly what kinds of values are at stake. The di-

nosaur, from the standpoint of studying the complete, unbroken record of extinctions, is a relatively 'bad' species. Micropalaeontologists like Norman MacLeod know that a much more precise and full record of evolution is contained in the archive of small creatures (shellfish, for instance). They don't leave so many gaps in the record. But dinosaurs are a very good species from the standpoint of public interest and fund-raising. And the further question of what specific form of value they contain is always of interest: are they 'totemic' (as dinosaurs certainly are) or aesthetic – trilobites appreciated for their formal beauty.

VB & NC: It would be remiss of us here in Montreal not to mention the cultural phenomenon that is the television series *Dino Dan* (and its more recent spin off series *Dino Dana*) produced in Canada and syndicated worldwide. Reception of the show at first involved considerable speculation about whether Dan, who is passionate about dinosaurs and sees them alive in his everyday suburban life, had autism or Asperger's. His great interest in dinosaurs was interpreted as indexing a developmental disorder, as autism is sometimes viewed. The popularity of the show nevertheless demonstrates that dinosaurs continue to form a rite of passage for children. In *The Last Dinosaur Book* you offer substantial reflections on the role of dinosaurs in education. Has your thinking changed or developed at all in this regard?

WJTM: *Dino Dan* is strong evidence that dinosaurs are still great for activating a lively imagination. I think the TV series flirts with treating it as a mild disorder, but not nearly as serious (or funny) as *Calvin & Hobbes*, where the big lizards activate a childish megalomania. I wish *Dino Dan* were not quite so nice. Although it is better than the syrupy love calls of Barney, it drains almost all the violence from the dino myth and replaces it with a suburban fantasy of good mothers and nuclear families. The only touch of darkness I could find is in the character of a rather stupid and incompetent elementary school teacher. *Dino Dan* goes all in, however, with the fantasy of a rainbow spectrum of dinosaur colouration, celebrating the gay plumage of its early birds.

I have been studying my grandson's progress with dinosaurs since his birth in 2013. The first full-length film he saw in a theatre (at around age 2 1/2) was *The Good Dinosaur* (Peter Sohn, 2015). He was just as absorbed in our family-size bag of popcorn as he was in the movie. About sixty minutes into the film, he leaned over to me and said 'Grandpa, no more dinosaurs', and his dad took him out to the lobby where he promptly threw up all the popcorn. But because he was just acquiring language himself, I think he loved the table-turning premise of the film, which portrays an

alternate history in which, thanks to a timely failure of a meteorite to wipe them out, dinosaurs have evolved into talking, thinking creatures, and human beings have not yet acquired language. Rudolph Zallinger's great mural, *The Age of Reptiles*, adorns his room. But at age six, I think he has outgrown them. Last year he was into the solar system, and could name all the moons of Saturn. This year it has been world travel via *The Magic Treehouse*, and we will be taking him to Paris next spring, where I hope to introduce him to the real monsters of the Jardin des Plantes. He is making rapid progress as a builder of sandcastles.

VB & NC: Picking up on the theme of outgrowing or losing interest, you have described dinosaurs as on the way to becoming a dead metaphor, culturally moribund. Do you still hold with this last viewpoint, or are you less willing to close the book on dinosaurs now?

WJTM: I think they have been dead for a very long time, both literally and figuratively. But that just means we will never be able to close the book on them. All books are books of the dead, keeping alive the mortal voices of their authors and images of their subjects long after they are gone.

VB & NC: Many thanks for taking the time to talk to us. It's been a great pleasure.

W.J.T Mitchell is Gaylord Donnelley distinguished service professor of English and art history at the University of Chicago. He is the senior editor of *Critical Inquiry*.

Valérie Bienvenue is a doctoral candidate in the Department of History of Art and Film Studies at the Université de Montréal. Her thesis critically examines human–equine relations through the prism of modern art and visual culture. Prior to her academic career, she worked for ten years in equestrian circles, including teaching bareback riding and rehabilitating horses suffering from physical and psychological trauma. She is the author of several articles and book chapters.

Nicholas Chare is professor of art history in the Department of History of Art and Film Studies at the Université de Montréal. He is the author of *After Francis Bacon* (2012). In 2017, with Sébastien Lévesque and Silvestra Mariniello, he founded the baccalaureate (BACCAP) in visual cultures at the Université de Montréal.

Notes

1. (VB & NC) This conversation was conducted by email from 5 September 2019 to 15 January 2020. All notes are our own. Mitchell, *The Last Dinosaur Book*.
2. *Ibid.*, 58.
3. Snow, *The Two Cultures and the Scientific Revolution*.
4. Mitchell, *The Last Dinosaur Book*, 225.
5. *Ibid.*, 182.
6. Mitchell, 'Planetary Madness'.
7. Mitchell, *The Last Dinosaur Book*, 54.
8. Mitchell, *What Do Pictures Want?*, 167.
9. *Ibid.*, 90.
10. Mitchell, *Image Science*, 36.
11. *Ibid.*, 37.
12. Mitchell, *What Do Pictures Want?*, 315–316.
13. Mitchell, *The Last Dinosaur Book*, 214.
14. Mitchell, *What Do Pictures Want?*, 86.
15. We have adopted the pronoun 'them' here rather than 'it' as a means to resist objectifying the thylacine. Harris's paper was read to the Linnean Society on 21 April 1807. It was published in 1808. Harris, 'Description of Two New Species of Didelphis'.

Bibliography

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