Darwin’s Camera: Art and Photography in the Theory of Evolution
by Phillip Prodger

The Art of Evolution: Darwin, Darwinisms, and Visual Culture
edited by Barbara Larson and Fae Brauer
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reviewed by Michael Ruse

Thanks to Plato, generations of philosophers have been rather toffee-nosed about pictures. In the Republic, the great Greek philosopher spoke rather contemptuously of the fine arts, thinking them misleading and dangerous to the kind of society he was building. He also argued that when it came to mathematics, although exalted, it could take only second place to the Forms or Ideas because it uses pictures to make its main points. True knowledge of the highest kind has no need of such aids. I would not say that no great philosopher has ever used an illustration—René Descartes in his role as a physicist gave a delightful picture of the vortices and of a comet passing through the earth’s area of influence—but when it came to the Meditations you look in vain for a picture of the cogito.

Closer to our time, the perfect proof of what I am saying is given by the late Thomas Kuhn. In his truly great book, The Copernican Revolution, there is diagram after diagram—planets looping the loop (retrogressing, in the language of the experts), spheres spinning within spheres, and buckets of water with magnets pulling and pushing for all that they are worth. But this is Kuhn as a historian. When, a year or two later, we turn to Kuhn as a philosopher, in his celebrated The Structure of Scientific Revolutions, we find nothing at all to lighten the way. Not even a duck-rabbit, showing how perception is in the eye of the beholder.

This austere attitude does little service to the understanding of science. Open up any magazine or journal of science, even the most august and pompous, and you are greeted by a cornucopia of diagrams and graphs and photos and pictures and more—often in dazzling color. And if anything, thanks particularly to the power of the computer, this riot of visual information is getting greater by the year. So what is any self-respecting philosopher of science to do? Most take a leaf from the Calvinist’s playbook. Just as no good Reformed theologian let a little matter of innate sexual orientation deter from the conclusion that homosexuals are damned to eternal torment because of their desires, so no good philosopher lets a little matter of evidence and practice deter from the conclusion that pictures play no significant role in the making and product of science. Graphs and everything else
are inessential aids for the weak. There are some indeed, the New York philosopher Jerry Fodor being a case in point, who will not even allow the importance of literary pictures. Real science begins when the metaphors get dropped.

I am glad to say that there are those who rebel against this Platonic impoverishment. The historian Martin Rudwick has for many years written brilliantly on the importance of illustration in geology. He should know. For many years before he was an accomplished historian of science, he was a no less accomplished invertebrate paleontologist. The philosopher William Wimsatt has likewise long championed the importance of illustration in biology, undoubtedly a personal crusade because he is himself an accomplished draftsman, and more recently one adept with the world of computers and the power they give to the pictorially minded.

It is as well that there are these distinguished scholars and a few others who stand against the horde, for to do otherwise is to miss so much. And nowhere more so than for those of us who are interested in Charles Darwin and his thinking. It is true that in his masterpiece, *On the Origin of Species*, Darwin gives us but one rather Spartan illustration—an idealized tree of life—but this is exceptional, brought on by the need to get the *Origin* written quickly and then published. (There are no footnotes or references either, likewise exceptionally in Darwin's work.) In other works, there are illustrations galore, and only a fool (or a philosopher) could deny their importance. How, for instance, would one assess Darwin's coral reef theory (that the reefs are caused by sinking brought on by the ever-added weight of new coral), without those famous cross-sectional pictures of an island at different times in its history—from poking out happily into the ocean to lying submerged beneath the waves, acting now only as a support for the coral above?

The early Darwin did not use photographs. Why? Simply because photography had not then been invented. (It comes into being around 1840, and obviously took some time to take off technologically.) But by the time of the later works, for example *The Expression of the Emotions in Man and Animals* (1872), it was a tool waiting to be used and use it Darwin did to the full. The work is cram full of photographs of people caught in different moods and emotions—happiness, sadness, hate, fury, love, and more. Phillip Prodger, the curator of photography at the Peabody Essex Museum in Salem, Massachusetts, in his *Darwin's Camera: Art and Photography in the Theory of Evolution*, does a magnificent job of tracing and explaining Darwin's illustrations, giving great detail about the sources of the pictures and their background, indeed the general background of the whole business of picture taking when Darwin was putting together his work.

Like many Darwin scholars, I suspect, I have never been quite sure about the *Expression of the Emotions*. Is it anything more than the clippings from the floor after Darwin had finished his very important *The Descent of Man and Selection in Relation to Sex*? The Descent clearly is a book with a major thesis, namely about the truth of human evolution, and with a mission, namely to refute the claim of natural selection's co-discoverer Alfred Russel Wallace that no naturalistic process could explain the coming of humankind. To counter Wallace's claim that spirit forces must be at work, Darwin made much of his secondary mechanism of sexual selection, showing that Wallace's arguments crumble when once we see the full range of selection's powers.
But the *Expression of the Emotions* does not strike me that way, being more a potpourri of thoughts about emotions and so forth. The recent Penguin reprint, with an introduction by Anglo-American historian of evolutionary biology Joseph Cain, suggests that the *Expression* cannot be read apart from the *Descent*, and should be seen as part of Darwin’s overall drive to show that human features, like facial expressions and the emotions they convey, are simply part of the natural world, making us kin to the animals. No more, but certainly no less. Perhaps we should leave things at that. Deeper judgments are unneeded and almost certainly false.

To be candid, I do not see that Phillip Prodger gives us much more than the Cain thesis suggests. He does not show for instance that Darwin's theorizing was throughout an epiphenomenon of camera techniques of the day. I hasten to add that I have no reason to think that it was, although Prodger surely shows that the sorts of things that Darwin talks about were going to be constrained and funneled by the pictures that he could get. No high-speed flashes, for instance, showing split second reactions. I think the contributors to *The Art of Evolution: Darwin, Darwinisms, and Visual Culture*, edited by Barbara Larson and Fae Brauer, would want to push things a bit further down that line. Certainly, going the converse way, they want to argue that Darwin fed back into the culture of his day and of generations succeeding. The very titles of the contributions tell you that. Thus, for instance, we have: “Darwin in caricature: A study in the popularization and dissemination of evolutionary theory,” by Janet Browne; “From *monera* to man: Ernst Haeckel, *Darwinismus*, and Nineteenth-century German art,” by Marsha Morton; and “Wild beasts and tame primates: ‘Le Douanier’ Rousseau’s dream of Darwin’s evolution,” by Fae Brauer. (Phillip Prodger also has a piece, “Ugly disagreements: Darwin and Ruskin discuss sex and beauty.”)

To take an example of how Darwin connects to culture, Robert Michael Brain in “Proto-plasmania: Huxley, Haeckel, and the vibratory organism in late nineteenth-century science and art”—an article that is not quite as erotically exciting as the subtitle might lead one to expect—argues that there is a line from Darwin to some of the weirdest excesses of modern art at the beginning of the twentieth century. As a result, for instance, “Picabia made ribbon-like forms coil over one another while refusing any focus or point of rest, and effacing any distinction between form and space” (p 117). The trouble with this sort of stuff is that it is very hard to know what would count as confirming—or falsifying—evidence. I don’t mean to say that evolutionary ideas never find their way into art, writing, drama, or painting, or that we cannot prove this. Take an example unmentioned in this book, Jack London’s *The Call of the Wild*. Obviously here we have a portrayal of Social Darwinism working flat out. But effacing distinctions between form and space? I dunno!

Searching through the volume for claims I could get my teeth into, I plunged into James Krasner’s “‘One of a long row only’: Sexual selection and the male gaze in Thomas Hardy’s *Tess of the D’Urbervilles*.” The claim here is straightforward. Hardy, who read Darwin even in his teens, is trying to show sexual selection in action—Tess and the other girls are passive, the men are aggressive and the choosers. Much is made of the way that Angel Clare picks out Tess from the others on display. Fair enough, but if Darwin has any bite surely we need to follow things through a little. The whole point about sexual selection in humans is that it leads to distinctive types—men are men and women are, well, children. Darwin argues that because of sexual selection, men are brighter, tougher and all of the rest. The
creatures of brawn and brain. Women on the other hand are child-like, less intelligent, but really good with the emotions and the heart. I don’t see Krasner arguing for any of this, nor frankly do I think Hardy’s novel bears such an interpretation. Of the two leading men, Alec D’Urberville is a cad and a sexual predator, and Angel Clare is a double-standard hypocrite and a bit of a wimp. Tess is more sinned against than sinner, but when push comes to shove, shove is precisely what she does. She finishes off Alec with a knife, for which act she ends the novel by being hanged. Not much support from or for the Descent of Man in any of this.

Good, bad, or indifferent, these two books underline a very important point, making clear the need for the kind of organization that produces the magazine in which this review is appearing. Charles Darwin’s ideas are a lot more than mere science. They grow out of culture and they extend back into culture. Some find this exciting and exhilarating. Others, too often especially in America, find this upsetting and threatening. Problems and disputes are not going to be settled overnight. But as a start, we need to understand Darwin himself and the work that he did, why and how he did it, and what the consequences were. This is the aim of the two books under review, with greater or lesser success. It is an ongoing process, one stone—or one book—at a time. That alone makes the work worthwhile.

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