



## RAR REVIEW

***Darwin's bridge: uniting the humanities and sciences***, edited by JOSEPH CARROLL, DAN P. ADAMS and EDWARD O. WILSON. 2016. Oxford University Press, New York, 335 pages, monochrome illustrations, bibliographies, index, hardcover, ISBN 978-0-19-023121-7.

This volume is of interest to rock art researchers primarily for two reasons: it endeavours to address the tensions between the humanities and the sciences, which are so very much evident in our field; and it features two chapters specifically dedicated to some of the earliest palaeoart. Nevertheless, it is clear that several other chapters are also of considerable relevance to our discipline and they deserve to be considered here as well.

This very aptly named book is a collection mostly of presentations given at a conference held at the University of Missouri in early 2012, entitled 'Consilience: evolution in biology, the human sciences, and the humanities'. However, as a review of the fourteen chapters organised into six parts soon reveals, consilience is not attained in this volume; in fact there is not even consilience about the meaning of that word. While it is recognised that the hard sciences have attained good levels of consistency among their different disciplines, commentators in this volume do accept that 'consilient work in the humanities is still in its infancy' (e.g. p. 271). Jonathan Gottschall, in an afterword, reminds us, that humanities scholars lack the tools to 'winnow patiently the field of competing ideas. That's what the scientific method is for.' The volume was essentially prompted by the work of Edward O. Wilson, 'considered one of the world's foremost biologists and naturalists', who also provided its opening chapter. He begins it with the statement: 'The meaning of humanity is too important a subject to leave to the humanities' (p. 3), prompting David Sloan Wilson to ask why humanists should not be 'discomfited' (265). But the battle between the two camps has a long history, beginning in the late 19th century with the tensions between the natural sciences and the *Geisteswissenschaften* (consider Wilhelm Dilthey); this volume does little to help resolving it.

One reason for this is illustrated by comparing the two palaeoart contributions mentioned. One is written by a self-confessed (90) scientist, John Hawks, the other by humanist Ellen Dissanayake. Hawks, an

anthropologist specialising in the Neanderthals, writes about the markings they produced and provides several incisive and well-argued points. For instance he discusses the 'consilience' of red ochre and shells, rightly demanding that the direction and strength of causal relations among observations be established (95) before anthropology could consider applying interpretation. He correctly invokes a taphonomic argument concerning red pigment but then spoils it by claiming red to be the second-most common pigment in archaeological contexts, after black (94). More disconcerting is his cavalier approach to published data, notably the available instances of palaeoart that can reasonably be attributed to what anthropologists tend to call Neanderthals. Hawks mentions a few instances, implying that these are the only ones he is aware of, or that they are the only ones he is willing to accept. When we consider the great lengths Peyroni went to in ensuring that his observations could not be questioned it needs to be asked why Hawks excludes the La Ferrassie 'Neanderthal' cupules (Peyrony 1934). Not only ignores Hawks most of the many relevant instances we have of 'Neanderthal' markings, he even states that these humans 'never, to our knowledge, painted figures or other representations on the walls of caves'. Such categorical statements need to be better qualified. Bearing in mind that 'Moderns' derive from 'Neanderthals', where does one group end and the other begin? Does he have evidence that the early phase of cave art in Chauvet (or Baume Latrone, or certain other sites) was made by fully 'anatomically modern humans'? If not, would it not be more appropriate to begin with a testable null hypothesis? What precisely does he mean with 'figures' and 'representations'? Is he implying that he knows the meanings of human marks on cave walls?

The neglect of available data by 'scientist' Hawks is contrasted with the data presentation of very early palaeoart by Dissanayake, who includes a good number of specimens that are even earlier than the putative Neanderthals. That factor alone renders Hawks' interpretation of the record available to him superseded. The same applies to other 'scientific' contributions to this volume. For instance there is a great paper by Michael R. Rose who examines the concept of free will in a Darwinian perspective. It contains several gems, including the description of popular science writing as 'intellectual lumpenproletariat'

and the notion that humans have somehow escaped biological evolution. Oh yes, he is on the right track here — what a pity he is also unfamiliar with the relevant literature. After rightly discussing the enormous biological cost of the expanding brain, Rose even arrives at the conclusion that if ‘our large brains are no longer relevant to fitness ... they should evolve rapidly toward much smaller sizes’. It seems a brilliant thought, but it is neither original nor does Rose know that the human brain has, since Hawks’ Neanderthals faded out, been reducing in size at a rate 37 times the previous long-term encephalisation (Bednarik 2011) — the latter a development Wilson rightly describes as ‘one of the most rapid episodes of evolution of complex organisms in the history of life’ (5). Indeed, Rose is unaware that *all* major paradoxes surrounding human evolution have already been resolved years before he came close to reinventing the wheel (Bednarik 2008, 2011). Not only is the ongoing atrophy of the human brain well known to informed researchers (Henneberg 1986, 1988; Bednarik 2014), the ‘first paradox’ he proposes ‘to solve’ (71) has already been explained satisfactorily. So have numerous others, all in a single powerful hypothesis, including more important ones Rose is not aware of, such as the famous Keller and Miller paradox: why has natural selection not selected against the numerous (in the order of 8000) disadvantageous alleles from the human genome (Keller and Miller 2006)? How did exclusive homosexuality or loss of oestrus creep into the human lineage? But more importantly, how can we possibly account for the ‘catastrophic’ and ongoing neotenisation event in recent human ‘evolution’, or for the rise of neuropathologies and neurodegenerative conditions, or the unstoppable rise of the exograms? All these issues have been resolved with one single, elegant explanation, and anyone wishing to explore the recent neurological development of humans needs to take the auto-domestication hypothesis into account. Just fifteen years ago Rose’s paper would have been brilliant; today it is superseded.

Ellen Dissanayake’s contribution, by contrast, is up to date in data presentation, properly the basis of all hypothesising. Moreover, her ‘artification’ concept is a robust, commonsense proposal. After all, art is inseparable from its interpretation (Danto 1986) and always derives from an ethnocentric concept: ‘the status of an artifact as a work of art results from the ideas a culture applies to it, rather than its inherent physical or perceptible qualities. Cultural interpretation (an art theory of some kind) is therefore constitutive of an object’s arthood’ (Danto 1988). Art is simply a ‘making special’ by the artist. We understand that if an artist arranges thirty ordinary bricks in a row in an art exhibition, it is ‘art’. If he slaughters a cow at the entrance of an art gallery, he creates art and the cadaver is a work of art. Nevertheless, we are not aware of any evidence tendered that any palaeoart of the Pleistocene is art in the modern Western sense of

the term.

Of interest to the palaeoart specialist might also be a chapter by Massimo Pigliucci entitled ‘The limits of consilience and the problem of scientism’. After considering the ‘two cultures and the science wars’, he elaborates on the reasons why an approach seeking ‘unity of knowledge’ along Wilson’s search for consilience is unlikely to succeed. He is probably right, though the reasons may be somewhat more complex than he envisages: our reality constructs are not reflections of some kind of objective reality, and there are good reasons for that. What this book manages to demonstrate is the wide gulf that will certainly continue to exist between the humanities and the sciences.

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