

OURSELVES EXPLAINED

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A Review of the Book

The Secret of Our Success. How Culture is Driving Human Evolution, Domesticating Our Species, and Making Us Smarter

By Joseph Henrich. 2016.

Princeton University Press, Princeton, NJ, USA, 445 pages.

ISBN 978-0-691-16685-5 (Hardback, US\$29.95)

The key to this book's 18-word title can be summed up in five: Cumulative culture drives human evolution. Important is the present verb tense: No one would deny the claim (which is hardly a secret) for now, but looking back into humanity's past is more challenging. It is especially so if one presents cumulative culture (hence CC) as uniquely human, as a binary divide between the hominin line and all others. Yet Henrich, a Harvard-based evolutionary ethnographer (by his own description), takes this hardline approach, repeatedly asserting that this criterion is today's evolutionary Rubicon. Thus, he is echoing the modern dogma that categorically distances ourselves from other animals; thus, CC replaces past Rubicons that have fallen by the wayside, such as tool use, imitation, etc.

So, what is CC? Surprisingly, Henrich gives no clear, operational definition for the process (a regrettable shortcoming that applies to other key phenomena in the book, such as self-domestication, collective mind, pair-bond, social norm, etc.). The idea is typically associated with Michael Tomasello and his championing of the 'ratchet effect', a progressive, complexifying trend in which increases in efficiency (and ultimately in adaptation) are built on previous advances. The metaphor was always suspect, allowing no retrogressive devolution but only onwards and upwards evolution, but clear examples in modern *Homo sapiens* are mathematics and language. CC is NOT cultural change,

which can come about by various factors, e.g. demographic, climatic, etc. Nor does culture have to accumulate, as ephemeral pop culture shows. Nor does CC even have to be complex, as the emergence of simplified texting language shows.

The goal of the book is laid out in his Preface: “To integrate insights from across the social and biological sciences to build an evolutionary approach to studying human psychology and behaviour that takes seriously the cultural nature of our species.” (p. XI). This is a challenging and ambitious cross-disciplinary approach, requiring polymathic knowledge from neuroscience to archaeology. By and large, Henrich succeeds, in an evolutionarily-based survey of who humans are now; he is especially good with ethnographic examples from traditional human societies, such as gatherer-hunters. However, another couple of key quotes may unsettle social scientists, such as sociocultural anthropologists; “[Cultural enhancements] are *biological* modifications to our brain, but **not genetic** modifications.” (p. 261) and “*Cultural differences are biological differences but not genetic differences.*” (p. 263) (Italics and bold are Henrich’s). These assertions are features of gene-culture co-evolution taken a step or two further (although they echo those of another Harvard academic, E.O. Wilson).

First, some descriptive information: The book has 16 chapters of readable and down-to-earth prose; it refers by numbered superscripts to 40 pages of endnotes (which sometimes contain vital information absent from the text). There are some useful synthesizing tables and 23 monochrome illustrations. It has more than a thousand references, making it a wide-ranging goldmine, and 14 pages of admirable but revealing index.

So, how about the arguments? From the first sentence of the book, Henrich makes clear that he believes humans to be *qualitatively* different from other animals, and repeatedly he stresses that CC is what makes the difference. These assertions are based on apparent absence of evidence in non-humans, and thus they are hypotheses, not findings. But consider: Nest-building birds are not instinctive automatons but instead learn socially how to make their structures (Guillette et al. 2016). Bearded capuchin monkeys make (albeit inadvertently) Oldowan-style stone flakes (Proffitt et al. 2016). Baboons take collective action in their daily ranging (Strandburg-Peshkin et al. 2015). Homing pigeons show CC through cross-generational knowledge transfer (Sasaki and Biro 2017). These recent findings may have come too late for him to consider, but they show the tenuousness of his claims.

Most egregiously treated is the non-human taxon that Henrich sets up as the straw man/fall guy/foil for his comparisons, *Pan troglodytes*. (As someone who chased wild chimpanzees over 40 years, I must declare here a special interest.) Again and again, he gets his facts wrong: “By contrast, chimpanzees remain confined to a narrow band of tropical African forest and have already diverged into three distinct subspecies.” (p. 10). In fact, chimpanzees inhabit a wide range of biotypes from savanna to rain forest, and this has been known for decades. And there are four subspecies. “In many primates, such as chimpanzees, female bodies unmistakably signal when they are sexually receptive and capable of getting pregnant, sometimes using shiny buttock swellings.” (p. 306). In fact, chimpanzee females continue to show several swelling cycles and mating *after* conception, and in general, few primate species show such perineal swellings. And so on. Perhaps his misunderstanding of non-human primates is related to the fact that of 58 experts consulted for the book, only three study non-human primates. (Notably absent

from the book is humankind's other closest living relative, the bonobo, *Pan paniscus*, which gets only two passing mentions.)

However, Henrich's chapters cover an astonishingly wide range of topics: brains, intelligence, faith, language, kinship, foraging societies, inter-group competition, hormones, self-domestication, mating systems, taboos, norms, all in terms of gene-culture co-evolution. These topics are presented in convenient summary tables. Some of these phenomena are analysed better than others: Chapter 8 is devoted to prestige, which is never operationally defined and so can be conflated easily with social dominance. As presented, the concept sounds suspiciously circular and reprises Michael Chance's ideas on attention structure, presented decades earlier but not cited. Some of his ethnographic stories are engrossing, such as examples of culture-bound Western expeditions that foundered fatally when faced with basic ecological challenges in new environments.

So, what about human ethology? By now it should be clear that much of the book's content overlaps with our field. Henrich explains many things by phrases such as "innate susceptibility" or "intuitively assumes" but the word "instinct" does not appear. Photos and descriptions of (e.g.) triumph displays could be straight from Eibl-Eibesfeldt, but he is referenced only once, in another context. No other human ethologist is cited. Basically, and regrettably, human ethology is invisible here.

In summary, this review perhaps sounds too negative. Henrich is clever and well-informed. Almost every page has stimulating ideas, even if some are dodgy. For a natural scientist unfamiliar with socio-cultural anthropology, or indeed, anthropology in general, there is much to be gained from his ethnographic stance. If you are in two minds about whether or not to pursue the book, borrow a library or colleague's copy and read the final chapter, *A New Kind of Animal*, which distils the whole case into 18 pages.

P.S. For a longer, in-depth treatment of the book, see Clarke and Heyes (2016).

ABOUT THE AUTHOR

William C. McGrew is Honorary Professor, School of Psychology and Neuroscience, University of St. Andrews. Thus, he has come full circle from his first PhD in psychology, after a 20+ year dalliance in anthropology. Now he spends more hours per week in the garden than in front of a computer screen and enjoys seeing his former students advance in the academic world.

REFERENCES

- Clarke, E. & Heyes, C. (2016). The swashbuckling anthropologist: Henrich on The Secret of Our Success. *Biology and Philosophy*, 32, 289-305 [DOI](#)
- Guillette, L.M., Scott, A.C.Y., Healy, S.D.. (2016). Social learning in nest-building birds: a role for familiarity. *Proceedings of the Royal Society, B*, 283(1827). [DOI](#)
- Proffitt, T., Luncz, L.V., Falótico, T, Ottoni, E.B., de la Torre, I. & Haslam M. (2016). Wild monkeys flake stone tools. *Nature*, 539, 85-88 [DOI](#)

- Sasaki, T. & Biro, D. (2017). Cumulative culture can emerge from collective intelligence in animals groups. *Nature Communications*, 8, 15049. [DOI](#)
- Strandburg-Peshkin, A., Farine, D.R., Couzin, I.D. & Crofoot, M.C. (2015). Shared decision-making drives collective movement in wild baboons. *Science*, 348(6241), 1358-1361. [DOI](#)