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Book Review

Cultural Evolution in the Digital Age

Alberto Acerbi
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Can the methods and theories from the natural sciences enrich our understanding of digital media? This book by the anthropologist Alberto Acerbi builds a bridge between the field of media and communication studies and a rather new approach to studying culture: cultural evolution. Can this bridge be a firm structure? And do media studies and cultural evolution even need each other? Acerbi makes a persuasive case for the usefulness and importance of this connection. The studies of media still have many open questions that might be clarified with a scientific theory. Cultural evolution, on the other hand, needs contemporary media as an enormous source of empirical data and interesting problems.

But, first, what is cultural evolution? Acerbi uses this term to refer to a rather new approach that aims to analyze culture from a quantitative standpoint (Mesoudi, 2011; Richerson & Christiansen, 2013). It differs, however, from other quantitative approaches to culture, such as computational social science or network science, in one key aspect: it insists on the importance of a large-scale, general *theory* of cultural change. Cultural evolution not only searches for trends in the masses of cultural data, but it also searches for regularities in these trends. These regularities derive from the underlying assumptions of this theory, such as "population thinking": culture consists of numerous populations of cultural traits, and their frequencies change over time. Say, videos on YouTube or memes on 4chan can be regarded as such changing populations. Acerbi is interested in the general principles of how and why some of the traits (videos, memes, and many others) become successful and widely transmitted—shared, copied, modified—while others don't.

What are these general principles? For example, consider online misinformation. Acerbi employs a cultural-evolutionary theory of cognitive attraction (see Morin, 2016) to explain why certain fake messages tend to be spread faster and further than others. Relying on various empirical evidence, such as the "transmission-chain" experiments—a popular method in cultural evolution research—he points out that misinformation tends to be cognitively "appealing": more attention-grabbing than other types of information. This, however, happens not because misinformation isn't true, but because it often incorporates stimuli that are attention-grabbing, for other reasons—such as those that evoke the feeling of disgust. Turns out, humans are really attentive to cockroaches, dead rats, or hair in one's plate. Misinformation usually incorporates such "attractive" (in quotes!) subject in order to become

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viral. The author provides an interesting statistic: he collected a sample of fake news and contrasted it with a sample of correct news. Disgust-related topics were present in more than 15% of fake news, and they were almost absent in the sample of correct news. Disgust is one of many cognitively appealing stimuli abused by misinformation to achieve wider spread. Others include, say, information about social interactions, or the so-called minimally counterintuitive concepts. Importantly, however, Acerbi stresses that digital media should not be blamed for misinformation—rather, we should blame our own cognitive predispositions, which have been with us for millennia.

The example with disgust is a good illustration of the general attitude of the author toward many popular criticisms of digital media. Humans often treat with apprehension new cultural and technological phenomena: fiction books, in the nineteenth century, were blamed for addiction to reading; radio, in the early twentieth century, for distorting the election results. Today, digital media are often blamed for a plenty of crimes: political polarization, misinformation, short attention span, and so on. Over and over again, Acerbi suggests good reasons to doubt some of these widespread claims—sometimes these reasons are based on his own empirical work, sometimeson his reinterpretations of the empirical work by other researchers. He admits, honestly: “I am more of a cheerer than a doomsayer. I believe, nevertheless, that I appear so only because doomsayers are in the majority now. [. . .] I realized that having a critical, but not necessarily negative, attitude towards current digital developments is enough to be considered a cheerer. So be it” (p. xiii).

One of the reasons why Acerbi is a “cheerer” may be hidden in his “long view” of digital culture. Instead of considering the new digital age as sharply distinct from everything that existed before, he draws numerous parallels between the old and the new. One of the key messages of this book is that, in addition to looking for differences between them, we should also look for similarities. If observed from a close perspective, digital media may indeed look sharply different from the media of the preceding epochs. But if we look from afar—and that is what Acerbi does, in the cultural-evolutionary fashion—we may see continuity between the old and the new.

Sometimes, however, this critical optimism may not be entirely justified. Say, in the case of online popularity. Acerbi describes several regularities in how popularity online looks like, and why. For example, online success is very uneven: very few individuals have millions of followers, most others have just dozens or hundreds. Or, popularity online is subject to the Matthew effect: the rich get richer, the more popular get even more popular, while the poor and unpopular remain just that. The author rightly notices that both these patterns are present not only online: they have a long history and can be found, for example, in the distribution of names given to newborns: few names are super-popular, while most others aren’t. This is the key message of Acerbi—continuity. And it is hard to disagree with: patterns of popularity and inequality

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remain similar over centuries. But the *extent* probably doesn't. The uneven distribution of popularity is known to be typical of the "winner-take-all" markets (Frank, 2016). Not all the markets are like this, but the market of digital goods certainly is. And as more and more of our lives move online, we are increasingly more bound to this winner-take-all market. The millions of moderately successful (analog) stores in every city are gradually replaced by a single hyper-successful (digital) store owned by the richest person in the world.

In most cases, however, Acerbi's debunking of the widespread stereotypes about digital media is justified. More generally, his long view at digital media—from the perspective of human culture lasting many thousands of years—provides an important addition to contemporary communication and media studies. But also, since the book is well written and discusses the empirical findings across a wide range of disciplines—anthropology, linguistics, psychology, arts—it can easily be recommended to anyone in the social sciences or humanities interested in the mechanics of digital culture.

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Oleg Sobchuk
Minds and Traditions Research Group, Max Planck Institute for the Science of Human History, 07745 Jena, Germany
E-mail: sobchuk@shh.mpg.de

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