

NOTE / NOTES

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Homo mendax, Fictional Heroes and Self-Deception A Brief Commentary on *The Storytelling Animal: How Stories Make Us Human*

In 1994, paleontologist and historian of science Stephen Jay Gould (1941-2002) wrote that

«we are storytelling creatures and should have been named *Homo narrator* (or perhaps *Homo mendax* to acknowledge the misleading side of tale telling) rather than the often inappropriate *Homo sapiens*. The narrative mode comes naturally to us as a style for organizing thoughts and ideas»¹.

Almost twenty years later Jonathan Gottschall, leading scholar in evolutionary studies applied to literature, starts from similar premises to elaborate an elegant review of evolutionary and cognitive studies focused on the understanding of the strange storytelling animal who once dared to name itself *Homo sapiens*. The backbone of his book, entitled *The Storytelling Animal*², is represented by the rebuttal of the extreme social constructivism that affected, and still affects, the humanities³. To cut a long story short, the cultural domain of *H. sapiens* has been traditionally considered exempt from every kind of evolutionary analysis, as if this *taxon* could astoundingly eschew biological constraints and enjoy the privilege of being otherworldly. Gottschall himself recalls his personal appalling experience during his university years in the introductory chapter of a previous and equally important book⁴. Suffice it to say here that from the perspective of the academic humanities science has been often perceived as anathema, a polymorphic monster whose ultimate goal is to reduce art and humanity's freedom to endless quantitative and quite repellent sequences of numbers (not to mention the absurd equivalen-

¹ S.J. Gould, *So Near and Yet So Far*, in «The New York Review of Books» 46, 20 (1994), pp. 24-28: p. 26.

² J. Gottschall, *The Storytelling Animal: How Stories Make Us Human*, Houghton Mifflin Harcourt, Boston - New York 2012.

³ Cf. S. Pinker, *The Blank Slate: The Modern Denial of Human Nature*, Viking, New York 2002.

⁴ J. Gottschall - D.S. Wilson (eds.), *The Literary Animal: Evolution and the Nature of Narrative*, Northwestern University Press, Evanston 2005.

ce between Darwin's evolutionary research programme and Spencerian progressionism or, worse, right-winged extremist interwar ideologies, which only denotes the lack of scientific and historiographic knowledge of its supporters)⁵. The most common strategic defense deploys the ideologically laden use of the reductionist label, «as if reductionism were always a bad thing and simply calling something you don't like "reductionist" is enough to make a case against it»⁶. Though with obvious exceptions, this picture is not a far cry from everyday reality in most humanistic departments.

The inconsistency of this stance is exposed in Gottschall's flowing and bright prose: the humanities have nothing to lose but everything to gain from a deeper knowledge of evolution, biology and cognition, given that science can help us to comprehend why we tell certain kind of stories and why we will keep on telling them. We definitely need to understand more and better about the ways in which «fiction subtly shapes our beliefs, behaviors, ethics – how it powerfully modifies culture and history»⁷ and, thanks to the combined efforts of neuroscience and cognitive science of religion, we finally have the possibility to explore this uncharted land⁸.

The book revolves around the following central tenet: fictional stories are psychological evolutionary mechanisms, based on a simple formula («Story = character + predicament + attempted extrication»)⁹ and dealing with human social universals such as love, sex, social power, life challenges, fear of death. This «universal grammar in world fiction, [this] deep pattern of heroes confronting trouble and struggling to overcome»¹⁰ is the outcome of our primate social intelligence, which in turn was moulded in the deep times of evolution as the response to a competitive social environment dominated by rather unpredictable strategies¹¹. As a result of

⁵ Cf. S. Stewart-Williams, *Darwin, God and the Meaning of Life: How Evolutionary Theory Undermines Everything You Thought You Knew*, Cambridge University Press, Cambridge 2010.

⁶ W.J. Wildman et al., *Reductionism in the Scientific Study of Religion*, in «Religion, Brain & Behavior» 1, 3 (2011), pp. 169-172: p. 169, doi: 10.1080/2153599X.2011.653538.

⁷ J. Gottschall, *The Storytelling Animal*, cit., p. xvii.

⁸ For recent summaries cf. J. Bulbulia - E. Slingerland, *Religious Studies as a Life Science*, in «Numen» 59, 5 (2012), pp. 564-613, doi: 10.1163/15685276-12341240; W.W. McCorkle Jr. - D. Xygalatas, *Introduction: Social Minds, Mental Cultures – Weaving Together Cognition and Culture in the Study of Religion*, in Idd. (eds.), *Mental Culture: Classical Social Theory and the Cognitive Science of Religion*, Acumen, Durham - Bristol (CT) 2013, pp. 1-10; A.W. Geertz, *Introduction*, in Id. (ed.), *Origins of Religion, Cognition and Culture*, Acumen, Durham - Bristol, CT 2013, pp. 1-16; L.H. Martin, *The Future of the Past: The History of Religions and Cognitive Historiography*, in Id., *Deep History, Secular Theory: Historical and Scientific Studies of Religion*, De Gruyter, Boston - Berlin 2014, pp. 343-357 (originally published in «Religio. Revue pro religionistik» 20, 2 [2012], pp. 155-172, available at: <<http://hdl.handle.net/11222.digilib/125418>>).

⁹ J. Gottschall, *The Storytelling Animal*, cit., p. 52.

¹⁰ *Ibi*, p. 55.

¹¹ A. Whiten, *Machiavellian Intelligence Hypothesis*, in R.A. Wilson - F.C. Keil (eds.),

this evolutionary history we are entangled, to use Richard Wrangham's well-chosen words, in «a soap opera of changing affections, alliances, and hostilities, and a constant pressure to outsmart others»¹².

Language and religion played a remarkable role in our *taxon*'s social and storytelling history right from the beginning since, among other things, they shape fictive kinship¹³. Fictional stories serve as a mental gym where it is possible, in a safe mode, to simulate life's social problems¹⁴ specifically relying on implicit memory¹⁵. Their power in shaping one's self and ingroup/outgroup relations is self-evident in the omnipresence of myths and stories centered on supernatural and counterintuitive agents across human societies. Fiction, in all its forms, is a moralistic device that stems from and nourish the need for «stigmatiz[ing] antisocial behavior and [...] celebrat[ing] prosocial behavior»¹⁶, with rewarding consequences for the good and punishment for the bad¹⁷. This is crystal clear in the case of religion. As dysfunctional as it may be, religion still provides cognitively appealing explanations for every salient aspect of environmental and social interactions, and with its sacred fictions it satiates the human desire of knowledge.

An astounding example of this kind of world-making/myth-making storytelling¹⁸, and one that could be easily added to the list of topics provided by Gottschall, is geomythology, the discipline devoted to the study of religious and folkloric records concerning explanations of geological phenomena and fossils in particular¹⁹. As astronomer and astrophysicist Carl Sagan (1934-1996) once wrote, «The myths and folklore of many pre-modern cultures have explanatory or at least mnemonic value. In stories that everyone can appreciate and even witness, they encode the

The MIT Encyclopedia of the Cognitive Sciences, The MIT Press, Cambridge (MA) - London 1999, pp. 495-497.

¹² R. Wrangham, *Catching Fire: How Cooking Made Us Human*, Basic Books, New York 2009, p. 108.

¹³ J. Gottschall, *The Storytelling Animal*, cit., p. 120. Cf. L.H. Martin, *Biology, Sociobiology and the Study of Religion: Two Lectures*, in «Religio. Revue pro religionistik» 5, 1 (1997), pp. 21-35, available at: <<http://hdl.handle.net/11222.digilib/124782>>; T.R. Trautmann *et al.*, *Deep Kinship*, in A. Shryock - D.L. Smail (eds.), *Deep History: The Architecture of Past and Present*, University of California Press, Berkeley - Los Angeles - London 2011, pp. 160-188: p. 179.

¹⁴ J. Gottschall, *The Storytelling Animal*, cit. p. 67.

¹⁵ *Contra* Pinker's model (cf. J. Gottschall, *The Storytelling Animal*, cit., pp. 64-65).

¹⁶ *Ibi*, p. 134.

¹⁷ *Ibi*, p. 135.

¹⁸ W.E. Paden, *Connecting with Evolutionary Models: New Patterns in Comparative Religion?*, in W. Braun - R.T. McCutcheon (eds.), *Introducing Religion: Essays in Honor of Jonathan Z. Smith*, Equinox, London - Oakville (CT) 2008, pp. 406-417.

¹⁹ D. Vitaliano, *Legends of the Earth: Their Geologic Origins*, Indiana University Press, Bloomington - London 1973; A. Mayor, s.v. «Geomythology», in R.C. Selley *et al.* (eds.), *Encyclopedia of Geology*, vol. 3, Elsevier Academic Press, Oxford 2005, pp. 96-100.

environment»²⁰. The absence of a proper knowledge of evolutionary mechanisms was overcome only after the adoption of the Darwinian research programme²¹, yet ancient myths, folktales and worldwide theological elaborations used to make sense of the fossil and geological record via ingenious, though fictitious, cosmological settings sometimes associated with proto-evolutionary or pre-scientific explanations²². Tom Sjöblom got it right when he noted that «[...] creating narratives is our way of connecting with our environment»²³.

Moreover, religious storytelling is one of the strongest cultural forces in creating ingroup prosocial boundaries and, as such, serves also as a powerful weapon for ingroup policy and outgroup competition²⁴. Therefore, as a peculiar mix of evolutionary by-product elements and specific social adaptations, and notwithstanding the counterproductive presence of rituals and beliefs manifestly noxious to health, survival or even reproduction, religious behaviors were not discarded by cultural evolution²⁵. These are all well known theoretical instruments in the toolkit of the cognitive science of religion, but the merit of Gottschall's book resides in its appealing and direct form, which makes it a perfect general introduction to the subject for any interested humanistic readership.

It should nonetheless be clear by now that narrative (whether religious or not) is not a bed of roses: though «the storytelling mind is a crucial evolutionary adaptation»²⁶, our computational devices make us prone to false positive in the detection of meaningful patterns, from anthropomorphism to pareidolia, from distorted national myths to global

²⁰ C. Sagan, *The Demon-Haunted World: Science as a Candle in the Dark*, Headline, London 1996, p. 239.

²¹ S.J. Gould, *Father Athanasius on the Isthmus of a Middle State: Understanding Kircher's Paleontology*, in P. Findlen (ed.), *Athanasius Kircher: The Last Man Who Knew Everything*, Routledge, New York - London 2004, pp. 207-237: p. 208; T. Pievani, *An Evolving Research Programme: The Structure of Evolutionary Theory from a Lakatosian Perspective*, in A. Fasolo (ed.), *The Theory of Evolution and Its Impact*, Springer-Verlag, Milan 2012, pp. 211-228.

²² S.J. Gould, *Father Athanasius on the Isthmus of a Middle State*, cit.; A. Mayor, *Fossil Legends of the First Americans*, Princeton University Press, Princeton - Oxford 2005; L. Piccardi - W.B. Masse (eds.), *Myth and Geology* ("Geological Society Special Publication", 273), The Geological Society, London 2007; A. Mayor, *The First Fossil Hunters: Dinosaurs, Mammoths, and Myth in Greek and Roman Times. With a New Introduction by the Author*, Princeton University Press, Princeton - Oxford 2010 [1st ed. 2000]; R.N. McCauley, *Why Religion Is Natural and Science Is Not*, Oxford University Press, Oxford - New York 2011, p. 104; L. Ambasciano, *Tempi profondi. Geomitologia, storia della natura e studio della religione*, in «Studi e Materiali di Storia delle Religioni» 79, 1 (2013), pp. 152-214.

²³ T. Sjöblom, *Storytelling: Narratives of Mind and Modes of Religiosity*, in «Historical Reflexions / Réflexions Historiques» 31, 2 (2005), pp. 235-254: p. 235.

²⁴ J. Gottschall, *The Storytelling Animal*, cit., pp. 121-123.

²⁵ *Ibi*, pp. 20ff.

²⁶ *Ibi*, pp. 102-103.

imaginary conspiracies. Our neural networks devoted to gathering and processing data into meaningful patterns (no matter how authentic) are unrelentingly at work²⁷.

Subservient to the continuous search for meanings, our own memories are «faulty by design»²⁸. There is no inner trustworthy videotape to rely upon: we are naturally inclined to the perennial redraft of our own lifetime, self-serving grand narrative, patching together fragments of events²⁹. For instance, to the extent that psychotherapy works, it does so because it helps the patient to rewrite a non-random personal story, in which s/he can rise again as the main protagonist³⁰. Hence, it helps reinventing and reshaping the self. From a wider biological perspective, we fool ourselves to better fool others – and the same goes for every aspects of our social life³¹.

Pattern detection is at work even during sleep, rewiring information into narratives, as our brain never stops from producing rather coherent storytelling: we dream of stories with characters, good versus evil plots, specific settings, and so on. Dreams could be, Gottschall writes, the night-time equivalent of the uninterrupted mental gym in which daytime storytelling takes place: quantitative data at hand, it could be assumed that dreams are a simulation for (un)pleasant social situations³². Dreams do not serve a unique neurophysiological purpose, if any (they are also a night-time by-product of our socially wired cerebral engine at work), and neither do they conceal a code to crack the crucial, meaningful, transcendent and hidden symbology so ardently (but in vain) sought for by psychoanalysts³³. Indeed, our inborn naïve/folk psychology behind the practice of storytelling (e.g., the fallacious representativeness heuristic, enthusiastically embraced by classic psychoanalysis)³⁴ is quite different from the standardized, effortful and collective scientific process of data gathering, evaluating, testing, reviewing and corroborating, which more than ever stands out as an amazing, though rare, social achievement in human history³⁵.

²⁷ *Ibi*, p. 96.

²⁸ *Ibi*, p. 170.

²⁹ *Ibi*, p. 169.

³⁰ *Ibi*, p. 175.

³¹ Cf. R. Trivers, *The Folly of Fools: The Logic of Deceit and Self-Deception in Human Life*, Basic Books, New York 2011.

³² J. Gottschall, *The Storytelling Animal*, cit., pp. 82ff.

³³ *Ibi*, 72.

³⁴ Cf. R.E. Nisbett - L. Ross, *Human Inference: Strategies and Shortcomings of Social Judgment*, Prentice-Hall, Englewood Cliffs (NJ) 1980; T. Gilovich et al. (eds.), *Heuristics and Biases: The Psychology of Intuitive Judgment*, Cambridge University Press, Cambridge - New York 2002.

³⁵ R.N. McCauley, *Why Religion Is Natural and Science Is Not*, cit.

In the last decade of the past century, Sagan³⁶ and Richard Dawkins³⁷ correctly evoked the risks of the postmodernist estrangement from reality and the resulting anti-scientific stance endorsed, for instance, by world-renowned *The X-Files* series (not to mention its overtly mystical spin-off *Millennium*)³⁸. Gottschall's masterly volume helps us to put those right critiques in a cognitive perspective. The issue is not enjoying fiction stories as *The X-Files*, *Star Trek*, *Lost*, *Fringe*, or whatever television series you may like. We have always been, and will always be, fascinated by agents involved in doing things, being trapped in a malevolent conspiracy and trying to escape from it. One lesson that powerfully emerges from *The Storytelling Animal* is that we are hardwired for such stories, and we crave for characters whose stories share some counterintuitive patterns, as strange as they may be. Throughout time, myth has nurtured us and legend has satiated our desires for storytelling. We have selected such stories, and by according our preference to specific contemporary television shows and feature films, videogames, comics and novels (the container is irrelevant: story evolves, adapting to its environment)³⁹, to a certain extent we keep on exerting a selective pressure on the stories that are being told to us. And eventually we feel compelled to retell them and change them in a never-ending loop⁴⁰.

The real problem is, actually, not being capable to distinguish reality from fiction, science from myth. Our beliefs are reflected in our behaviors, and harmful beliefs translate into harmful behaviors, both socially and individually⁴¹. We must recognize our biological heritage and our naïve psychology, its biases, its deleterious penchant for fallacious agentivity and patternicity, for creating false memories and distorted sequences of meaningful events. Narrative has the overwhelming power to change the world, for the better or for the worse⁴². For instance, natural theology did not painlessly give way to a scientific and non agent-driven paradigm in the study of Earth's deep times. Ideological references to teleological

³⁶ C. Sagan, *The Demon-Haunted World*, cit., p. 351.

³⁷ R. Dawkins, *Unweaving the Rainbow: Science, Delusion and the Appetite for Wonder*, Houghton Mifflin, Boston 1998, p. 28.

³⁸ For a philosophical and postmodernist defense of that renowned television show cf. D.A. Kowalski, *Introduction: Mulder, Scully, Plato, Aristotle, and Dawkins*, in Id. (ed.), *The Philosophy of The X-Files. Updated edition*, The University Press of Kentucky, Lexington 2009, pp. 1-13.

³⁹ J. Gottschall, *The Storytelling Animal*, cit., p. 180.

⁴⁰ D. Sperber, *A Naturalistic Ontology for Mechanistic Explanations in the Social Sciences*, in P. Demeulenaere (ed.), *Analytical Sociology and Social Mechanisms*, Cambridge University Press, Cambridge 2011, pp. 64-77.

⁴¹ Cf. C. Sagan, *The Demon-Haunted World*, cit., p. 240; M. Shermer, *The Believing Brain: From Spiritual Faiths to Political Convictions. How We Construct Beliefs and Reinforce Them as Truths*, Robinson, London 2012 [or. ed. New York 2011].

⁴² J. Gottschall, *The Storytelling Animal*, cit., pp. 139ff.

narratives and moralizing theological coordinates still thrive today in humanities, politics and media when relevant scientific studies are brought up⁴³. These ideological narratives sometimes translate into (sometimes retrograde) political decisions, which have real consequences and can affect the entire community's welfare. We have suffered and we are still suffering from the educational and social consequences of the lamentable theo-teleological and postmodernist denial of science in the humanities, as well as the historico-religious positive and appreciative propensity towards the supernatural and the paranormal⁴⁴. Therefore, scientific literacy should become a primary target especially for the humanities, in order to give scholars, citizens, policy makers and interested readers alike the proper scientific tools for understanding our world, either real or fictional. Consequently, Gottschall's book represents a welcomed introduction to a scientifically informed perspective in the humanistic studies⁴⁵.

There is nothing to be afraid of. No matter how deep science goes in uncovering the neuroscientific reality behind our cognitive machinery, we will always like knotty plots as those featured in *The X-Files*, *Star Trek*, *Lost* or *Fringe*, because knowing the neurophysiologic reality behind our neurons' firing does not depreciate nor corrode the everlasting awe in front of a good story: «understanding the power of storytelling – where it comes from and why it matters – can never diminish your experience of it. Go get lost in a novel. You'll see»⁴⁶.

⁴³ M. Isaak, *The Counter-Creationism Handbook*, University of California Press, Berkeley - Los Angeles - London 2007 [1st ed. 2005]; D.L. Smail, *On Deep History and the Brain*, University of California Press, Berkeley - Los Angeles - London 2008; M. Kölbl-Ebert (ed.), *Geology and Religion: A History of Harmony and Hostility* ("Geological Society Special Publication", 310), The Geological Society, London 2009; R.N. McCauley, *Why Religion Is Natural and Science Is Not*, cit.; J. Rosenau, *Science Denial: A Guide for Scientists*, in «Trends in Microbiology» 20, 12 (2012), pp. 567-569, doi: 10.1016/j.tim.2012.10.0022012; L. Ambasciano, *Tempi profondi*, cit.

⁴⁴ *Contra* Kowalski, *Introduction: Mulder, Scully, Plato, Aristotle, and Dawkins*, cit., cf. R.L. Numbers, *Myth 24: That Creationism Is a Uniquely American Phenomenon*, in Id. (ed.), *Galileo Goes to Jail and Other Myths about Science and Religion*, Harvard University Press, Cambridge, MA 2009, pp. 215-223; A. Sokal, *Beyond the Hoax: Science, Philosophy and Culture*, Oxford University Press, Oxford - New York 2010 [1st ed. 2008]; L.H. Martin, *The Future of the Past*, cit.; L.H. Martin - D. Wiebe, *Religious Studies as a Scientific Discipline: The Persistence of a Delusion*, in «Journal of the American Academy of Religion» 80, 3 (2012), pp. 587-597, doi: 10.1093/jaarel/lfs030 (also published in «Religio. Revue pro religionistik», 20, 1 [2012]), pp. 9-18, available at: <<http://hdl.handle.net/11222.digilib/125392>>; D.R. Prothero, *Reality Check: How Science Deniers Threaten Our Future*, Indiana University Press, Bloomington 2013; J. Coyne, *Science is Being Bashed by Academics Who Should Know Better*, in «New Republic», April 3, 2014, available at: <<http://www.newrepublic.com/article/117244/jeffrey-kripals-anti-materialist-argument-promotes-esp>> (01/2015); M. Ferraris, *Manifesto of New Realism*, State University of New York Press, Albany 2014 [or. ed. *Manifesto del nuovo realismo*, Laterza, Roma - Bari 2012].

⁴⁵ E. Slingerland - M. Collard (eds.), *Creating Consilience: Integrating the Sciences and the Humanities*, Oxford University Press, Oxford - New York 2012.

⁴⁶ J. Gottschall, *The Storytelling Animal*, cit., p. 199.

ABSTRACT

Nel 1994, il paleontologo e storico della scienza Stephen Jay Gould scrisse che «siamo creature che raccontano storie; la nostra specie avrebbero dovuto chiamarla homo narrator (o forse homo mendax per riconoscere l'aspetto fuorviante che c'è nella narrazione di storie). [...] La modalità narrativa ci riesce naturale, come uno stile per organizzare pensieri e idee»⁴⁷.

*Quasi venti anni dopo, Jonathan Gottschall, uno dei maggiori studiosi di evoluzione applicata alla letteratura, ritorna a quell'intuizione gouldiana nel suo *The Storytelling Animal* (2012; tr. it. *L'istinto di narrare: come le storie ci hanno reso umani*, Bollati Boringhieri, Torino 2014). Il libro di Gottschall offre un'agevole rassegna di studi evuzionistici e cognitivi volti a indagare quello strano animale contastorie che siamo e rappresenta nel contempo una lettura altamente raccomandata per introdurre una quanto mai necessaria prospettiva scientifica nelle discipline umanistiche.*

Sulla scorta di alcuni tra i temi più importanti presentati nel volume di Gottschall (ossia, la presenza dei nostri innati e fallaci bias psicologici nella narrazione di storie e i potenziali effetti di ritorno di quelle storie sulla vita reale, siano essi positivi o negativi), nel presente articolo vengono suggeriti due ulteriori argomenti da affrontare in sede di ricerca: la geomitologia (la disciplina che studia l'interpretazione religiosa e folklorica dei fossili e dei fenomeni geologici) e i contemporanei e variegati movimenti antiscientifici.

In 1994, paleontologist and historian of science Stephen Jay Gould wrote that «we are storytelling creatures and should have been named Homo narrator (or perhaps Homo mendax to acknowledge the misleading side of tale telling). [...] The narrative mode comes naturally to us as a style for organizing thoughts and ideas».

*Almost twenty years later Jonathan Gottschall, leading scholar in evolutionary studies applied to literature, reverts to that intuition in his *The Storytelling Animal* (2012), which I briefly comment upon here. The book offers an effortless review of evolutionary and cognitive studies concerning the understanding of the strange storytelling animal that we are and represents a highly recommended reading for introducing a (much needed) scientific perspective in the humanities.*

In the wake of two most important ideas featured in Gottschall's book, i.e. storytelling is marked by our own inborn and potentially fallacious mental biases and narratives (in the long term, at least) have the power

⁴⁷ It. tr. R. Ceserani, *Romanzi di Neandertal*, in A. Casadei (ed.), *Spazi e confini del romanzo. Narrative tra Novecento e Duemila*, Pendragon, Bologna 2002, pp. 95-112: p. 96.

to change the world for the better or the worse, I wish to highlight herein the relevance of two possible fields of further storytelling and cognitive inquiry: geomythology (the discipline devoted to the study of religious and folkloric records concerning explanations of geological phenomena and fossils) and various anti-scientific movements.

KEYWORDS

Discipline umanistiche, evoluzione, geomitologia, scienze cognitive della religione, narrazioni di storie

Humanities, evolution, geomythology, cognitive science of religion, storytelling