

## BOOK REVIEW

**Heretics: Adventures with the Enemies of Science** by Will Storr. Picador, 2013. 450 pp., \$14.99. ISBN 978-1447231684.

Will Storr, journalist and novelist, has written a book about people who vociferously disregard evidence that does not fit comfortably with their dogmas. Yes, many of the usual suspects are here: the holocaust denier, the creationist who ridicules evolutionary theory, and the past Thatcher science advisor who pooh-poohs global warming. But Storr shows that many debunkers and critics of nonmainstream (in our culture) beliefs are equally contemptuous of the scientific method and, in some cases such as that of the “Amazing Randi,” mythologize themselves and lie in order to ridicule and frustrate their opponents. Lying is a strong word, but a refreshing virtue of Storr is that he arrives to his interviews very well-prepared and is fearless in his probes (p. 368, see also McLuhan 2010):

- S: (You) sometimes lie. Get carried away.  
R: Oh, I agree. No question of that. I don't know whether the lies are conscious lies all the time . . .  
S: So you've never been wrong about anything significant?  
R: In regard to the Skeptical movement and my work . . . No. Nothing occurs to me at the moment.

In a note about his method at the end of the book (p. 392), Storr declares that his “knowledge is broad but shallow,” yet he is an astute and vigorous synthesizer of many sources including the media and academic publications. *Heretics* is at it most incisive when it juxtaposes replies from opposite camps, revealing just how similar they actually are despite content divergences. A telling example is from his chapter on homeopathy. First an advocate (p. 121):

- S: What would your response be to a Skeptic who says it's [the active substance in a homeopathic preparation] diluted to such an extent that there is actually nothing to it?  
G: I'd say go and look it up.  
S: Look it up?  
G: Yeah.

S: Have you ever read any scientific studies that have looked at the efficacy of homeopathy?

G: Yes.

S: Which ones?

G: Don't ask me that question.

And now an attendee at a Skeptic conference in which homeopathy is ridiculed (p. 123):

S: Have you read any scientific studies into homeopathy?

D: Not personally. . . . Lots of people, if they take homeopathy and think it's real medicine, they might avoid going to an actual doctor.

S: Do you know anyone that that's happened to?

D: Not personally.

Finally, one of the organizers of the conference (pp. 130–131):

M: There is no evidence for homeopathy. The science has been done. It simply doesn't work.

S: Have you read any of the studies?

M: Yes.

S: And understood them?

M: Yes.

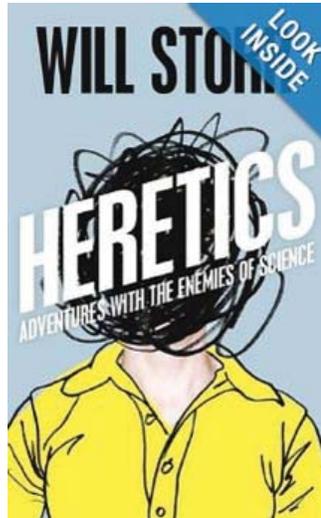
S: Which ones?

M: I can't quote their names.

That dogmatic leaders and followers, independently of their specific beliefs, share a similar antiscientific stance is something I discussed in a paper (Cardeña 2011) in which I contrasted true skeptics, that is those who are skeptical even of their own preconceptions, with "skeptics." Using the word as an acronym, I posited that the latter provide **S**implistic explanations that disregard the complexity of reality; are **K**nowledge-averse (unless the new information confirms their beliefs); **E**nsure that other perspectives cannot be considered (witness the call by some scientists to forbid the scientific study of parapsychological phenomena!); are **P**ejorative toward those they disagree with; seek to **T**errify others with the claim that even considering alternative perspectives will bring about the end of rationality and science; are **I**nconsistent in the use of standards of proof, requiring standards from their foes that they do not follow themselves; and use **C**ircular and other forms of faulty reasoning, for instance demanding that to be taken seriously research for psi should be published in scientific journals while simultaneously chastising any journal that dares to publish research on such topics.

*Heretics* is full of examples of the processes I described, but also proposes an explanation as to why so many people, some of them with advanced degrees, are willing to commit fervently to dogmas, ignore any challenging evidence, and, not infrequently, abuse and try to banish those they disagree with. There are many elements to Storr's explanation: the degree to which irrational nonconscious processes determine our evaluations and judgment, how confirmation biases help us maintain a previously held belief instead of revising it when presented with contradictory information (in Piagetian terms, assimilation versus accommodation), how much humans seek to be members of an in-group that targets other groups, and what a minute amount of available information we can process at any one point in time. Storr bases many of his statements on the research of landmark psychologists (Solomon Asch, Jerome Bruner, Daniel Kahneman, Timothy Wilson, and Philip Zimbardo, among others). A paper he missed is Greenwald's (1980) review exposing how much we distort reality and alter our perceptions, evaluations, and memories, in order to maintain a narcissistic self-image, a process that Greenwald compares with that of a totalitarian state. This reference would have strengthened Storr's account of a personal narrative of the self as heroic and battling against the forces of obscurantism, evident in so many "defenders" of science who miss the point of how humbling and difficult the scientific method actually is, requiring of us the unnatural act of putting aside our most cherished (and too often emotional and not fully thought-out) beliefs and expectations and regarding all evidence and its potentially distressing implications.

*Heretics* covers many interesting topics including psi, homeopathy, extreme obedience to gurus, global warming, and unexplained medical illnesses. I found its discussions generally well-informed and balanced, with one exception. Chapter 10 includes interviews with a British therapist with an unfalsifiable belief in rampant satanic abuse. Dr. Sinason interprets patients saying that they "don't know" whether they were horribly abused as "What they really mean is, 'I can't bear to say'" (p. 214). Her account not only defies common sense (if the powerful, widespread horrible cabals she describes actually existed, they would have killed and eaten her a long time ago), but being so extreme perversely helps those who seek to deny



the horrible abuses that do happen and are described in our newspapers with dizzying frequency. To counterpose Dr. Sinason's stance, which could create or at least distort the memories of her patients, Storr relies on the opinions of two non-clinicians, Drs. French and Loftus, who go to the other extreme of questioning both the possibility of actual trauma being forgotten and remembered later and the diagnosis of dissociative identity disorder (erstwhile known as "multiple personality"), yet Storr does not challenge their perspective. The malleability of memory exemplified by possibly "implanted memories" is actually consistent with that expressed in forgotten but later "recovered memories." There is ample experimental and clinical evidence that psychologically based (i.e. psychogenic) amnesia exists and can be reversed in therapy or spontaneously (Pezdek & Banks 1996, Schacter 1997). The British Psychological Society concluded that therapy-induced beliefs do occur but that "the ground for debate has also shifted from the question of the possibility of recovery of memory from total amnesia to the question of the prevalence of recovery of memory from total amnesia" (Working Party of The British Psychological Society 1996, for instance in Pezdek & Banks 1996:373). Furthermore, there is clinical, cross-cultural, cognitive, and neurological evidence for the validity of dissociative identity disorder (Cardena & Gleaves 2007).

In a minor vein, Storr falls prey at times to the current neuro-babble of writing about people as if they were just brains (see Tallis 2011) and explaining cognitive and emotional biases exclusively in cognitive and neurological terms. The historian of ideas Isaiah Berlin also characterized (1988/1997) those who have

arrived at clear and unshakeable convictions about what to do and what to be that brooks no possible doubt. . . . [T]hose who rest on such comfortable beds of dogma are victims of forms of self-induced myopia, blinkers that may make for contentment, but not for understanding of what it is to be human. (Berlin 1997:11)

Storr's depiction of some rather unpleasant "heretics," however, shows that they are less content than Berlin thought.

*Heretics* is also a tale of personal examination in which Storr reveals how much his explanations of irrationality and dogma can refer to many passages in his life and should make readers ponder whether they are taking the very easy step of assuming that it is only "others" who express these deeply irrational and at times destructive mechanisms but not oneself. This book shows how unusual beliefs and experiences (e.g., hallucinations and delusions) are not necessarily an indication of pathology and, in some cases,

are but amplifications of processes present in all of us (Cardeña, Lynn, & Krippner 2013). In often uncomfortable ways, Storr updates the Roman Terence's dictum that nothing human is alien to us.

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