

## IS THIS BOOK A KLUGE?!

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*A Review of the Book*

***Kluge: The haphazard evolution of the human mind***, by Gary Marcus.  
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### INTRODUCTION

Occasionally, a book that was published a few years ago remains unnoticed by the scientific community. It is sometimes useful to examine whether a book was overlooked because it was simply too mediocre to generate discussion, or because of other factors, such as a plethora of books released at one time with some marketed better than others. Therefore, I set out to review *Kluge* upon the recommendation of a colleague, despite it being an older book.

*Kluge* is a small book, only 211 pages with eight chapters, six of which are devoted to major kluges. The term “kluge” is borrowed from engineering, and is defined as “a clumsy or inelegant – yet surprisingly effective-solution to a problem” (Marcus, 2008, p. 2). The Apollo 13 analogy where astronauts had to work with what they had on the damaged space craft to build an air filter is used as an example of how a kluge emerges. The astronauts managed to build an air filter that worked, thus saving their lives; it was not an elegant piece of work, but it brought the astronauts home safely. Natural selection, according to Marcus, operates in the same manner. Results are not always optimal - but they work. For anyone being aware that human adaptations are rarely perfect, the word “perfection” might seem overused in the beginning of the book. Marcus asserts that “sometimes elegance and kluginess coexist side by side” (p. 11) but at least to evolutionary psychologists this is not new information.

Body kluges are examined first, then mind kluges. Marcus uses the human spine as one example of a body kluge in that the spine is a poorly designed structure supporting all the weight of a biped with a single spinal column. Indeed, the spine does cause many painful ailments related to human bipedal gait. However, a major flaw of the book becomes apparent here: Marcus omits the explanatory power of sexual selection. Not once does he mention it as impetus for body (and later, for mind) kluges. Why did

humans become bipedal in the first place? Marcus only refers to tool use, when other approaches have suggested the upright human gait might have evolved as a result of displaying ourselves to the opposite sex, signaling health, fertility, or strength (for a review see Buss, 2004). Including a sexual selectionist approach, perhaps some of the so-called kluges would not seem as suboptimal and startling. Subsequent chapters on choice and pleasure likewise omit explanations based on sexual selection, which strongly decreases the quality of the book overall.

The main argument throughout the book is that the human mind (and consequently, behavior) is no less of a kluge than the body. Does the book succeed in its argument? In my opinion it does not, and due to omissions of theory, such as the incorporation of sexual selection, the book turned into a frustrating read. Marcus takes the reader through six chapters devoted to kluges of memory, belief, choice, language and pleasure, but the majority of the presented data or "facts" for each chapter are unsubstantiated. For example, Marcus refers to a finding that people spend almost an hour a day looking for things (p. 19), but no study or statistics are cited to support the point. This kind of referencing (e.g., "As one study shows" (pg. 143)) occurs throughout the entire text. In addition, every few pages feature an array of footnotes that make the read distracting. If information is vital, it would seem better placed within the main content.

The most interesting chapter in my opinion is the one on memory (pp. 18-39). Marcus clearly demonstrates that memory is rife with problems. For example, humans rely on context cues especially for recalling one's name and for the association of how we know her/him. Marcus provides an example of meeting a celebrity at a party. He could not remember the actresses name because the cues that helped him remember the name (which were present on the television program but not at the party) were absent. However, there are memory issues that are far more detrimental than not getting a cue to remember a person's name, and some of these issues are discussed. For example, flaws in memory recall have implications for eyewitness based testimony in the United States court system. Memory is not a reliable source, and may lead to innocent people being convicted of crimes they did not commit. The work of Elizabeth Loftus who studies false memories in relation to eyewitness testimony and sexual abuse is discussed, and the reader gets a glimpse into the imperfections of the mind (p. 28). Marcus takes some swipes at Steven Pinker, a prominent evolutionary psychologist, by arguing that Pinker (for example, in *How the Mind Works*) has overlooked the possibility of memory as a form of a kluge. However, the argument against Pinker is somewhat unsatisfying, especially since Pinker provides substantial support to his arguments, whereas Marcus does not.

It seems everything about the human mind is a kluge, according to Marcus. The arguments laid out in the subsequent chapters are rather repetitive. Working on mating strategies and sexuality, I was particularly interested in the chapter on pleasure (pp. 123-143). Marcus declares sex is motivating and pleasurable, but seems to be startled that "people often have it in ways that are deliberately designed not to produce children" (p. 129). He then continues by mentioning women tying their tubes, pedophiles, and men with HIV having sex, and states that "all of this, aside from sex for reproduction or parental pair bonding is a giant mistake" (p. 129). He throws in a quip about evolutionary psychology trying to study homosexuality and how none of the

theories are compelling (p. 130). However, there is no reference to any scientific study on evolution and homosexuality. Neither E.O. Wilson's kin selection theory (1978), nor Dean Hamer or Peter Copeland who have been studying possible "gay genes" for years (1994) are mentioned. When Marcus says none of the arguments are compelling, it is not clear what arguments he has pinpointed, and without a thorough discussion of evidence, readers are left without context. A large footnote (p. 130) talks about the "uncle theory" of homosexuality and how it needs more explanation. In it, Marcus writes "If homosexuality is a sort of evolutionary byproduct, rather than a direct product of natural selection, does that make it wrong to be gay? The morality of sexuality should depend on consent, not evolutionary origin" (p. 130). First, there is no evidence that homosexuality is a by-product; and second, even now we still lack a clear answer as to the origin of same-sex behavior. Plenty of researchers, including myself, are examining its evolutionary origins. In addition, the fact that Marcus throws homosexuality in the same company as pedophilia and bestiality, in that he views all as kluges, seems very problematic. While Marcus does not delve into the research on homosexuality and evolutionary origins, he still discounts it. This, accompanied with his grouping of homosexuality with pedophilia and bestiality, leads me to believe that he views heterosexual behavior as acceptable and homosexual behavior as unacceptable.

Perhaps the most audacious part of the book is Chapter 8, entitled "True Wisdom" (pp. 161-176), where Marcus provides a layout for how to live with and overcome mind kluges. For example, he states "Whenever possible, consider alternative hypotheses", "Anticipate your own impulsivity and pre-commit", "Try to be rationale" and "Whenever possible, don't make important decisions when you are tired or have other things on your mind" (pp.165-172). The self-help kluge section reiterates the triteness of the book. Apparently informed by research, it appears a bit lofty. Is there actually data supporting the given advice? The true wisdom chapter seems to be based on common sense notions; however the content is treated as if it is breakthrough research. A skeptical reader might miss the direct link between the prescriptive suggestions to fool our mind kluges and the studies that have been conducted to support these claims.

Overall, *Kluge* would have benefited from a more informed discussion of evolutionary processes, and evolutionary psychology in particular. I contend that if Marcus intended to argue against a theory, it would have been a good idea to clearly define what he was arguing against. The book is written for a non-academic audience, but still lacks any scientific rigor. While Kluge delivers some interesting tidbits about the human brain, members of the general public interested in the human mind and its "shortcomings" would be better off with Steven Pinker's *How the Mind Works*.

#### ABOUT THE AUTHOR

**Sarah Radtke** is a PhD Candidate at Ryerson University in Toronto, Canada. Her main research area is evolutionary psychology where she is conducting research on same sex behavior from an evolutionary perspective. Her other main research area is allomothering in the great apes, focusing mainly on bonobos (*Pan paniscus*).

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