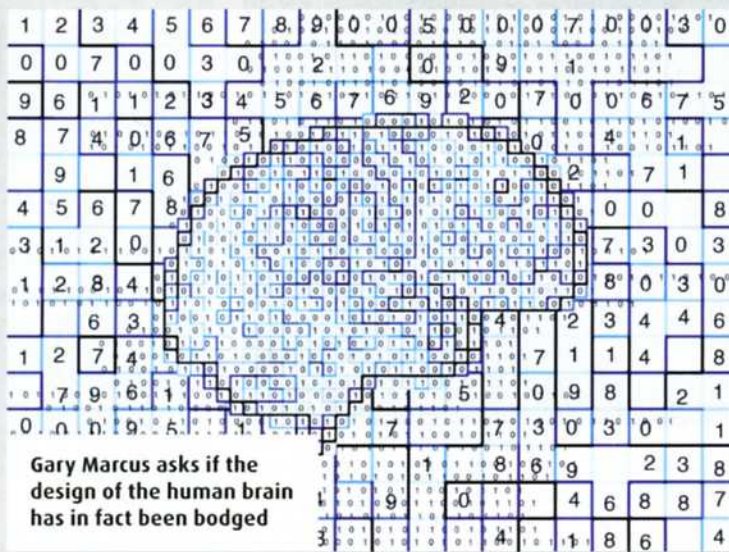


Peer review by Tom Stafford

Kluge: The Haphazard Construction of the Human Mind

Gary Marcus
Faber and Faber,
£15.99
(224pp, hbk)



A kluge, or in the UK 'kludge', is an engineering solution that is clumsy or inelegant, yet effective. Gary Marcus argues that the mind is a collection of kluges – features that only exist because there was no point at which evolution could rebuild the mind from scratch, and so had to pile new features on top of old brain machinery.

The problem for Marcus is that although the idea that evolution produces kluges is a sound one, the trick with evolutionary explanations is to be convincing about the particulars. And he's not. For example, he says memory would be better built like a computer, with individual items filed neatly

of being a biological machine; a constraint of our Universe rather than of the evolutionary processes that produced us?

Marcus says the mind is full of kluges, but perhaps it is in fact optimally built – just in a way we don't understand. My disappointment with the book isn't that I think there aren't kluges in the mind, but that Marcus doesn't convince me that

Psychology is at its most interesting as a science when it doesn't just record and list phenomena, but it also gives deep explanations for why these phenomena have to exist given the constraints the Universe, of biology and of other related mental phenomena. *Kluge*, unfortunately, misses the opportunity to do this. It is a whistle-stop tour of various foibles of the human mind which offers a single explanation for all of them: they are kluges because they fall short of what Gary Marcus thinks a perfect design would be.

That said, this is an engaging and lively introduction to various domains, such as memory, choice and belief, where psychology has demonstrated just how non-rational we are. If you want a quick introduction to mistakes we are likely to make, this is a good place to start. If you want a more serious consideration of the design of the mind, look elsewhere.



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in separate locations. This could be true, although I'm pretty happy with my biological-style memory that gets things wrong but never needs to be rebooted. To work out whether we'd be better off with a computer-like brain, we'd need first to decide what would be the 'best' way for memories to be organised. Should memory be infallible, or quick and able to retrieve related items from minimal clues? The 'design spec' for the human mind isn't at all clear. So if human memory has fallen down on one side of this trade-off, is that a kludge, or just a limitation

any of the features he discusses in his book really are kluges.

For instance, his argument that language could potentially be unambiguous – and so it *should* be – appears to need a far more detailed treatment than he gives it. Is it true that language *could* be unambiguous? I don't think unambiguous computer languages are a fair example of a useful human communication system. Wouldn't such a language be unwieldy and slow? If human language is quick and sometimes ambiguous, perhaps that's another necessary constraint, not a kludge as such.

Books

1000 Languages

Peter K Austin
Thames & Hudson,
£19.95
(288pp, hbk)



There are 6900 recognised languages worldwide, but by 2050 half of these are likely to be extinct. Some 96 per cent of the world's population speak the most popular four per cent of known languages – yet in Vanuatu, the population of 100,000 speaks a staggering 120 different languages.

So how do you define a language? What's the difference between it and a dialect? *1000 Languages* starts off by giving some background to linguistics, but moves on quickly to become an encyclopaedia. It covers the 11 most widely-spoken world languages, reasoning why these and their forbears came to dominate civilisation – empire administration, trade and religion being the main culprits. Then it goes on to look at languages in different regions. Each section has nuggets of interesting facts, such as words loaned to other languages – think 'café' and 'crescendo'. And you get to learn to count from one to 10 in each lingo cited.

This book is a bit of a looker, and one to dip in and out of at your leisure. You might have hoped for more detail on the evolution of language, but Austin gives a good intro to all sorts of tongues – and an insight into the languages that are disappearing fastest from our lips. Fear not Wales – Welsh is apparently the only Celtic language that is not seriously under threat.

Jheni Osman is the editor of *Focus*