We need more accurate metaphors for DNA

Ask me what a genome is, and I, like many science writers, might mutter about it being the genetic blueprint of a living creature. But then I'll confess that “blueprint” is a lousy metaphor since it implies that the genome is two-dimensional, prescriptive and unresponsive.

Now two new books about the genome show the limitation of that metaphor for something so intricate, complex, multilayered and dynamic. Both underscore the risks of taking metaphors too literally, not just in undermining popular understanding of science, but also in trammelling scientific enquiry. They are for anyone interested in how new discoveries and controversies will transform our understanding of biology and of ourselves.

John Parrington is an associate professor in molecular and cellular pharmacology at the University of Oxford. In The Deeper Genome, he provides an elegant, accessible account of the profound and unexpected complexities of the human genome, and shows how many ideas developed in the 20th century are being overturned.

Take DNA. It’s no simple linear code, but an intricately wound, 3D structure that coils and uncoils as its genes are read and spliced in myriad ways. Forget genes as discrete, protein-coding “beads on a string”: only a tiny fraction of the genome codes for proteins, and anyway, no one knows exactly what a gene is any more.

The GLP aggregated and excerpted this blog/article to reflect the diversity of news, opinion and analysis. Read full, original post: DNA is life’s blueprint? No, master controller of the cell