The Categorization Heuristic

Review of 'Black – and – white thinking:
The burden of a binary mind in a complex world'
by Kevin Dutton

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(excluding references)

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The uses and abuses of categorization are well known. The general situation is this: We need to form categories in order to be able to make better-than-chance predictions in a complex world. Categorization enables perception, memory, and thinking itself. It has heuristic value. The alternatives are as unappealing as they are science-fictional. At one end of the spectrum, we find a swirling chaotic mess, what the author of Genesis calls *Tohu va Bohu*. Everything is new and unique, but without shape, form, or meaning. At the other end of the spectrum, we find categories so granular that, again, no inductive inferences can be made. When every atom is its own category, the very concept of category becomes meaningless, and the second alternative bleeds into the first.

Pragmatic thinkers, who recognize the need to make heuristic distinctions, wonder who to lump things together well. In *Phaedrus*, Plato argues that nature offers enough order so that it may be "carved it at its joint." This insight gives us the category of 'natural kinds.' On this Aristotle built what is now called the classic theory of categorization. This theory postulates the existence of necessary and jointly sufficient features supporting categorization, and indeed, the existence of essential features, which, once removed, make categories collapse. Then came Wittgenstein, who could not find any necessary or essential features. His analysis of games shows that patterns of family resemblance are enough the keep the categorization game going. Wittgenstein restored much needed flexibility to categorization without slipping into Heraclitean nihilism. Wittgenstein, we suspect, would recognize the river when stepping into it for the second time. Had he denied categories their inductive power, his own analysis of games would have been pointless. To what other kinds of category could he generalize his conclusions?

Along comes Mr. Kevin Dutton, an Oxford-based post-doctoral research psychologist with roots in Cambridge, a pair of facts he emphasizes. Mr. Dutton is also an aspiring public intellectual and author, with several books to his name. His 'Black-and-White Thinking' is an immoderate sweep through the history of social-cognitive psychology and indeed through of human history and prehistory, from the golden age of the Pleistocene to the even goldener age augured by Mr. Dutton's

own revolutionary insights. Between these two bookends lies a wasteland of illusions and errors perpetrated by the binary mind.

The book is a mélange of interwoven narratives, one of which I will follow to organize this review. This narrative is Mr. Dutton's odyssey of visits with some of the pioneers of social and cognitive psychology. We find him sitting down with Professors Eleanor Rosch, Arie Kruglanski, Robert Cialdini, and Dominic Abrams, among others. The contributions of these pioneers are well known and perhaps could have been summarized and placed into a coherent framework. Mr. Dutton, however, emphasizes his personal connection to these researchers; he takes care to let them in on the new paradigm he envisions, a paradigm they had prepared but not worked out. This task was left to Mr. Dutton. It is irritating that the author describes these giants on whose shoulders he stands with a mix of reverence and condescension.

Before telling us about his visit with Eleanor Rosch, Dutton describes her younger self as a "dauntless, venturesome, jungle-bashing" (p. 52) and "intrepid" (p. 53) professor at the University of Berkeley (*sic*, p. 52) to Kellie Maloney, a "diminutive, cheeky chappy (boxing) manager" (p. 49). When Kellie was still Frank, he "was equally at home in smoke-filled rooms, sweat-soaked gyms and the vampish clutches of scantily clad tabloid newspaper models" (p. 49). Now Kellie's role is, it seems, to showcase the Wittgensteinian fuzziness of gender categories – and to tell us that she's "got great legs" (p. 55). Then Dutton meets Rosch in a Berkeley coffeeshop and Rosch explains the concepts of category prototypes, basic level categories, and graded structure, using the classical domains of color perception and the classification of birds. It's a story of complexity and nuance. Yet, Dutton rejects it in favor of his premise that our stone-age minds can't help but think in simple dichotomies. In his telling, the life in the Pleistocene was simple enough for Black-and-White thinking to work well. But now we have created world for ourselves so complex that dichotomies do more harm than good. Perhaps, but there is no good evidence to this effect. Perhaps stone age humans got through their day with fuzzy and flexible categories. Who is to say that the Wittgenstein-Rosch theory of categorization is a poor description of Pleistocene cognition?

If the Pleistocene hypothesis were true, it would be difficult for humans to create and use multi-class categorizations. There would be no problem of categorical overrefinement. Yet, such problems exist, and they seem to proliferate of late. Dutton notes the 72 gender-related categories Facebook offered for self-identification at the time of writing and he notes the risk of a Borgesian descent into categorical madness. Borges once imagined an encyclopedia that grouped animals into 13 types, including "stray dogs," "suckling pigs," and "those that belong to the emperor" (see p. 67). Like Borges, humans experiment with innovative and creatively nested categories, often to the chagrin of Aristotelian purists. A local university, for example, has a center for the study of 'Women and Gender.'

Much as Aristotelian investigators may wish to keep categorization pure, the enterprise has a political aspect. As Foucault taught, they who control the language, control the conversation. And that means power. Language requires the use of words, and a shared understanding of their delimited meaning. Words refer to categories. Their usage guides, constrains, and biases thought. It limits what can be expressed, or even perceived or thought. This is an important lesson contained in Dutton's book, and I wish he had worked it out more clearly. Instead, it seems that the author opened a Pandora's box and got overwhelmed by what tumbled out.

Then Dutton sits down with Arie Kruglanski, whose theory of *lay epistemics* is one of the most sophisticated attempts to build a coherent framework for the study of cognition (Kruglanski, 1990). Dutton focuses on Kruglanski's individual differences measure, which was designed to show that not everyone thinks in black-and-white terms all the time. Kruglanski has studied nuance and difference, whereas Dutton gravitates toward dichotomies. Yet, when Kruglanski introduces his need-for-closure measure, Dutton approvingly notes that "Arie gets it" (p. 121). Before Kruglanski, there was Else Frenkel's pioneering work on binary thinking. Dutton presents Frenkel as a native of Poland who crossed the border into Austria, a misconception he might have copied from Wikipedia. Borders and boundaries, even imaginary ones, shape thinking. Frenkel's work on the intolerance of ambivalence became an important element of the theory of the authoritarian personality. Like

Kruglanski, however, Frenkel was interested in individual differences (Frenkel-Brunswik, 1949).

Intolerance of ambiguity and, relatedly, uncertainty aversion, are general human tendencies that vary

in strength; they do not entail rampant black-and-white thinking (Krueger & Grüning, 2021).

Next, Dutton checks in with Robert Cialdini, arguably the most prominent figure in the study

of subtle influence techniques. Cialdini's *Influence* (1984) is the definitive text, though Dutton opens

the conversation with a reference to his own *Flipnosis* (Dutton, 2011), which he advertises as a work

enjoying cult status with the U.S. military. Cialdini is further diminished in an imaginary contest with

Dutton senior, whom we are invited to imagine as the victor in a "one-shot persuasion shootout" (p.

189). Dutton senior, it seems, inspired the SPICE model (Simplicity, Perceived self-interest,

Incongruity, Confidence, Empathy), giving the secret sauce of Dutton's *supersuasion* its magical

flavor. Dutton lectures, and Professor Cialdini ("Bob") barely gets a word in edgewise. "I tell Bob

about a study . . ." (p. 204) and "Bob nods in agreement" (p. 206). It's just not a good day for Bob,

being outshone be a true "persuasionista" (p. 207).

The introduction of "supersuasion" (chapter 10) might be the book's climax, though this is

not clear because of the multiple interwoven subplots. Dutton's goal, it seems, is to find a bombshell

breakthrough in the domain of human influence that is simple, stirs our self-interest, is incongruent

with our prior beliefs, is presented with confidence, and perhaps even with empathy with our abject

ignorance. All this Dutton seeks to achieve with a return to that which he has hitherto vilified: black-

and-white thinking. An epigraph from John Wayne sets the tone: "If everything isn't black and white,

I say, why the hell not?" (p. 208). Dutton treats us to an Eleusian moment. If supersuasion leverages

"the ancient art and secret science of super-framing" (p. 212), we are in for an initiation rite. When

the drums have stopped rolling, three binaries pop out: "Fight versus Flight. Us versus Them. Right

versus Wrong" (p. 213). Dutton, who is fond of 'motorizing his metaphors,' frames his revelation

rhetorically: "What if the spectrum of all known influence consists of just three primary shades? A

'supersuasion' rainbow?" (p. 214). Supersuasion is supposed work not through argument and

evidence, but through the manipulation of perception. This, though, is not a new idea (cf. Cialdini, 2016; reviewed in Krueger, 2017).

The last few chapters are a swirl of hunches, claims, and metaphors that is hard to unpack. The theme appears to be that our Pleistocene past and our psychopathic contemporaries are onto something. The wisdom of the Neanderthaler it seems was her ability to use binary thinking to good advantage, although it is truly bad and hopefully obsolete. Now Dutton has discovered that it works after all, and that you can sell it to the military or anyone willing to listen. Dutton's dénouement is a sit-down with his mentor and "psychological mastermind" (p. 292) Dominic Abrams, to whom he almost sheepishly submits. He tells Abrams about his "theory of modified cognitive dissonance" (p. 292) and Abrams "authors enough sage nods and strokes his chin a sufficient number of times to suggest I may well be on to something" (p. 292). The discussion drifts into questions of personal and social identity (notice the agile gendering from Facebook to campus), and how they depend on the categories we use. These are weighty matters that deserved more care.

What does all this add up to? Dutton himself contemplates the old *sorites* paradox, which leaves one wondering at what point a number of grains, where one is added at a time, becomes a heap. Following Dutton in taking metaphorical liberties, I submit that although there are many colorful beans in this book, they don't make a hill. To categorize is to represent reality efficiently, that is, by finding a workable balance between prediction errors and predicting anything at all. Categorization is sensitive to stimulus inputs, social norms and habits, and our mental constraints and biases. It must be flexible and adaptable to be of any use. To reduce it all to the vices and virtues of black-and-white thinking is merely an instance of the same. Where optimal computational solutions are lacking, social categorization is a useful mental heuristic.

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