Intelligence in the Flesh: Why Your Mind Needs Your Body Much More Than It Thinks

By Guy Claxton

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If there’s anything that you know that you know. Intelligence is the unknowing bits of you that are bow you know that you know; all that underlies all the behaviour you express that goes beyond the rudiments of physics and metabolism. That definition may still be too conservative. In his introduction, Claxton argues that to identify our minds with only our brains rather than with our full being is a form of anthropomorphic Cartesian dualism – a critical point for transhumanists hoping to achieve immortality by employing whole-brain scanning to upload their minds to computers. Claxton speeds along through what is sometimes deceptively well-argued effort to convince us to pay more attention to our bodies, to embrace the theory of the extended mind, as postulated by the University of Edinburgh’s Andy Clark. Under Clark’s hypothesis, one of the unique aspects of human intelligence is the capacity to manipulate our environments to improve our own cognition. Thus we as individuals are smarter because of our books, lists and gadgets, and to the extent that we exploit these objects, they as well as our bodies become part of our minds. I shouldn’t jump ahead of the story, though. Claxton does care about the body, and he does a beautiful job of communicating quickly in just a few chapters the many unappreciative aspects of our bodies. All of sensing can be thought of as a form of touch, as a felt response to the prodding of the body. (If you’re sceptical that this can be true then we should have the scientist back in the lab.) From showing the immense computational requirements and capacities of our bodies as a whole (do you think digestion is easy?) through to showing the utility of the brain for coordinating all this intelligence, Claxton is not shy about the brain’s role in generating emotions and the ways to do so. In chapter 8, Claxton argues that thinking about the brain is (sometimes disconcertingly) familiar. Nor is he afraid to offer advice. After discussing the impressive intelligence involved in unglamorous work such as waiting tables, he moves on to the positive impact of physical creation on emotional state and self-conscious. From here he muses: “People (currently often) become their own most highly crafted product and performance. Nothing helps us to really understand what it becomes so prevalent and so obsessive for some, perhaps, precisely because the opportunities for physical making and doing in schools and elsewhere are held in such low esteem.” The reason I became a robotist is because the University of Edinburgh had a team robot course on their MSc, and I thought “This might be my last chance to do something with my hands.” Of course it wasn’t, but that fear propelled me unexpectedly into what I still consider the most interesting subfield of AL. Robotic intelligence is interesting specifically because it contacts the physical world, and in being embodied, shines bright light on some of the least illuminated aspects of our own intelligence. As a reviewer, I should be doing at least two things with this book. The one I’m most confident about is checking for accuracy. Claxton is not only reviewing a broad range of contemporary literature, but also synthesising his own spin over contemporary theories, creating a novel collection and interpretation of the ideas of our peers. For this task I feel competent, at least for the first 10 non-clinical chapters. I spotted a few gaffes in physics, or breathing?) he quickly skips to showing the utility of the brain for coordinating all this intelligence, offering clearly the basis of action selection – the eternal problem of what to do next when competing available options would require mutually exclusive control of the same resource. Actually, “action selection” is a typically top-down AI term for what is really a procession through a complex system co-ordinated through mutual feedback. Claxton describes beautifully undulating waves of perception and action, the two inseparable sides of the coin of intelligence. If we imagine action as the peak (although it could equally be the trough) then learning occurs on the downward slope as the body perceives whether its action’s outcome matches the expectations that led to its expression. Claxton describes intelligence as the dancing complex of “Deeds, Deeds, and See’d”—motivating drives, behavioural capacities and perceived opportunities, respectively—united by a body. Claxton’s interests extend also to traditional and alternative therapeutic psychology. He reminds us of Plato’s model of human nature as two horses (one the passions, the other the virtues) under the hand of a skilled charioteer, then shows how directly Freud mapped itself to the black-stallion-id and the white-stallion-superego, and the ego charioteer (who seems to have lost a little status and balance since Plato’s day). In the next paragraph, Claxton blast the limitations of my own 1980s-vintage psychology degree, and seems from 1960s neuroscience “coincidentally” found the brain to consist of three parts: the old reptilian coordinating ego, the emotion providing lymbic-system id, and the rational cortex-superego, here fully ascendant and in control, in a very Cold War kind of way. Claxton’s own model is more contemporary, European and politically correct: reason and emotion are not sworn enemies, but “lifelong partners who occasionally tread on each other’s toes”. This may sound hokey, but Claxton’s model is strikingly better motivated and supported than the more familiar theory of emotional intelligence. EI may be highly defined, in an essentially human but still often fails to recognise emotions and reason as two very different, but completely interdependent, aspects of human intelligence. Intelligence in the Flesh is seamlessly, almost seamlessly from chapter breaks, from metaphors to emotions to words and concepts. In chapter 8, Claxton ranges through consciousness, carrying on to Clark’s extension of the mind past the body, through what of our environment the body has in its reach, where that reach is extended with tools, including our society. The pace is high, the content dense, and Claxton’s tone is (sometimes disconcertingly) familiar. Nor is he afraid to offer advice. 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