

The neurobiology of conscience

An exploration of the science behind our morality from philosopher Patricia Churchland is illuminating and grounded, finds Nicholas A. Christakis.

Nicholas A. Christakis 



The relationship between mother and child might have been the evolutionary foundation of conscience. Credit: TaPhotograph/Getty

philosopher Patricia Churchland argues that “we would have no moral stance on anything unless we were social”.

That we have a conscience at all relates to how evolution has shaped our neurobiology for social living. Thus, we judge what is right or wrong using feelings that urge us in a general direction and judgement that shapes these urges into actions. Such judgement typically reflects “some standard of a group to which the individual feels attached”. This idea of conscience as a neurobiological capacity for internalizing social norms contrasts with strictly philosophical accounts of how and why we tell right from wrong.

There is a strand of thought in evolutionary biology (advanced, for instance, by the theorist Bret Weinstein) that the capacity for moral debate itself has a social function, binding groups regardless of the topics contested or their abstract moral ‘rightness’. Moreover, many of our moral rules – such as the idea that we should not betray our friends or abandon our children – have clearly been shaped by natural selection to optimize our capacity to live in groups. Other rules, for instance regarding the correctness of reciprocity, are similar: we feel quite intensely and innately that if someone gives us a gift of food, we should reciprocate on a future occasion.

Churchland briefly touches on how other primates, such as chimpanzees, have been observed acting in ways that echo conscience. These include behaviours analysed by primatologist Frans de Waal: cooperating towards common goals, sharing food, adopting orphans and grieving. Churchland argues that such examples point to the evolutionary origins of human conscience.

To build that case, she first focuses on the fundamental bond between mothers and children. This relationship, she argues, was eventually extended across evolutionary time to mates, more distant kin, and friends. Conscience is essential to our ability to sustain and benefit from such attachments. As Churchland writes, “attachment begets caring; caring begets conscience”. The capacity to formulate and act on moral norms therefore arises from the

need to develop practical solutions to social problems. Our conscience is reinforced by social stimuli: for instance, we face disapproval for lying and approval for courteous behaviour. Thus, conscience, as Churchland sees it, involves “the internalization of community standards”.

Commitment to one’s conscience is not always good. We applaud the antislavery stance of nineteenth-century US abolitionist John Brown, but some people question his belief that the only solution to the evil of slavery was armed insurrection. And we are repulsed by extremists who go on shooting rampages in mosques or detonate bombs in churches in the name of their ‘conscience’. Conscience is complex, and moral rules (such as those against killing) are not themselves what our neurobiology encodes. Churchland explores related topics — including the absence of conscience, as in antisocial personality disorder, or its overabundance, as in people who follow the moral strictures of a religion with excessive scrupulousness.

Churchland also sharply critiques the state of her field. She is frustrated by sequestered academic philosophy, in which “practical wisdom may be in short supply, replaced either by endless dithering or unwavering adherence to a favorite ideology”. She eviscerates moral philosophers who believe that moral rules can be utterly divorced from biology and find a foundation based on reasoning alone. She points out that the assumption that morality is not properly philosophically grounded unless it is universal is itself merely a rebuttable stipulation. She notes that decades of attempts to define universal rules have not succeeded. And finally, she shows that most moral dilemmas are just that: dilemmas in which it is impossible to satisfy all the constraints, and which put ostensibly universal principles into conflict with each other.

Such problems would seem to be insuperable for those who believe that moral rules can be rendered absolute, based on moral reasoning alone and disconnected from real life, as if driven simply by a kind of philosophical logic. But, as Churchland notes, “you cannot get morality out of merely not contradicting yourself”.

Neither does she have much use for utilitarians, with their simple calculus of adding up the greatest good for the greatest number. She rightly points out that living in a utilitarian

society would be unsatisfying for most people, because we are not partial to all members of our society equally. We prefer our own groups, our own friends, our own families. For most people, as she argues, “love for one’s family members is a colossal neurobiological and psychological fact that mere ideology cannot wish away”. She concludes that utilitarianism is irresolvably at odds with how our brains function, given that we evolved to care more deeply about people we know than about those whom we do not.

The book is decorated, in the manner of our best philosophers, with pithy illustrative examples. Many are drawn from Churchland’s upbringing on a farm in the wilderness of the Pacific Northwest. (She calls herself a “country bumpkin”.) They are wonderful: rafting teams circumventing rapids in Canada’s Yukon Territory; ways to chop firewood; the strategic hunting behaviour of the grizzly bear (*Ursus arctos*); the spontaneous actions of farmers who milk the cows of a neighbour stricken by influenza; a sign in a farm kitchen proclaiming, “Them that works, eats.”

The limitations in Churchland’s account are mostly limitations in the state of the field. As she repeatedly notes, many aspects of how conscience comes to be embodied in the brain, and shaped by natural selection, are simply not yet known. But she nevertheless makes a mighty effort. *Conscience* is illuminating, entertaining and wise.

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