

Leadership

Inside the Wise Leader's Brain

The Neuroscience of
Leadership

By
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With the
Amrop Editorial
Board

Part 7
The Social Brain



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Leaders For What's Next

The Social Brain

Do we have an innate moral sense? Some impulses are so universal and have such a negative effect that they scarcely need stating as rules. Murder and incest, for example. If the human brain is a decision-making device, then it isn't too far-fetched to assume that we also possess a universal moral compass. And this is essential for societies to function.

¹¹See Gazzaniga 2011 and 2005: 162. Specific areas of our brain interpret incoming data to create meaning, to make sense. The interpreter in our left brain seeks patterns, order, and causal relationships. Recent research indicates that nowhere does this interpreter operate more than in the case of religious belief. Could it be that this urge to create some order originates from a moral core we all possess, to interpret surrounding cultural realities? "It appears that all of us share the same moral networks and systems, and we all respond in similar ways to similar issues. The only thing different, then, is not our behavior but our theories about why we respond the way we do".

¹²The human 'mirror neuronal system' may be at the basis for learning to make an ethical choice by imitation. These universal moral rules that are contextual and social seem to allow humans to deal with these challenging situations. The brain reacts to such socio-ethical challenges on the basis of its hard-wiring to contextualize and debate the gut instincts that serve the greatest good given a specific context. Something a smart machine is not able to perform at all.

'Moral emotions' are driven (mostly) by the brain stem and limbic axis, which regulate basic drives. The mirror neurons, the orbital frontal cortex, the medial structures of the amygdala, and the superior temporal sulcus are believed to be responsible for our 'theory of mind' — these conscious processes that enable us to understand the desires, intentions and beliefs of others. This skill typically develops between 3 and 5 years of age in humans.

Abstract moral reasoning, as brain imaging is showing us, uses many brain systems. Neuroscientists have concluded that the neural processes responsible for seeking patterns in events are housed in the left hemisphere. This zone engages in the human tendency to find order in chaos, to fit everything into a story, to put it into context. It seems that the human brain is driven to hypothesize about the structure of the world even when presented with evidence that no such pattern exists.

Another interesting argument suggests that common subconscious mechanisms are activated in the human brain (irrespective of gender, age and culture) in response to moral challenges. These moral judgments are initially perceived as intuitive. In other words, they are almost an automatic reaction to a situation — a brain-derived response. Gazzaniga has argued that our brain generates an "interpreter" process¹¹ (in the left hemisphere) to translate this situation into an (ethical) choice¹².

And this could explain our pro-social behavior.

However, Gazzaniga also argues that the interpreter in the human brain is only as good as the information it gets. And this is quite similar to the 'garbage in, garbage out' that we associate with *machina sapiens*.



Big brains make for big groups

Responsibility and the choices we make as individual executives are a crucial notion in wise decision-making. As our choices arise out of social interaction, our individual minds will likely also be molded by social processes. We are born social: even children as young as fourteen months old will act to help others.

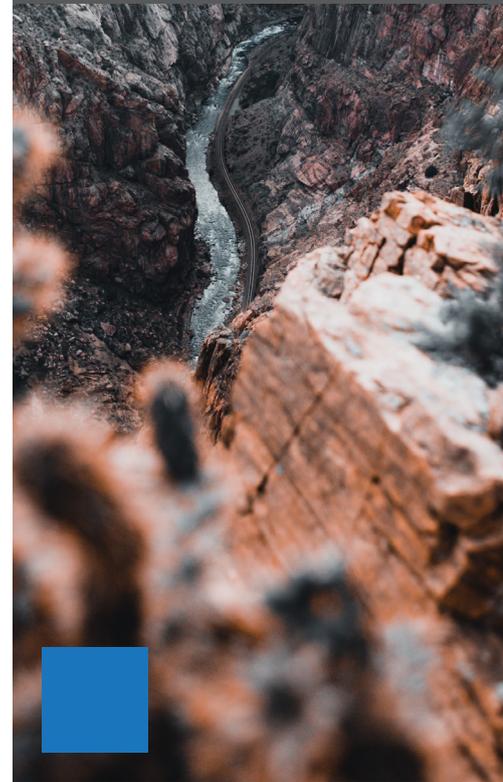
The anthropologist Robin Dunbar has found that in primates, brain size correlates with social group size: the bigger the neocortex, the bigger the social group. The chimpanzee has the most advanced social group among the great apes; about 55 individuals, humans, a group of about 150. And guess what? This even applies to our social networking. Although we may have hundreds of 'friends', we typically interact with an inner circle of about 150 people.

Similarly, research has shown that 150-200 people is the maximum number that can be controlled without an organizational hierarchy¹³. To develop the level of cooperation we need to live in larger groups, humans have had to become less aggressive and competitive. Call it a self-domestication process if you will. Over time, the gene pool was modified, which resulted in the selection of systems that controlled (even inhibited) forms of emotional reactivity, such as aggression. The social group constrained the behavior — and this eventually affected the human genome.

A social dance — ethical choices and moral systems

Ethical choices and moral systems are interlocking sets of values, virtues, norms, institutions, practices and evolved psychological mechanisms. These work together to suppress or regulate pure selfishness and make social life possible. Researchers such as Michael Gazzaniga, Jonathan Haidt, Joshua Green, and Marc Hauser have all reached a similar conclusion. Moral responsibility reflects a rule that emerges out of one or more agents interacting in a social context, and the shared hope that each individual will get in line. An 'abnormal brain' — that of a narcissistic CEO for example — deviates from the standard. However this doesn't mean that this CEO cannot, or should not, follow social rules.

Abstract moral reasoning, as brain imaging is showing us, uses many brain systems. Neuroscientists have concluded that the neural processes responsible for seeking patterns in events are housed in the left hemisphere.



¹³Gazzaniga, M. 2011, Who's in Charge & Dunbar, R.I.M., 1993, Coevolution of neocortical size, group size and language in humans, Behavioral and Brain Science, 16(4): 681-735

Where do we go from here? In the next and final chapter, we'll share 8 ways to 'wise up your brain.'

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