

PH remarks on the papers of Samuel Bowles, John Mikhail, and Marcel Kinsbourne

- As a physicist I am no more qualified to speak on these matters than a chef or bus driver. But ignorance, fortunately, cannot stop anyone from wanting to know how you and I got our respective moral codes, why they are similar or different, whether some universal concepts of right and wrong can exist, and whether moral ideas may be hard-wired into us.
- Samuel Bowles gives fascinating examples of how fines, punishments, rewards, and incentives may actually produce effects directly opposite to those which they were intended to produce: British blood donations went down when the government announced payment for them; parents actually left their children for longer hours at a Haifa daycare when a fine was announced for late pickups; and the resolve of Jewish and Palestinian youth for unilateral control of Jerusalem hardened instead of softened when a proposal was made to buy peace with money. Moral values, and perceptions of self-dignity, can trump the selfish urge.
- I recall that my cognitive psychologist friend, Scott Atran, who interviewed failed Palestinian suicide bombers, saying similar things. He says that they are driven by sacred values which differ from material or instrumental values by incorporating moral beliefs that may drive actions independently, or all out of proportion, from prospects for worldly success. Indeed, across the world people believe that devotion to essential or core values – such as the welfare of their family and country, or their commitment to religion, honor and justice – are, or ought to be, absolute and inviolable. These are privileged values in the sense that they are entirely unconnected with material well-being. This is well beyond the realm of simple utilitarianism.
- This tells me that you cannot buy off the suicide bomber. In a sense, the madrassa lad who blows himself up in a market in Lahore frequented by unveiled women, is exhibiting a high degree of altruistic behavior. He is giving up his life for eventually creating a society that, in his worldview, will be a better one for all. While disapproving this particular act, all of us certainly admire altruism when it is associated with certain other values. Just how similar is he to us, and just how different? And why the difference?
- Bowles paper makes it easier for me to understand another paradox: as the United States pours in more aid into Pakistan, both civil and military, its popularity graph goes down instead of up. Its moral values that are involved here: if the bulk of Pakistanis feel that they are fighting America's war, then they will inevitably construe the aid as an instrument designed to make them forsake morality.

Now, for comments on John Mikhail's paper:

- It is an enormously attractive idea to believe that all humans are fundamentally the same. Without that, the entire Enlightenment Project would flounder. Today we accept a priori that racial differences, skin color, sex, sexual orientation, ethnicity, intelligence, and other differences among humans should not negate the equality of their worth and dignity.
- We therefore would like to believe that evolution has hardwired all human brains in the same way. Chomsky's landmark work in linguistics – upon which Mikhail models his work – is attractive precisely for that reason. Chomsky assigns development of language in the individual to three essential factors: (1) genetic endowment, which sets limits on the attainable languages, thereby making language acquisition possible; (2) external data, converted to the experience that selects one or another language within a narrow range; (3) principles not specific to the faculty of language.
- Of course, the idea of human universality is much older than that of Chomsky's UG (Universal Grammar). After publishing "The Origin of Species" Darwin published another book: "The Expression of the Emotions in Man and Animals". In the introduction Darwin writes: *"I thought it very important to ascertain whether the same expressions and gestures prevail, as has often been asserted without much evidence, with all races of mankind, especially with those who have associated but little with Europeans. Whenever the same movements of the features or body express the same emotions in several distinct races of man, we may infer with much probability, that such expressions are true ones, -that is, are innate or instinctive."*
- To gather evidence, Darwin sent a printed questionnaire to missionaries and colonial administrators across the world. There were 16 questions such as:
 1. Is astonishment expressed by the eyes and mouth being opened wide, and by the eyebrows being raised?
 2. When a man is indignant or defiant does he frown, hold his body and head erect, square his shoulders and clench his fists?

Darwin received 36 responses, many from people who were in contact with extremely distinct and isolated groups of humans. This left him convinced that the responses to his questions reflected innate rather than acquired behavior.

- More specifically on the universality of morality: Hume noted that we are constantly making moral decisions in new situations with fair consistency and without bounds. This implies something like a moral grammar that yields these consequences. Hume took it for granted that the basic principles, like those that underlie induction, must be innate in substantial measure. Investigation of these principles seems to indicate the existence of some kind

of substratum, like every aspect of growth and development. But what aspects of cognition are hard-wired is a difficult empirical problem.

- Today we know that our brains are constantly computing away and implementing rules of mathematical logic. Riding a bicycle, or pouring detergent into a washing machine, requires complex computations. Certainly, making moral judgments is a much more sophisticated computational task.
- Inspired by UG, Mikhail proposes UMG (Universal Moral Grammar) – that our brains arrive at moral decisions using pre-existing rules (rather than acquired ones). He maintains that “ordinary individuals are intuitive lawyers, who possess tacit or unconscious knowledge of a rich variety of legal rules, concepts, and principles, along with a natural readiness to compute mental representations of human acts and omissions in legally cognizable terms”.
- Mikhail also proposes a perceptual model for moral judgments with several distinctive stages: an external stimulus leads to an internal structural description through the application of conversion rules. The mind, pre-wired with the rules of deontic logic (elements of which are: obligatory, permissible, and forbidden), then responds whether an action is morally permissible or otherwise. In a sense, we are computers possessed with an inner moral sense.

The other part of this nature-versus-nurture debate comes from Marcel Kinsbourne whose conclusions appear oppositely directed:

- Humans do not have dedicated neural circuitry.
- Moral judgment derives from implicit social learning in infancy and childhood, even before it is explicitly inculcated. Infants perceive by representing, and by representing they automatically internalize the represented events and the extraction of the invariant rules that drive them. Mimicry is the essence.
- Moral rules that are acquired subconsciously and uncritically are subsequently felt to be self-evident, and to have intrinsic and unquestionable merit, as though they were innate.
- You forget where you got your morals rules from. *Thus, after childhood experiences are forgotten, an individual takes rules learned during childhood for granted.* They acquire the status of moral facts. This strikes me as amazingly perceptive.
- Kinsbourne argues that moral convictions are held so fiercely precisely because they are acquired subconsciously by automatic extraction of rules from observed behavior, and not by reasoned exposition. He insists that the

ability of the whole (intact) brain to choose negates Determinism, and the individual shoulders the responsibility.

I have questions for the last two authors:

- Craig Venter, one of the key researchers in the Human Genome Project, notes that we have only about 25,000 genes. Thus psychological differences between humans cannot be much determined by them. Our environments are critical, he concluded. Similarly, Robert Plomin, a leading behavioural geneticist, wrote that the evidence had proved that *“genetic effects are much smaller than previously considered: the largest effects account for only 1% of quantitative traits”*. So, could it be that moral behavior is also largely determined by nurture rather than nature? That UMG is a highly incomplete explanation?
- Could the “hard-wiring” beyond moral code generation come from neural nets? In experimental particle physics we can train neural nets to make rules that decide the nature of a particle or jet by assigning appropriate weights at the nodes. Would this be nurture or nature in the language of neuroscience?
- We live most of our lives on a kind of moral autopilot without questioning learned values of right and wrong...what kinds of crisis cause us to seize the controls? To override assumptions that we previously thought to be the truth itself?
- Thanks...