

## Re: Patterns of evolution in intellegince

**Source:** <http://sci.tech-archive.net/Archive/sci.bio.evolution/2004-09/0259.html>

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**From:** Phil Roberts, Jr. ([philrob\\_at\\_ix.netcom.com](mailto:philrob_at_ix.netcom.com))

**Date:** 09/19/04

Date: Sun, 19 Sep 2004 03:09:08 +0000 (UTC)

Tim Tyler wrote:

> *melvin <sshrrp@hotmail.com> wrote or quoted:*

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> *[Door/Goat/Car puzzle]*

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>>*Some psychologists have studied in detail what leads people to the  
>>right or wrong conclusion and it would be interesting if one could do  
>>a study to tie in evolutionary pressures in intelligence to shed light  
>>on why the approaches to this problem are so divergent or if certain  
>>types of thinking though wrong still have an evolutionary benefit  
>>which outweighs the negative effects of incorrect reasoning.*

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> *The benefit is likely to be that resources spent on getting esoteric  
> mental apparatus to work well on problems they have not been well trained  
> on – and which ancestors rarely encountered – is better spent elsewhere.*

Human intelligence is mostly ANAlogical in a nature. Reasoning which, according to Hume, is simply comparing, is a development from conditioning. Although we often focus on the logical sequential aspects of both conditioning and reasoning, simply because they enable us to cognize the order in the manner in which we cognize order, the heart of the process is ANAlogical in which:

conditioning = the cognition of OBVIOUS similarity and difference

example: this A + B sequence is similar to one previously observed

and

reasoning = the cognition of ABSTRUSE similarity and difference

example: electricity is like water flowing

in a pipe.

and with the dividing line between conditioning and reasoning as indistinct as the blurriness in the concept of similarity itself.

Notice this way of viewing matters allows you a nice evolutionary understanding of how reasoning evolved from conditioning. Its also compatible with Hume's claim that 'All reasoning is nothing but comparing' and his claim that there are only three types of association, RESEMBLENCE, contiguity, and cause and effect.

In man, cause and effect does most of the heavy lifting in explanatory hypothesese, but causal examplanations are themselves the result of postulating an abstruse similarity, the postulated similarity between our impression of the minds affectations and effectations (causes) and the primitive ancestors of modern scientific explanations, e.g., the volcanic eruption is "caused" by a spatially non-extended self-conscious agent (gods, spirits, etc.). So even cause and effect explanations are largely based on RESEMBLENCE to other features. In short, reasoning is ANALogical at its very core:

One should not think of analogy-making as a special variety of reasoning (as in the dull and uninspiring phrase "analogical reasoning and problems solving," a long-standing cliché in the cognitive science world), for that is to do analogy a terrible disservice. Afer all, reasoning and problem-solving have (at least I dearly hope!) been at long last recognized as lying far indeed from the core of human thought. If analogy were merely a special variety of something that in itself lies way out on the peripheries, then it would be but an itty bitty blip in the broad blue sky of cognition. To me, however, analogy is anything but a bitty blip -- rather, ITS THE VERY BLUE THAT FILLS THE WHOLE SKY OF COGNITION -- ANALOGY IS EVERYTHING... (Douglas Hofstadter) [emphasis mind].

One of the problems that has plagued much of game theory, normative decision theory etc, is the assumption that reasoning is mostly a matter of logic. The result is a whole lot of confusion, such as the 1981 Cohen symposium (Behavioral and Brain Sciences) on rationality entitled, 'Can Human Irrationality Be Experimentally Demonstrated?'. The author supposes that fellow humans set the standard for what qualifies as rational, with some thirty or fourty commentators going ballistic about Cohen's suggestion that the discovery of lots of logical fallacies in human reasoning can not tell us about human irrationality.

If reasoning is predominantly ANALogical, Cohen was right, but for reasons he didn't fully understand at the time, among them

the failure to appreciate the distinction between logic and rationality. Unlike logic, rationality entails AN OPEN-ENDED QUANTITATIVE COMPONENT and, as such, can only be found in the concrete world in RELATIVE terms. If so, then of course you can't demonstrate human irrationality by pointing to logical deficiencies. That's because all rationality ascriptions are implicitly referencing the norm. IOW, when we say X is rational or irrational, what we really mean is that X falls above or below the norm. But human beings are just not going to encumber themselves with relativistic language in every day speech.

More recently we have the Coleman symposium on rationality (Behavioral and Brain Sciences, 2003). Twenty three years later they are making the exact same mistake (I tried to get a few in the earlier Cohen symposium to listen to me but, obviously, to no avail :) ), although at least in this more recent symposium the mistake doesn't show up until the first sentence, "Is rational social interaction possible?"

Once it is understood that rationality NEVER appears in nature in any but a relative sense of the term, you realize that such a question constitutes an exercise in futility in that, it really amounts to asking one's self 'Is the relative amount of rationality normally present in social interaction possible?' Its just that none of these guys wants to give up on the belief that you can reduce rationality to logic, i.e., the belief that rational creatures are deterministic (follow logical rules) rather than creatures that COGNIZE rules and, with it, the capacity TO TRANSCEND rules when and if it is deemed "rational", (e.g., the rule maximize your own self-interest favored by mother nature) in spite of the fact that Godel has already demonstrated that it can't be done.

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