

## Re: Patterns of evolution in intellegince

**Source:** <http://sci.tech-archive.net/Archive/sci.bio.evolution/2004-09/0289.html>

---

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

**Date:** 09/21/04

Date: Tue, 21 Sep 2004 18:00:37 +0000 (UTC)

melvin wrote:

> *Phil Roberts Jr. wrote:*  
> ".  
>  
>> *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.*  
>  
>  
>  
> *What evolutionary pressures would lead to more emphasis on reasoning*  
> *than conditioning?*

Don't know. The assumption here is that intelligence in the form of increased skill in ANAlogical thinking was heavily favored in man's ecological niche as simply evidenced by the fact that we seem to have more of it than other species. Of course, I'm

assuming that the increase in intelligence can be accounted for mostly in terms of a transition from an ability to notice obvious similarity and difference (enumerative induction) to a capacity to cognize increasingly more abstruse similarity and difference. BTW, I forgot to mention that the Latin for 'ratio' as in 'rationality' is "to compare". I'm also assuming that ANA-logical is just another way of saying NOT logical, although perhaps a latin student in our midst will find fault here.

> *You also stated that logic has a quantitative component below.*

No, Mel, you've got that backwards. Logic is BIVALENT, its an all or nothing proposition. One misstep in the sequence and you move from logical to illogical. Rationality is different, in that it also entails a quantitative element and, so far, there are good reasons for supposing this quantitative element is open-ended (e.g., the endless amendability inherent in our scientific hypotheses, the demise of foundationalism verificationism, falsificationism and the rise of explanationism in epistemology where theory A is better or worse than theory B rather than "true" or "false", etc.). This allows one to incorporate Aha! experiences, those moments of significant insight sometimes referred to as ampliative inference, into one's notion of rationality. In this view, rationality is not about following rules, but more about "standing outside the system" (Lucas/Penrose) or "thinking outside the box" (Ross Perot). Its what scientists do when they dare to suggest that old ways of thinking have got something wrong and there is a paradigm shift.

> *Do you think that the amount of the quantitative component contributes to the "abstruseness" of the similarity comparison, or is that set by other factors.*  
>

No. I assume the ANA-logical nature of reasoning is what produces ever more comprehensive conceptions and values. Much of this is the result of cognizing the abstruse similarity and difference in features in which we have already cognized abstruse similarity and difference. For example, Aristotle was one of the earliest to notice the abstruse similarity between diverse occasions in which has cognized more obvious similarity, e.g., the similarity between objects in the category man, and the properties they share, e.g., mortality reduced to the rule if A then B, A therefore B.

In the case of the specific inference involved with Socrates, the reasoning has already occurred and is present in the premises in which one cognized a category of objects (man)

sharing the same properties (e.g., mortality). Once you've gotten this far, concluding Socrates is mortal is more like REMEMBERING what the category man entails than like reasoning, at least to the extent I'm on the right track here.

> *The reaction to the Monty Hall varies drastically between people.*

The Monty Hall paper was extremely interesting. Thanks so much for bringing it to our attention.

The guys who figured out that you can actually achieve a 2/3 chance of success by switching doors have probably utilized a combination of logic and reasoning to decipher the "correct" answer. And, I am not suggesting that they might not be right and the average person might not be wrong, merely that this does not qualify as evidence that the average dufus who guesses wrong about the doors is IRrational and the logicians are rational. The former may be illogical, and less rational than the experts, but to the extent there is an open ended quantitative component in rationality, to that extent ALL rationality ascriptions have to be in RELATIVE terms with the implicit reference to the average.

BTW, my contention that rationality NEVER appears in nature in any but a relative sense entails the conclusion that my own speculations on the nature of rationality are themselves only relatively rational and, just like a scientific hypothesis, will probably require further amending at a later time. In otherwords, I am proposing a "theory" of rationality here that actually predicts its own eventual demise. It also means that no fixed objective can itself ever be construed as rational in any but a relative sense, including maximizing your own self-interest. Not even the pursuit of rationality itself is immune to this rule, and which can accomodate our intuitions about Dr. Frankenstein's monomania.

> *What evolutionary patterns would lead to such divergence or do you believe that there are environmental pressures which lead to this divergence?*  
>  
>

In man's ecological niche, it is likely that intelligence was heavily favored as evidenced by the fact that we appear to have more of it than other creatures. I'm merely suggesting that this increase in intelligence was more a matter of an increased skill in the cognition of similarity and difference rather than an increased skill in logical/probabilisitic thinking.

Thanks for questions.

--

PR