

Re: "It's uncertain whether intelligence has any long term

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gmsizemore2@yahoo.com (Glen M. Sizemore) wrote in message news:<cds2f4\$1r87\$1@darwin.ediacara.org>...

[snip]

- > *HT: In technical discourse, it*
- > *is routine to stipulate definitions for words. For instance, Einstein*
- > *defined 'time' as what clocks measure and 'distance' as what measuring*
- > *rods measure.*
- >
- > *GS: Curiously, or not, so did colloquial speakers, although they*
- > *probably had other things to say as well. The point is ? and I might*
- > *as well get right to it ? that with colloquial mental terms like*
- > *"intelligence" we must discover their "referents." If we simply state*
- > *what "they" are (and might we not find that they are not things at*
- > *all?) then we are merely superimposing our assumptions on what should*
- > *be treated as something to be discovered.*

If you define intelligence as the ability that IQ tests measure for instance, then there is still "something to be discovered", namely what this ability corresponds to in the brain and what its determinants are. On the other hand, to discover what 'intelligence' refers to in colloquial contexts could lead to a variety of answers for different people in different contexts and is merely a question of what the word means rather than what accounts for the ability in physical terms. Colloquial usage is no good for technical discussions for these reasons, but also because colloquial terms can refer to things that don't exist as you mentioned.

[snip]

- > *HT: What he concluded about time and distance relates only*
- > *to the definitions he stipulated, but he wasn't asserting that other*
- > *definitions are not possible or valid.*
- >
- > *GS: Yes. But these were straightforward definitions, and they were*
- > *ones that were forced upon him and anyone before him that tried to*
- > *build a clock.*

Not really. Defining 'time' this way opened up the possibility that time could advance at different rates for different observers, something that stood in sharp contrast to traditional ideas about what it was.

- > *The definitions that psychologists, and others*
- > *concerned with behavior, give for terms simply reflects their*
- > *philosophical assumptions and these are, when it comes to behavior, a*
- > *product of theism and animism.*

Definitions don't require assumptions and cannot be wrong in the way that statements about the world can be wrong. What would a mathematician say if you argued that $1 + 1$ does not equal 2 because the definition of addition was wrong? You CAN be wrong about how people generally use a word, but that would involve a statement about the world.

[snip]

- > *HT: Of course, as a practical consideration, you should define your*
- > *terms*
- > *so that they are as close to their everyday intuitive meanings as*
- > *possible so that people aren't misled about the applicability of your*
- > *conclusions.*
- >
- > *Philosophers who argue about what the 'correct' meaning of a word is,*
- > *are completely wasting their time in my opinion.*
- >
- > *GS: Well we are in agreement here, but I believe what you say here is*
- > *incompatible with what you said earlier.*

The statement " $1 + 1 = 0$ " is true if '+' is here defined as subtraction, so we have a true statement, but it is bound to confuse because it departs from usual conventions so this is why I said there is a practical consideration.

[snip]

- >> *HT: You've raised a lot of issues here.*
- >>
- >> *Chomsky's review of "Verbal Behavior" is a pretty thoroughgoing*
- >> *demolition of Skinner's position and was one of the most important*
- >> *events triggering the cognitive revolution against the old-school*
- >> *Behaviourism.*
- >>
- >> *GS: No, it is widely regarded as "a pretty thoroughgoing demolition*
- >> *of Skinner's position," that does not make it so. It is correct,*
- >> *though, that it "was one of the most important events triggering the*
- >> *cognitive revolution against the old-school Behaviourism."*
- >> *Unfortunately, Skinner had already begun dismantling "old-school*
- >> *Behaviourism" 20 years earlier. The version of behaviorism that*
- >> *Chomsky attacked is not the version that Skinner advocated, despite*
- >> *Chomsky's numerous quotes. Anyone who has read both Verbal Behavior*

- > > *and Chomsky's "review" can see easily that Chomsky never read the*
- > > *book, and he admitted as much to Searle.*
- > >
- >
- > *HT: Something doesn't sound quite right about what you've said here*
- > *especially when we put these two comments alongside one another:*
- > *"Chomsky never read the book", "despite Chomsky's numerous quotes".*
- >
- > *GS: Are you saying you can't quote fro a book without actually reading*
- > *it for comprehension? Don't be ridiculous. Simply making "textual" and*
- > *"transcription" responses is not "reading."*

This seems like a perfect case for illustrating the earlier comments about stipulating definitions. Here we have 'read' in the sense that you can pronounce the words and parse the sentences, and 'read' in a more specific sense which also includes understanding the meaning/intentions/etc. of the writer. Let's label them sense 1 and 2 respectively.

I have no problem with the statement that you can read(1) a book without reading(2) it. So you're saying that Chomsky admitted to Searle that he never read(2) the book? Seems pretty hard to believe to me.

- >
- >
- > *[snip]*
- > > *HT: Your comments about general learning mechanisms that you say we*
- > > *share*
- > > *with other animals run up against a critical problem – we are capable*
- > > *of things that other animals are not (language being the obvious*
- > > *example). This leads inevitably to the conclusion that humans possess*
- > > *different 'learning' devices.*
- > >
- > > *GS: I don't think so. Natural selection propels some species along a*
- > > *path in which more and more of their behavior is not elicited like*
- > > *reflexes or "fixed–action patterns" etc. In primates, this trajectory*
- > > *has been followed to the extreme and when the vocal musculature became*
- > > *sensitive to its consequences, "language" arose. Put simply, the*
- > > *argument is that there is a continuum of, let's call it, "percent of*
- > > *repertoire that is not elicited" (i.e., a matter of degree) and that*
- > > *the extraordinary flexibility and utility of sounds produced by the*
- > > *vocal musculature made the emergence of "language" inevitable. Once*
- > > *"language" and culture emerge, much of what is extraordinary about*
- > > *humans follows, even though we are just a little "smarter" than other*
- > > *mammals, and the mechanisms are the same.*
- >
- > *HT: Language is language whether it is spoken, written, signed or*
- > *whatever.*
- >
- > *GS: Yes, but it was speech that allowed true culture to emerge.*

> *Indeed, it is telling that writing didn't emerge for a very long time.*

The jury is still out on the debate about whether spoken or signed forms of language appeared first. Note that signed languages that are presently in use among deaf people are as expressive as spoken languages and have all the same universal features. The point I was trying to make is that language is modality independent. Indeed, most language use does not involve any perceptual/motor modality at all and doesn't even involve communication. I'm talking about thought. I hope you can now see that any discussion of the "vocal musculature" is irrelevant.

>

> *HT: I wasn't making a comment about speech which you seem to be conflating with language. Various ape language experiments have been performed using sign language and a mode of communication which involves pointing to lexigram symbols on a board.*

>

> *GS: Thanks for the heads-up on that one, Huck. As someone pushing the view that "language" is a product of processes that we share with non-human animals don't you think I might be familiar with the ape-language stuff?*

I have no idea what you know. Sorry.

>

> *HT: Neither task exceeds the perceptual/motor abilities of apes in the way that speech does. Nevertheless, there are still extremely severe limitations in the communication systems that develop in terms of vocabulary size and basic grammar.*

>

> *GS: Yes, of course.*

So we're in agreement except you see only quantitative differences between humans and other apes with respect to language where I see both quantitative and qualitative differences. Terrance Deacon (*The Symbolic Species*, 1997) posed a very pertinent question when he asked why there aren't any simple languages in the animal kingdom...

[snip]

> *HT: Language is also acquired without apparently making much use of negative feedback about what is and isn't grammatical. Infants are much more likely to be corrected when they say something that is untrue rather than something that is ungrammatical so the feedback is extremely noisy.*

>

> *GS: Yes, but selection has a way of amplifying slight differences in fitness.*

I was talking about language acquisition here, rather than the evolution of language.

- >
- > *HT: Infants also spontaneously use structures universal*
- > *to language that they haven't heard in the input (most notable in the*
- > *phenomenon of creolisation).*
- >
- > *GS: But to say this is antithetical to an operant description is based*
- > *on an incorrect understanding of the notion of operant response class.*

I made this point in response to your view that the differences are just quantitative: "we are just a little "smarter" than other mammals, and the mechanisms are the same". I didn't mention, and wasn't making a point about, operant conditioning.

[snip]

- > *HT: There is a small amount of evidence of continuity between*
- > *ape–language*
- > *abilities and that of humans, but not enough to draw serious*
- > *conclusions about the evolution of language. Apes never acquire exotic*
- > *properties like case systems, subject–verb agreement, phrasal movement*
- > *and embedding, relative clauses and so on. The comparative method is*
- > *therefore limited in what it can tell us about where these abilities*
- > *came from.*
- >
- > *GS: It should be clear that I agree to some extent. As I said, there*
- > *are quantitative differences between species, but it is not clear that*
- > *the basic processes are not the same. And the "comparative method" has*
- > *already produced the only viable technology for establishing any kind*
- > *of language in people that don't acquire it under "normal*
- > *circumstances," i.e., autistics, and it could be argued that the*
- > *"comparative method" was successful in establishing ape–language. What*
- > *do rats pressing levers, pigeons pecking keys, and apes pressing*
- > *"lexigrams" have to do with each other? Think about that. Then, ask*
- > *yourself how much you know about what goes on in operant laboratories,*
- > *and how much you know about behaviorism as presented by behaviorists*
- > *rather than their critics.*

I studied it in my degree, I read books by behaviourists, and for a while I thought it was great and defended it enthusiastically. But then I read other books and saw its short-comings although I would still defend aspects of it to this day.

[snip]

- > *HT: A property that is widespread is not necessarily adaptive. Most*
- > *animals fall to the ground if you drop them, for instance.*
- >
- > *GS: Hmmmmm. I shall waste no time in starting to think about this.*
- > *How's that for tact?*

Maybe you shouldn't be so dismissive. You ignore spandrels at your peril. Another example: It is a 'widespread' property of flowers that the number of petals is in the Fibonacci sequence. Is this adaptive or just a side-effect of the way they grow?

[snip]

- > *HT: Let me ask you a question. Can you draw a principled distinction*
- > *between 'learning' and other types of phenotypic plasticity such as*
- > *muscle development (a function of exercise) and callus formation (a*
- > *function of pressure on, or repeated rubbing against, skin)? Both of*
- > *these developments are adaptive responses of the body to environmental*
- > *input. Would you call these 'learning'? If not, why would you be any*
- > *more inclined to group all 'learning' processes under one label? Is*
- > *there some reason to suppose that the same mechanisms are involved in*
- > *all cases of learning?*
- >
- > *GS: The answer to this question is simple. Taking operant*
- > *conditioning, we say that operant conditioning (let's just take*
- > *positive reinforcement) occurs when 1.) there is a contingency of*
- > *reinforcement, 2.) there is a resulting increase in the frequency of*
- > *the response that enters into the contingency and, 3.) that the*
- > *increase is because of the contingency.*

When skin is rubbed (stimulus), a callus grows (response), which causes the pain and blisters to go away (negative reinforcement). Does this count as a kind of operant conditioning or do you have to show that the response wouldn't happen if you could somehow remove the reinforcing stimulus in this case?

- > *And, finally, the reason that*
- > *I say that the mechanisms should be lumped together is because 70*
- > *years of research suggests that the processes are reliable and general*
- > *within and between species (see the history of the experimental*
- > *analysis of behavior). The generalization is not complete, of course,*
- > *but so what?*

Some of Chomsky's criticisms are relevant here. The first prong of the attack that he presented in his review of 'Verbal Behavior' was targeted at the vacuity of the terminology of 'stimulus', 'response', and 'reinforcement'. A taste of this appears in the following heavily-trimmed quote from chapter 4.

Full text on-line here:

<http://cogprints.ecs.soton.ac.uk/archive/00001148/00/chomsky.htm>

In Behavior of Organisms, "the operation of reinforcement is defined as the presentation of a certain kind of stimulus in a temporal relation with either a stimulus or response. A reinforcing stimulus is defined as such by its power to produce the resulting change [in strength]. There is no circularity about this: some stimuli are found

to produce the change, others not, and they are classified as reinforcing and nonreinforcing accordingly" (62)... Consider first of all the status of the basic principle that Skinner calls the "law of conditioning" (law of effect). It reads: "if the occurrence of an operant is followed by presence of a reinforcing stimulus, the strength is increased" (Behavior of Organisms, 21). As reinforcement was defined, this law becomes a tautology.¹³ ... Examining the instances of what Skinner calls reinforcement, we find that not even the requirement that a reinforcer be an identifiable stimulus is taken seriously. In fact, the term is used in such a way that the assertion that reinforcement is necessary for learning and continued availability of behavior is likewise empty.

To show this, we consider some examples of reinforcement. First of all, we find a heavy appeal to automatic self-reinforcement. Thus, "a man talks to himself... because of the reinforcement he receives" (163); "the child is reinforced automatically when he duplicates the sounds of airplanes, streetcars ..." (164); ... We can also reinforce someone by emitting verbal behavior as such (since this rules out a class of aversive stimulations, 167), by not emitting verbal behavior (keeping silent and paying attention, 199), or by acting appropriately on some future occasion...

Running through these examples, we see that a person can be reinforced though he emits no response at all, and that the reinforcing stimulus need not impinge on the reinforced person or need not even exist (it is sufficient that it be imagined or hoped for). When we read that a person plays what music he likes (165), says what he likes (165), thinks what he likes (438-39), reads what books he likes (163), etc., BECAUSE he finds it reinforcing to do so, or that we write books or inform others of facts BECAUSE we are reinforced by what we hope will be the ultimate behavior of reader or listener, we can only conclude that the term reinforcement has a purely ritual function. The phrase "X is reinforced by Y (stimulus, state of affairs, event, etc.)" is being used as a cover term for "X wants Y," "X likes Y," "X wishes that Y were the case," etc. Invoking the term reinforcement has no explanatory force, and any idea that this paraphrase introduces any new clarity or objectivity into the description of wishing, liking, etc., is a serious delusion. The only effect is to obscure the important differences among the notions being paraphrased...

H.

Like-minds don't notice shared mistakes. Talk to someone else.