A sequel to JAW26 , via Chomsky

In the spring of 2003, I wrote JAW26 , *A mathematical manifesto* . In that manifesto, I pondered about whether mathematics was "true" in some universal, Platonic sense, and about whether it even makes sense to ponder about such things. My conclusion was that we are misled into thinking mathematics is "true" , simply because mathematics resonates so nicely with our perceptions of the world.

About two and a half years later, I wrote JAW30 , *What is science, and how should we use it?* , where I basically applied this same idea to all reasoning. To quote JAW30 :

> *I perceive things. On some days, I care to draw the distinction between "internal" and "external" perceptions, the latter being of the sort that are in some way related to "the outside world" . Today I do not feel much like making that distinction: the march of my own thoughts, the song of the birds outside my window... today I will treat these perceptions equally.*
>
> *For me, science is comprised of efforts to organize these perceptions.*

and then later, in a Note:

> *A lot of people have fallen in love with the idea that reasoning allows us to discover things about the world. I couldn't disagree more: the only things we come even close to "discovering" about the world are the external perceptions that lead us to reason in the first place, so that our "discovering" is over and done with by the time we start doing science.*

Somewhere in between I had planned to write this note, JAW27 , about Noam Chomsky's failure to distinguish carefully enough between a scientific theory, and the subject of that theory. Even though I have in the meantime tackled this point in general in JAW30 , Chomsky is well known enough that I think the point is still worth making.

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In the Introduction to *The Minimalist Program* , Noam Chomsky wonders:

> *How can a system such as human language arise in the mind/brain, or for that matter, in the organic world, in which one seems not to find anything like the basic properties of human language?*

and later, discussing the tensions between empirical and theoretical approaches to science:

> *In practice, however, the two enterprises have proven to be mutually reinforcing, and have proceeded side by side. One illustration concerns redundant principles, with overlapping empirical coverage. Repeatedly, it has been found that these are wrongly formulated and must be replaced by nonredundant ones. The discovery has been so regular that the need to eliminate redundancy has become a working principle in inquiry. Again, this is a surprising property of a biological system.*

I know that some scientists thrive on the sort of puzzles and mysteries and surprises that Chomsky is talking about, but there is nothing puzzling or mysterious or surprising here.

As for the first quote: It is not language that possesses these peculiar "basic properties", but rather our *theories* of language. And if Chomsky is correct that we don't seem to find these properties in theories of other phenomena, we should wonder what the cause of this discrepancy is: Is it the case that linguists have not been judicious enough in crafting their theories, and have consequently overloaded them with superfluities? Or is it the case that scientists from other fields have not been abstract enough in crafting their theories, and have consequently failed to exploit those properties that Chomsky claims are so beneficial to a theory of language. In any case, there is no reason to expect our theories of language and our theories of meerkats to be alike, just because language and meerkats are both "natural". (The whole business makes me skeptical of the notion "natural".)

As for the second quote: Chomsky begins by pointing out that redundant principles are inadequate for forming scientific theories, specifically theories of language. And I wholeheartedly agree! Redundancy, being inefficient, should be avoided in human inquiry. But what does this have to do with language? This is a basic error of mixing levels: Our theoretical principles are one thing; how those principles are implemented in the world is another thing entirely. To carry Chomsky's error to an absurd extreme, if we discovered one day that the implementation of language was a horrid mess, would that give us license to make a horrid mess of our theories of language? (I cringe as I write this, because I have indeed heard this "excuse" from scientists of all different backgrounds.)

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It is clear where the problem comes from: Chomsky is willing to recognize human inquiry as something separate from the natural world, but can't bring himself to fully separate the two; he is one of those individuals who has, in the words of JAW30, fallen in love with the idea that reasoning allows us to discover things about the world. But by entangling separable concerns, this view of things hinders more than it helps.

Chomsky should take his own words —found later in the above-quoted Introduction— to heart, as should we all:

> *Idealization, it should be noted, is a misleading term for the only reasonable way to approach a grasp of reality.*

Amen!

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