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Why words and rules are not enough: The ontology of avoidance

A theory of language, including its grammatical component, must account for the use of language as a communicative medium. It must account for not merely some of the things we communicate in speech, but all of them, and that is true whatever the source of the linguistic item under consideration, be it perceptual, memorial, imaginative, or, most important, conceptual. Are prior ontological assumptions forcing grammarians to theorize with specific ends in mind rather than a description of language as it is observed?

Part 1 – Steven Pinker’s Demon

In the book *Course in General Linguistics*, the students of Saussure write: “Language has an individual aspect and a social aspect. One is not conceivable without the other” (1986, p. 9). What does this mean? Most people would answer that language is both sociological and ideolectical, assuming that language is something independent of the social and personal, although it is influenced by both of these. This is not, however, what Saussure had in mind.

Saussure’s students wrote¹ that the duality of language, its simultaneous existence in the mind of the speaker and in “the collectivity,” where it “exists perfectly” (ibid, p. 13), involves a “connexion between the two [that is] so close that it is hard to separate them” (ibid, p.9).

Saussure concludes that the best we can do is to study “linguistic structure as [our] primary

concern” (ibid). Saussure knows his limitations. He does not attempt to explain language, but instead confines himself to describing it.

His students then go on to define linguistic structure, the proposed object of study, in the following way, which I consider to be pregnant with unavoidable implication: “The structure of language is a social product of our language faculty. At the same time, it is also a body of necessary conventions adopted by society to enable members of society to use their language facility” (ibid, p.9).

The implications are as follows:

1. The language faculty of human beings produces a social product, namely linguistic structure.
2. This very same product is simultaneously a “body of necessary conventions adopted by society” and,
3. It enables the use of the language faculty, which gave rise to it in the first place.

So, A produces B, which enabled A in the first place. This non-linear, and seemingly illogical description of linguistic structure is the result of a lifetime of observation and study on the part of Saussure. It is not a tautology. Rather, it expresses a unity. It is not a mistake, or a gratuitous remark, and, as we shall see, it may be explained via a philosophy of language which also accounts for the origin and communication of the non-material objects of conceptual thought, but it cannot be explained by a theory which confines itself to the material. Modern linguists largely ignore this problem, glossing it over, and moving directly to materialistic

explanations of language (as did science prior to Quantum Mechanics²), but it is a skeleton in the linguistic closet, which will not go away.

Saussure touches on the profound when he says of language that: “It lies astride the boundaries separating various domains” (ibid, p.10). As we will see, those domains must be those of the material and the immaterial, and if this is the case, linguistic structure cannot be wholly material, nor can a materialistic approach to language as is normally employed by modern linguists be correct. It cannot be correct because it cannot account for language as we observe it to function. This is no small point. It flies in the face of the modern paradigm of language as wholly materialistic in its origin and propagation.

Saussure’s characterization of language as somehow connecting mutually exclusive domains means that linguists occupy what is, perhaps, a unique vantage point among the sciences. As Steven Pinker points out in *Words and Rules*: “The past tense is the only case I know in which two great systems of Western thought may be tested and compared on a single rich set of data, just like ordinary scientific hypotheses” (2000, p. 90).

Those two great systems comprise what Pinker considers to be the philosophical underpinnings of the arguments that assert that human behavior is either completely innate on the one hand, or completely learned on the other. The men who founded these systems of modern philosophy, the systems of thought to which Pinker refers, were not only concerned with the material. As Pinker’s work shows, the arguments upon which they embarked are far from settled: they continue to engage us, and not just in the philosophical sense. We continue to seek data that will provide solutions to problems posed by Descartes and the moderns who followed him, but

we do so, in my view, with a less than open mind: it is not what we don't know that hinders us, but as Sophocles pointed out, it is what we think we *do* know that so often leads us down fruitless paths of inquiry (Plato, p. 202), and sometimes prevents us from recognizing the object of our search when it is right in front of us. It is my assertion that modern linguists tend to ignore what was seen plainly by Saussure as the great paradox of human communication.

Unlike modern philosophers and modern linguists, the philosophers of the Enlightenment considered reference to the immaterial to be a valid component of logical argument. Few modern linguistic scholars would consider such a reference to be acceptable in an explanation of observed data, though they have no problem with appeals to the unobserved or unobservable theoretical construct in general. In fact, many such intellectual creations are gratuitously accepted as being factual. For example, gravity, the several models of the atom, and the wave theory of electromagnetic radiation are all theoretical constructs used to provide explanations for observed data. All are generally, and mistakenly, regarded as factual, rather than as that which they really are: theoretical explanations accomplished via a process of analogy. They do not have material instantiation. They are immaterial, a product of the mind. If there were no minds to think about them, they would not exist at all. This is true of all objects of conceptual thought. They do not and cannot have instantiation in a material sense. Accordingly, the words that describe them are always common, never proper, nouns.

Pinker is right, in my view, to think that through examination of our speech and how it is constructed, we may glean an insight into our very nature. But he is wrong to assume that we can explain all of human thought this way. That would be true only if what we must explain is purely

material, but human beings are able, through the use of the intellect, to reach into the province of the non-material. This “reach” cannot be explained in material terms of cause and effect, but, as we will see, its hypothesis does account nicely for observable data, and it is no more intellectually inaccessible than an appeal to gravity or evolution³. I will return to this idea later in this essay.

Pinker has his own, unfortunately undisclosed, prior ontological assumptions. They color and underlie everything he writes. He, like some philosophers before him, most notably Emmanuel Kant, worries about the horrors that are the logical conclusions toward which modern Western philosophical thought rushes. But that which so troubles him is the result, as it was for Kant, of not facing the skeleton in the linguistic (and philosophical) closet squarely in the first place. He glibly writes: “...no one doubts that our thoughts and feelings are caused by the activity of the brain” (ibid, p. 241)⁴. Once one swallows this bait, one suspends one’s disbelief, and accepts the Words and Rules theory as being the basis for a general theory of language. But Pinker dissembles because he knows very well that many people doubt, and have doubted, this assumption throughout human intellectual history. As we will see, there are those who consider the actions of the brain necessary, but not sufficient, for an explanation of language used by human beings as a communicative medium, and some of them who do so are well aware of developments in the fields of neurophysiology and artificial intelligence⁵.

What I think Pinker really means by “no one doubts” is that no *rational* person doubts this. But even here he cannot be correct if this is what he thinks because the very philosophers to whom he appeals were surely rational men. Those who doubt the validity of a materialistic

model of language are not irrational madmen. Much of Pinker's *The Blank Slate* is a diatribe against those who adhere to scientific dogma in a religious sense, but Pinker himself does the same thing. To those who would defend Pinker by noting that the knowledge possessed by mankind has been vastly augmented since the 16th century, I must point out once again that, an enormous amount of data and scientific discovery notwithstanding, we still have not solved many problems first put forth five centuries (and longer) ago, including those having to do with the nature and origin of language.

One might wonder why it matters if the underlying ontological assumptions of Pinker's theory are questionable. To that skeptic, I pose the following question: "Is a science, like Linguistics, to be concerned with *any* plausible explanation for a phenomenon, or ought it be constructed so as to integrate with other explanations of other phenomena in pursuit of coherent truth?" What is the use of a grammatical theory if it does not function as part of a full theory of human communication?

Pinker is a materialist, and that means that he explains the present state of all organisms by means of the continuous and seamless process of natural selection commonly called "evolution". Evolution, another theoretical construct, is an aesthetically pleasing explanation for the historical development of that which we currently observe around us. Most people would think only the religious doubt its truth. Even the religious themselves assume that the non-religious have no intellectual alternative to evolution.

So isn't Pinker merely following along with the paleontologist in accepting evolution (and therefore some form of mechanistic causation) as the force behind the development of

language? Perhaps not, because while in *The Blank Slate* Pinker faults Steven Jay Gould for his political bullying due to his (Gould's) assumption, a priori, of the mind as a *tabula rasa*, there may have been a less obvious motive for trying to discredit Gould. As noted above, Pinker begins *The Blank Slate* attacking those who assume along with the philosopher John Locke and those who followed him that the human mind is a blank slate as being religious in this ontological assumption: "...the Blank Slate has become the secular religion of modern intellectual life" (2002, p.3). But is it the Blank Slate or *materialism* that has become the latter day equivalent of religion?

Consider this from Gould's *The Flamingo's Smile*: "I regard the failure to find a clear 'vector of progress' in life's history as the most puzzling fact of the fossil record" (1985, p.241). Gould proposed the idea of "punctuated equilibrium" to uphold the theory of evolution (Orr, 2002), but had to eventually give it up because it could not be fully integrated with the theory. Gould died with doubts about evolution, doubts that Steven Pinker does not share, and which would jeopardize the premise of the Words and Rules theory.

Gould did not deny evolution. His whole career as a paleontologist was based on a fundamental acceptance of the theory. He just could not validate it by means of the fossil record as it currently stands. He died not knowing, just as no one knows today if evolution is a valid explanation of the history of the biological world or not. The best we can say is that while the theory seems plausible, it is not possible to confirm it without further evidence. Without an acceptance of evolution, however, the Words and Rules theory, materialistic in nature and therefore dependent on the factual status of evolution, must be considered an observational

hypothesis of some aspects of human speech rather than an integrated explanation of language formation and the functioning of the human mind. If Pinker had limited his characterization of his data to a paradigm of the syntagmatic formation of the past participle in verbs, that would be one thing, but he does not. His theory relies on cognitive processes, analogical in nature, which require judgment acts on the part of the speaker.

Pinker deftly puts forth convincing evidence to substantiate his theory. He even reconciles two opposing theories that attempt to explain the formation of past-tense forms, namely that of Chomsky and Halle, which attempts to explain it by the postulation of rules of Transformational Grammar, and Rumelhart and McClelland's more specific appeal to Parallel Distributed Processing. He adeptly shows that Chomsky and Halle are right about regular inflection (rules) and Rumelhart and McClelland got it right in regard to irregular inflection (words). He then asserts: "the mind, like any complex device, is a system of mechanisms optimized for different jobs" (2000, p. 146). In both cases, he assumes the existence of, mathematical programs; algorithms and heuristics, which result in the observed data. He never bothers to explain the difference between these two computational methods. In fact, he never mentions them at all, and this could be because in doing so he would challenge some of the assumptions on which his theory rests. The problem comes in asking where these grammatical "programs" came from. Pinker avoids the issue altogether in assuming that they "evolved" according to the principles of natural selection.

All of this is put forth with a sense of certitude, making it is easy for a reader sufficiently impressed with Pinker's considerable erudition to accept without question, but there are

problems not only with Pinker's ontology (the acceptance of materialistic evolution in regard to human language as explaining all available data) but also with his epistemology, that he never addresses. One problem is the constant, unquestioning, postulation of the brain as the equivalent of an assemblage of computer programs to explain the data: "a system of mechanisms optimized for different jobs" (2000, p.146). One might see nothing wrong with this, unless, as we will now see, one happens to be a mathematician.

Geoffrey Sampson, in his *Schools of Linguistics* writes that "at any given time there are a few outstandingly successful branches of science which are regarded as models of what a science should be, so that scholars attempting to investigate scientifically some new field of phenomena will almost inevitably imitate the methods and theories of the 'model' sciences" (1980, p.15). I am, of course, placing the concept of materialism in this category of unexamined assumption, but there are more specific paradigmatic problems with Pinker's thought, to wit, the aforementioned "brain as computer" model.

This "computer" analogy is known as the "computational theory of mind". Pinker calls it "the big picture" (1997, p. x). He defines it this way: "the mind is a system of organs of computation designed by natural selection to solve the problems faced by our evolutionary ancestors in their foraging way of life". Organs are material. If Pinker thinks that somehow the immaterial is part of this whole "system", that the immaterial, like the material, can be subject of physical causation, he never says so.

Why does this matter? Well, to quote the philosopher Mortimer Adler, "the dictionary of any language is full of words that refer to entities or items that cannot stimulate sense organs;

and these words were initially meaningless notations which have not only acquired referential significance, but also elicit a variety of observable responses and most frequently no observable response at all". Adler then asks: "How could these words have acquired their referential significance through the process of conditioning as formulated in behavioristic theory? In my judgment there is no satisfactory answer to this question" (Adler 1991: 43). This is a very sticky wicket, and one that I think invalidates the computational model in regard to the empirical evidence⁶.

While the algorithm, one of the hypothesized processes behind Pinker's data, was invented in the ninth century by the Arabian mathematician al-Khwarizmi, it remained primarily a mathematician's concern until roughly the second half of the twentieth century, when computers fired the imagination of all scientists. Since the invention of the computer, the algorithm has held a not always deserved paradigmatic position: all things, it is imagined, are possible with computers of sufficient power in combination with a sufficiently clever algorithm.

Roger Penrose, a mathematician at the University of Oxford, is perhaps best known through his association with Steven Hawking, the current guru of the physical universe. In his book *The Emperor's New Mind* he writes: "are we simply following some *algorithm*—no doubt favoured over less effective possible algorithms by the powerful process of natural selection [Pinker's supposition]? Or might there be some other, possibly non-algorithmic, route – perhaps intuition, instinct or insight—to the divining of truth" (1989, p.99)?

Penrose is one of those people I mentioned earlier, dismissed out of hand by Pinker (1997, p. 97), who thinks the algorithm to be possibly *part* of the explanation for human thought,

but he does not consider it sufficient for reasons I cannot explain here⁷. However there is something else Penrose writes that mitigates against Pinker's, and for that matter Noam Chomsky's, methods, that is sufficient for the purpose of this argument: "it is not easy to ascertain what an algorithm is simply by examining its output" (ibid, p.415). As W. Daniel Hillis writes in his *The Pattern on the Stone*, "usually, many algorithms can compute the same result" (1998, p. 79). Pinker ignores these caveats regarding algorithms over and over again in *Words and Rules*. Not everyone agrees with Pinker that the structure of the mind can be divined from its output.

David Berlinski, a popularizer of things mathematically conceptual, says it well in discussing the work of Pinker's colleague at MIT, David Marr. Marr studies the physiology of vision. Berlinski writes: "Marr does suggest that in interpreting a representation, the brain *recognizes* certain visual features, *compares* them to other visual features, and in general carries on a number of *cognitive* activities below the threshold of vision itself" (2000, p. 272). But Berlinski continues: "An analysis of this sort may well be of great scientific value...but one thing it does not offer is an escape from a circle of mental concepts. These, it would seem, remain ineradicable" (ibid). Next, there is this: "At the conclusion of its computations, the mind bursts into consciousness, a vivid and light-enraptured awareness of the world" and finally "The persistence in theory of a certain embarrassing imbroglio, the mind suddenly opening an arena in which images are thoughtfully examined, or representations mysteriously made to represent, is evidence of the enormous difficulty in accommodating the essential nature of consciousness within any sequential or procedural view of the mind's operations" (ibid, 273). This amounts to

self-awareness, something Pinker dismisses as an “illusion in the machine” (2002, p.42), without noting its similarity to his reviled “ghost in the machine”. Critically, he never asks if there can there be a “self” without an “other”. In Saussurian terms we might ask the question this way: “can there be a ‘parole’ without a ‘langue’”? Saussure himself thought not, and in my view this is an inescapable linguistic conclusion, one’s desire for a mechanistic explanation of linguistic reality notwithstanding.

The “programs” underlying Pinker’s theory cannot reliably explain the data he cites, because they cannot explain such considerations as occur in the “wug test” (Pinker 2000, p. 14). Pinker writes: “Children are not parrots who just play back what they hear,” and “Noam Chomsky and Eric Lenneberg, pioneers of the modern study of language and contemporaries of Berko Gleason in the Harvard-MIT community, pointed to children’s ability to generalize constructions such as the regular past tense in support of their theory that language is actively required by a special rule-forming mechanism in the mind of the child” (ibid, p.14). That mechanism cannot be an algorithm because an algorithm always gives the same answer, and the children do not. What *would* possibly explain the results of the wug test is called a *heuristic*, and evolutionarily speaking, Pinker should have been making a distinction between algorithms and heuristics all along. Heuristics can evolve; algorithms cannot (Hillis, p. 148).

In speaking of simulated evolution on computers, W. Daniel Hillis writes: “Essentially, simulated evolution is a kind of heuristic search technique that searches the space of possible designs”, and more importantly, he continues, “Simulated evolution is a good way to create novel structures, but it is an inefficient way to tune an existing design. It’s weaknesses as well as

its strengths stem from evolution's inherent blindness to the 'Why' of a design. Unlike the feedback systems described in the last chapter, where specific changes were made to correct specific failures [like Rumelhart and McClelland's pattern associators], evolution chooses variations blindly, without taking into account how the changes will affect the outcome" (1998, p.148).

This means that there would have to be either some evolutionary advantage to speaking modern languages – Modern English, say, over Old English or Spanish over Latin – or that the fact that people can communicate well after all this random evolution is a fluke. Please keep in mind that in Pinker's theory, all of this is mechanistic – whether an algorithm or a heuristic is employed. Algorithms don't change, and heuristics take time to do so, and they can only do so in random fashion. With no "ghost in the machine" to direct things, how do languages change so drastically over only 500 years, the minimum amount of time normally thought by linguists to be sufficient for significant language change, and retain their communicative efficacy?

James Milroy writes: "many of the features that are positively dysfunctional in context-independent language are actually functional and necessary in the conduct of successful conversation: lack of explicitness, hesitation, ambiguity, incompleteness, repetition and reliance on extra-linguistic clues are themselves very important aspects of how conversation is organized" (1993, p.218). All of these things require *judgment*, and judgment cannot be shown to be consistent, even in an individual.

As Saussure would put it, *langue* and *parole* are not two discrete things. Rather they are two aspects of the same thing. We are all connected by language. It is our communal heritage. It

binds us, yet we are free to use it as each one of us wills. That is the fact that makes language arbitrary: all aspects of language could be different than they are, and all that is necessary to make this so is that men *will* it to be. History may demonstrate an occasional collectivity of will, but it does not similarly indicate universality. Men, to some degree, have done as they have pleased, and this freedom, which confounds the materialistic approach, applies to language as much as it does to politics or to culture in general.

Pinker also makes much to do about response time to a stimulus, using the *lexical decision* task, which, to be fair, he says, “doesn’t correspond to anything that people do outside the lab, and no one really knows what goes on in people’s heads as they do it” (2000, p. 132), but he uses data derived from this test to bolster his argument without cautioning the reader as Hillis does that, “you can’t judge how fast an algorithm is by measuring the time that elapses before a solution to your particular problem is reached” (1998, p.78). In any case, algorithms cannot make decisions, so the method employed in the lexical decision task must be heuristic in nature. That may account for the variance in the subject’s response time, but a heuristic cannot be expected to employ consistent times of computation, as is the case with an algorithm, so the results of lexical decision measurements must be invalid, at least in relation to the Words and Rules theory.

Pinker is concerned, as is Chomsky, and as was Emmanuel Kant, that Western society rushes headlong toward conclusions that are counter to humanistic principles. In *The Blank Slate*, Pinker places the origin of this thought in the early Enlightenment, when the ideas of the Blank Slate, the Noble Savage, and the Ghost in the Machine came to be of great importance in Western philosophy. Throughout *The Blank Slate*, Pinker attempts to establish radical

materialism as the counter-argument to the conclusions reached as a result of the acceptance of these ideas. There are two things wrong with this. First, materialism does not prevent us from reaching the same cynical conclusions as are reached as a result of the ideas Pinker opposes. In the over 450 pages of *The Blank Slate*, Pinker never attempts to put forth a cogent counter-argument: all Pinker can offer is an endless sociological smoke-and-mirrors argument with the “invisible hand” of self-interest steering the course of mankind to a happy self-enlightened state achieved through the inexorable grinding away of the evolutionary process. In fact, one might think of Pinker not as the Adam Smith of Psycholinguistics but rather as an evolutionary Bolshevik who is just a little worried that evolution may not be quick enough to stop mankind from destroying itself.

Over and over, he assures us that we need not be concerned with the fact that we are nothing more than productive machines. When we behave justly, Pinker tells us, we follow our own evolutionary blueprint: good behavior is in our best interest. But what about human speech as we all observe it? Here is the second thing wrong with Pinker’s radical materialism: while he is worried about the basis for justice in society, he cannot explain how we can even *discuss* an immaterial object of thought like justice, which is either necessary to achieve the happy condition, or really is extraneous to a process provided by evolutionary self interest, which, to the faithful evolutionist, is cause to wonder how we ever came up with the unneeded concept of justice in the first place.

That is so because “justice” is not the result of perception. It is, rather, an object of *conceptual* thought, which is a different thing entirely. Justice, like language according to

Saussure, exists only in the minds of men, and does so, again like language itself, both individually and collectively. The term “justice” refers to a condition, an ideal, which does not exist in reality. If men never thought of justice, it would not exist. It is immaterial. To paraphrase Karl Marx, if justice did not exist, Man would invent it. But justice *does* exist because I am writing and thinking about it, and you are reading and thinking about it right now. The word “justice” refers to something, an object of thought, that cannot stimulate any known sense organ, and therefore in strictly materialistic terms, it could not have acquired referential significance in the first place⁸. The question is not who invented justice, but how we can communicate about it as we are doing here: we are discussing the *immaterial* and the prompt to do so cannot come from a material source. In materialistic terms, everything acquires meaning as the result of the action of the brain in connecting stimulus with response. The immaterial *cannot* act as a stimulus, and so words cannot acquire meaning in reference to the non-material.

Steven Pinker and his contemporary psycho-socio-materio-linguists are caught in a materialist’s trap, and to make matters worse, their ulterior motive of saving the materialist world from itself has so hopelessly biased their research and thought that their objectivity is compromised. To avoid the same trap, I will state my ontological assumptions before describing a philosophy of language that avoids the mistakes made by the philosophers of the Enlightenment and which have been compounded by those who are entangled in their wake.

As the philosophy of Mortimer Adler demonstrates, Pinker need not appeal to radical materialism to avoid reaching the conclusions he so rightly fears. Hume was not correct. There is another way.

Part 2 – Adler and a Theoretical Construct To the Rescue

My prior ontological assumption is, in general, that I am in agreement with the thought of the American philosopher Mortimer Adler, and in particular, with his philosophy of language. I am also guilty, as is Steven Pinker, and as was Adler, of being greatly concerned about the two conclusions to which modern thought rushes headlong: might makes right, and the ends justify the means.

Such concerns, as serious as they may be, should not, however, prevent one from describing language as we observe it. It is what it is, and no amount of moral perturbation can change that. If we lack an explanation we should say so, our biases, and fears, notwithstanding. While I recognize the unavoidability of personal bias, it is my hope that this disclosure will mitigate its effect. I should add here that, in my opinion, Adler's philosophy avoids the conclusions Pinker so deeply fears. That is not to say that Western society has accepted Adler's view, but only that it exists. Pinker need not fear the ghost in the machine, the theory of the noble savage, or the blank slate. There *is*, in Adler's philosophy, a universal human nature, one that is based upon needs common to all men, and is, therefore, a logical basis for the exposition of universal human rights: all men are equal because all men are equally human. It is therefore in defining what it is to be human that should rightly occupy our thought, not an appeal to evolution. We need not appeal to evolutionary factors alone to justify living together in a just, compassionate society. In fact, if justice were the product of evolution, we would never have to think about it at all. However, think about it we must, and fortunately our intellects, applied to

the formulation of a cogent, straightforward argument will provide everything we need. The problem is that we have, as a society, made serious mistakes in reasoning, ones that must be corrected if we are to avoid the conclusions Adler refers to as “repugnant to reason,” the same conclusions that Steven Pinker tries so hard to avoid.

Adler was, among other things, a surveyor of Western thought. He was amazingly erudite. His thought is not well known in most academic circles, though his portrait once appeared on the front cover of Time magazine (March 17, 1952). This is likely because he turned his back on writing for the professional philosopher sometime around 1973, insisting that “philosophy is everybody’s business”, and in accord with that democratic belief, writing for a popular audience thereafter. It may also be because he became wealthy through the medium of philosophical thought.

His last purely academic work *Some Questions About Language: A Theory of Human Discourse and Its Objects*, was published in 1976, but was actually written in the summer of 1973. In it, Adler codified over 50 years of concern with language. I cannot begin to give an exposition of the entire theory here, but I hope I can provide enough information from it to convince the reader that consideration of Adler’s theory might be a fruitful pursuit, especially in light of the failure of the computational Words and Rules theory of Pinker, and any other purely materialistic theory, to explain observable features of language.

I must make one other comment regarding Adler. He was a particularly concise writer. It is difficult therefore to condense his writing into a simpler form. In making the argument that follows, I will, therefore, quote Adler extensively. I will try to construct the line of thought in a

way that contains little philosophical digression or explanation. I must refer the reader's philosophical questions to a reading of Adler for himself. My aim here is not to be polemical; rather it is my intention to provide an outline of Adler's argument, which I find to be persuasive. I therefore ask the reader to assume for the sake of brevity that Adler's argument is defensible, and that any necessary defense may be found in the books cited in the references section of this essay.

The theoretical construct posited by Adler and necessary for an account of language that can explain how meaningless notations can acquire referential significance (Adler 1976, p. 39) is the *preclusion* of "the complete reduction of mind to brain" (ibid), which is an ontological assumption of Pinker's theory. What does this mean?

It means first that we must admit that there are things we do not know, and we must at least attempt to avoid ontological bias by admitting our presuppositions. Perhaps an example will help to illustrate my meaning here. Is light a material substance, following Newton, or is it purely energy, following Huyghens? It seems to have characteristics of both. We posit the photon to represent light as matter and wave to represent it as energy. Light seems to oscillate, to pass through material things, and yet to have demonstrable impact, and it seems to bend in gravitational fields and to alter its course to go around very small objects. All of these things are *indirect* observations. Heisenberg's uncertainty principle tells us that we can't really observe light at all because our very act of observation changes the observed. The various theories of the nature of light, which attempt to explain these observations, are analogical. They are theoretical constructs. Nonetheless, very few of us would argue with them.

Why, then, would we argue with the postulation of theoretical constructs to explain linguistic phenomena? There is no reason whatsoever to reject such hypotheses, as long as they provide a reasonable explanation of observed phenomena. I hope I have hereby established the reasonableness of the postulation of the mind as somehow distinct from the brain.

Let us then, begin with Adler's postulation of mind as somehow distinct from brain. This frees us from materialistic constraints, however it does not obviate the need to explain our observations, which, as we have seen, materialistic theories cannot do, because they cannot explain our ability to communicate about anything lacking physical instantiation. Adler writes: "I propose to regard conversation about public matters as a fact even when it is clear that the items being discussed do not exist in the physical world...They [men] certainly appear able to talk to one another about many items that are not present to their senses in the way that furniture [Adler's chosen example of material objects] is – past events that they remember, future contingencies that they imagine or conjecture, and even items the existence of which, past, present, or future, they question and the actual or possible reality of which they discuss with one another" (1976, p. 5).

Adler's philosophy of language revolves around the explanation of two things: "the problem of the genesis of meaning" and the "problem of what is meant by any meaningful word" (ibid, p.14). Now, we routinely have conversations about that which we apprehend and we utilize words as our means of conversation. What, then, do we apprehend?

Let us refer to that which we apprehend as “potential objects of thought”. In his book *Ten Philosophical Mistakes*, Adler says, following Plato and Aristotle: “the objects we apprehend [potential objects of thought] divide into those that are sensible and those that are intelligible” (1985, p.33). We apprehend the sensible via our senses and the intelligible via our intellect. The purely intelligible, which includes things like “souls, angels, and God...liberty, justice [my example in this essay], virtue, knowledge, the infinite, and even the mind itself” (ibid, p.34), is not sensible: “none of these can ever be perceived by the senses” (IBID, P.34).

So we have the sensible, perceived by the senses, and the intelligible, apprehended via the intellect. “Sense [sense-experience] includes a variety of powers, such as the power of perceiving, of remembering, and of imagining” (ibid, p.34). Intellect [thought], on the other hand, has the power of “understanding, of judging, and of reasoning” (ibid, p.34). This means that through our senses, in the material realm in which cause and effect are plausible explanations for the development, usage, and propagation of language as we observe it, we may *perceive, imagine, and remember*, but we may not *understand, reason, or judge* because these are the actions of the immaterial mind. In a purely material world, Steven Pinker’s books could not exist, or at least the materialistic theory he espouses cannot explain their existence.

It is at this point, the point of consideration of the sensible and the intelligible, that the modern philosophers diverge, committing a number of mistakes that I cannot review here, but one of them is Pinker’s “ghost in the machine”, which can easily be rectified, and Adler does so in his book *The Angels and Us*, to which I refer the interested reader⁹. Suffice it to say here that human beings, unlike any other material creature, have the ability, through our power of

conceptual thought, to reach into the immaterial, though we are surely otherwise bound by the material.

The next point is that “while some objects of thought are purely intelligible, our sense experience provides us with objects that, with rare exceptions, are never purely sensible” (ibid, p.35). Adler goes on to say that normally the sensible objects we perceive are particulars: “We not only perceive it as this one individual thing. We also understand it to be a particular thing of a certain sort...It could not be a particular if it were not, at the same time, both a sensible and an intelligible object” (ibid, p.35).

Adler says that we use our conceptions to “*either* apprehend purely intelligible objects of thought *or*, when our intellects cooperate with our sensitive powers, apprehend sensible particulars that are also intelligible” (ibid, p.36).

So we see that we apprehend and use language to describe both purely intelligible objects of thought, and particulars, which are really existing things in the material world. Finally, Adler says that it is “by means of an abstract concept [that] we understand what is common to all the particular cows, trees, and chairs that we can perceive or imagine” (ibid, p. 42). In language, this double-sided ability to apprehend both the material and the immaterial is reflected in our use of common (abstract) and proper (material) nouns.

In Adler’s theory, then, we have the ability to refer to and discuss both the material and the immaterial. In any purely materialistic theory, such as Pinker’s, we are confined to the material.

Pinker writes: “the simplest explanation of concepts is that they are conditions for membership in a category” (2000, p.270). This is not an explanation. It is a definition. It does not explain the origin of concepts, nor their development. He goes on to say: “The power of a definition is that it transcends the particulars of experience” (ibid, p.271). While this is, in fact, correct, it is an observation, not an explanation. Later he writes: “the members of a category are not created equal” (ibid, p.272).

Who is doing the creating? Purely random synthesis may possibly be explained by materialism, but creation cannot be so explained, and even random synthesis must have some kind of organizing principle if it results in anything but isotropic homogenization. Pinker postulates this organizing principle to be self-interest, but what *is* “self-interest”? It is patently obvious that some of us think suicide to be in our “self- interest” and some of us do not. How is it possible that some of us are still committing suicide if that would have been selected out by evolution? Where, then, did the world’s languages come from? Merely from sound change without the mediation of any cognitive processes whatsoever? I think not.

In chapter 10 of *Words and Rules*, “A Digital Mind in an Analog World,” Pinker unsuccessfully attempts to harmonize Saussure’s concept of the arbitrary nature of language with von Humboldt’s “principle of the infinite use of finite media” (2000, p. 270). He worries about the “fuzziness” of our process of categorization, and makes the same mistake of thinking of ideas as *representations* that was made by John Locke and is discussed by Adler (1985, p.25). Adler corrects this mistake, which is, in a nutshell, thinking that we can apprehend our own ideas.

Our ideas, according to Adler, are *that by which* we apprehend our objects of thought: ideas *are* meanings, and meanings cannot be apprehended directly. Ideas are not representations: they are *relationships*, and relationships can only be discussed in terms of the objects being related. We are, therefore, confined to a process of discussing our *objects of thought* in an attempt, through the process of analogy, to understand what we mean, but we can never reach unity in this process, even in regard to our own personal meaning because without more than one individual's object of thought under apprehension, which is to say, without two distinct perspectives, there can be no *relationship*, and without a relationship, there is no meaning at all.

This analogical process of “discussion with the aim of understanding” is uncannily similar to the concepts of the *derivative* and the *limit* in calculus, concepts that engineers, physicists, and mathematicians have no problem utilizing to describe the nature of the universe or, perhaps more accurately, our ability to apprehend it: we may come infinitely close to a precise understanding, but it is impossible to actually achieve it. It is also reflected in Saussure's observation of language as consisting of *langue* and *parole*, a paradox unsolved because, every one of us is blessed, and cursed, with our own personal vantage point on the apprehensible and the inability to examine our own, or anyone else's, apprehension directly. There is a *relationship* between *langue* and *parole*, and that relationship defines the totality of language.

Conclusion

This discussion has unavoidably involved semantics, but not *only* semantics. As Ruth Nanda Anshen put it: “Language is not a mere mechanism, although it is also a mechanism and it

is the relation of language as mechanism and language as meaning which must be sought” (1957, p.10).

Pinker’s thinking is not on the forefront of science. Newton’s Third law of Motion, which defined cause and effect in the material world, does not describe the physical universe, as it is now known. As Werner Heisenberg, describing probability waves, which were postulated to describe the nature of matter, put it: “It meant a tendency for something. It was a quantitative version of the old concept of ‘potentia’ in Aristotelian philosophy. It introduced something standing in the middle between the idea of an event and the actual event, a strange kind of physical reality just in the middle between possibility and reality”(1958, p.41). He could very well have been describing language.

Today there is talk of “quantum computers” that will compute on the basis of potentials and probabilities. Surely, there are those who will hope these “supercomputers” can emulate the human brain. But still, there will be the mind, employing relationship upon relationship, and extending these to the infinite power, and all the while, unable to examine the means by which it does so.

In the end, the Words and Rules theory cannot account for our engagement in communication about objects of conceptual thought, and since we always, or almost always, conceptualize our perceptions, imaginings, and memories (and cannot divorce ourselves from our concepts because we cannot examine them), it cannot account for our ability to communicate about the material world either. In the end, Pinker is forced to *observe*, not explain. His prior ontological assumptions lead him to a line of reasoning, albeit peppered as it is with examples of

experimentation, that, while it may *appear* to support the Words and Rules theory, too often glosses over the serious obstacles therein, leaving them unexplained. He is, like all of us, confined to the prison of his own vantage point. For all his erudition, perhaps he should have heeded the wisdom of Saussure, who seemed to know this limitation instinctively, and who never tried to explain anything in the first place.

Is it possible to develop a grammatical theory based upon Adler's "theory of human discourse and its objects"? I cannot say, but surely we should start at the beginning, now that the beginning may be understood.

 Endnotes

¹ Saussure did not write *Course in General Linguistics*. The book was compiled from the class notes of eight of Saussure's students. However, the ideas to which I refer here are generally accepted as attributable to Saussure himself.

² Experiments with light conducted by Thomas Young in 1803 are described by Gary Zukav in his *The Dancing Wu Li Masters* (p. 45 – 66). Zukav writes of these experiments: “The wave-particle duality was the end of the line for classical causality.” One of my objections to Pinker's Words and Rules theory is its assumption of the modern day validity of classical causality.

³ In his book *How the Mind Works*, Pinker briefly refers to both Mortimer Adler and John Searle in this essay, I cannot begin to expose their arguments here. I should, however, disclose that these arguments ultimately turn on *intentionality*, a topic upon which both Adler and Searle have written. The sources for both arguments are listed under References. While I will not refer to him here, I must also direct interested parties to John Deely's article [The Immateriality of the Intentional as Such](#), *The New Scholasticism*. 42 (Spring 1968), p. 293-306, and to Adler's refutation of Deely in the same publication (Autumn 1968): p. 578 – 591.

⁴ Pinker is not alone here. In fact the assumption of materialism as the only explanation for all linguistic evidence is *de rigueur* in Western society. This is in fact, my point: we are bound by our own paradigm. As we will see in Part 2 of this essay, the acceptance of the theoretical constructs of the mind as somehow distinct from the brain and of human thought as non-materialistic are foundational to Adler's philosophy of language. This contrasts sharply with the definition of *mind* in the *American Heritage Dictionary, fourth edition*: “the human consciousness that originates in the brain and is manifested especially in thought, perception, emotion, will, memory, and imagination” (p. 1117). Though we cannot explain thought in materialistic terms, we have leaped (in my opinion through nothing more than faith) to the conclusion that it is so certain that we will someday be able to do so, we may accept the idea as factual (and reflect that acceptance in our definition of terms such as that of *mind*).

⁵ Please see Adler's 1982 Harvey Cushing Oration for one such example: *Journal of Neurosurgery*, 57 (September 1982), 309-315.

⁶ Pinker objects to the arguments made by Penrose, and to those made by John Searle (*Intentionality: an essay in the philosophy of mind*. Cambridge: Cambridge, 1983). I have not referred to Searle here because he is, or at least was, a materialist, though Pinker says of both Searle and Penrose: “they are so unconnected to discovery and explanation in scientific practice that they have been empirically sterile, contributing no insight and inspiring no discoveries on how the mind works” (1997, p. 97). Interestingly, Pinker makes no such characterization of his colleague Noam Chomsky, who is not exactly an empiricist. Pinker also quickly dismisses Mortimer Adler in a single paragraph in which he erroneously characterizes Adler's thought (1997, p. 325). We can attribute the pass on Chomsky to collegiality, but Pinker's dismissal of Penrose and Adler amounts to the fact that they don't fit into the “big picture” (ibid, p. x). This whole business proves my point: for Pinker all knowledge comes from scientific empiricism. This makes him less of a scientist than he is an adherent of the philosopher David Hume, who wrote in the last paragraph of his *Concerning Human Understanding*: “Does it contain any abstract reasoning concerning quantity of number? No. Does it contain any experimental reasoning concerning matter of fact and existence? No. Commit it then to the flames: for it can contain nothing but sophistry and illusion”. Yet, Hume came to these conclusions via non-mathematical abstract reasoning, proving that paradigmatic thinking is an intellectual trap.

⁷ Please see Penrose (1999) chapters 4 and 10 for a full exposition of this idea.

⁸ An explanation of the acquisition of meaning by meaningless notations is one of the cornerstones of Adler's theory of language. Please see Adler, 1976 for a full exposition of the theory.

⁹ See *Ten Philosophical Mistakes* (1985) and Adler's 1982 Harvey Cushing Oration: *Journal of Neurosurgery*, 57 (September 1982), 309-315.

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