For a quarter of a century, Steven Pinker and I have been on opposite sides of major intellectual and scientific divide concerning the nature of language and the mind. Until this review, the divide was confined to the academic world.

But recently the issue of the nature of mind and language has come into politics in a big way. We can no longer conduct 21st century politics with a 17th century understanding of the mind. The political issues in this country and the world are just too important.

Pinker, a respected professor at Harvard, has been the most articulate spokesman for the old theory. In language, it is Noam Chomsky’s claim that language consists in (as Pinker puts it) “an autonomous module of syntactic rules.” What this means is that language is claimed to be just a matter of abstract symbols, having nothing to do with what the symbols mean, how they are used to communicate, how the brain processes thought and language, or any aspect of human experience, cultural or personal.

I have been on the other side, providing evidence over many years that all of those considerations enter into language, and recent evidence from the cognitive and neural sciences indicates that language involves bringing all these capacities together. The old view is losing ground as more is learned.

In thinking, the old view comes originally from Descartes’ 17th Century rationalism. A view of thought as symbolic logic was formalized by Bertrand Russell and Gottlob Frege around the turn of the 20th Century, and a rationalist interpretation was revived by Chomsky in the 1950’s. In that view, thought is a matter of (as Pinker puts it) “old-fashioned … universal disembodied reason.” Here reason is seen as the manipulation of meaningless symbols, as in symbolic logic.

The new view is that reason is embodied in a nontrivial way. The brain gives rise to thought in the form of conceptual frames, image-schemas, prototypes, conceptual metaphors, and conceptual blends. The process of thinking is not algorithmic symbol manipulation, but rather neural computation, using brain mechanisms. Jerome Feldman’s recent MIT Press book, *From Molecules to Metaphors*, discusses such mechanisms.
Contrary to Descartes, reason uses these mechanisms, not formal logic. Reason is mostly unconscious, and as Antonio Damasio has written in *Descartes’ Error*, rationality requires emotion.

The old view in economics is the rational actor model, where all economic actors are assumed to be acting according to formal logic, including probabilistic logic. Daniel Kahneman won the Nobel Prize in economics for his work with Amos Tversky showing that real people do economic reasoning using frames, prototypes, and metaphors rather than classical logics.

These questions matter in progressive politics, because many progressives were brought up with the old 17th Century rationalist view of reason that implies that, if you just tell people the facts, they will reason to the right conclusion — since reason is universal. We know from recent elections that this is just false. “Old-fashioned … universal disembodied reason” also claims that everyone reasons the same way, that differences in world-view don’t matter. But anybody tuning in to contemporary talk shows will notice that not everybody reasons the same way and that world-view does matter.

There is another scientific divide that Pinker and I are opposite sides of. Pinker interprets Darwin in a way reminiscent of social Darwinists. He uses the metaphor of survival as a competition for genetic advantage. He has become one of the principal spokesmen for a form of evolutionary psychology that claims that there are present genetic differences between men and women that stem from prehistoric differences in gender roles. This led him to support Lawrence Summer’s suggestion that there are fewer women than men in the sciences because of genetic differences.

Luckily, this unfortunate metaphorical interpretation of Darwin has few supporters.

This divide matters because my cognitive analysis, in *Moral Politics*, of conservative and progressive ideologies in terms of a nation-as-family metaphor is inconsistent with his version of evolutionary psychology. The seriousness of present-day politics in America makes these issues more than a merely academic ivory-tower matter. If I — and other neuroscientists, cognitive scientists, and cognitive linguists — are right, then Pinker is wrong, and vice versa. Pinker is, however, right for raising the issues and bringing these academic research questions into the public eye.

Unfortunately, what passes for a review of my book, *Whose Freedom?*, is actually a vituperative and underhanded attack. You might never guess from the review what the book is about. It is about the fact that freedom is a contested concept, a concept that people necessarily have different versions of, depending on their values. The book is an account of how conservative and progressive ideologies extend a limited common
view of freedom in opposite directions to yield two opposed versions of the “same” concept.

The review is based on two rhetorical strategies:

- First, claim that I say the opposite of what I really say. Point out that that is ridiculous. Then ridicule me for saying such a thing. Pinker uses the tactic over and over.
- Second, assume that his old guard theory is obviously right and anything else is radical and crazy. He uses the second strategy with his politics as well as his theory of mind.

Here are some examples.

Pinker represents the research results on conceptual metaphor as follows:

> “Conceptual metaphor, according to Lakoff, shows that all thought is based on unconscious physical metaphors …”

I have actually argued the opposite.

- Chapter 12 of *Metaphors We Live By* discussed the non-metaphorical grounding of conceptual systems.
- Chapter 2 of *More Than Cool Reason* begins with a section on “What is not metaphorical.”
- *Women, Fire, and Dangerous Things* goes through 373 pages of non-metaphorical conceptual analysis before bringing up examples of metaphorical thought.
- Mark Johnson and myself in *Philosophy in the Flesh* (see chapter 3) survey the basic mechanisms of thought, beginning with the non-metaphorical ones, e.g., image-schemas, conceptual frames (sometimes called simply “schemas” in psychology), and various kinds of prototype structures.

Metaphorical thought is based on these extensive and absolutely crucial aspects of non-metaphorical thought. The system of metaphorical thought is extensive, as these cognitive science books show in great detail. Results from other branches of cognitive science demonstrating the reality of unconscious conceptual metaphor are listed in chapter 6 of *Philosophy in the Flesh*.

Having claimed falsely that I believe that all thought is metaphorical, Pinker then chides me by taking the position I have actually advocated: “Thinking cannot trade in metaphors directly.” Just as I have not only said, but have argued empirically.

In addition, Pinker misunderstands the most basic result in contemporary metaphor research: Metaphor is a matter of thought, not just language. The same words can be instances of different conceptual metaphors. To take a familiar example: *It’s all downhill from here* can mean either (1) things will get progressively worse, based on the Good Is Up, Bad Is Down metaphor; or (2) things will be easier from now on, based on the metaphor in which Action is Understood as Motion (as in *things are moving right along*) and Easy Action is understood in terms of easy (i.e., downhill) motion. The literature in the field is filled with such examples.

One of my persistent themes is that facts are crucial, and that the right system of frames is often required in order to make sense of facts. With a system of frames that is inconsistent with the facts, the frames (which are realized in the brain) will stay in place and the facts will be ignored. That is why framing to reveal truth is so important. Here is what I say in *Don’t Think of an Elephant!* (pp. 109-110):

> “Facts are all-important. They are crucial. But they must be framed appropriately if they are to be an effective part of public discourse. We have to know what a fact has to do with moral principles and political principles. We have to frame those facts as effectively and honestly as we can. And honest framing of the facts will entail other frames that can be checked with other facts.”

In short, I’m a realist, both about how the mind works and how the world works. Given that the mind works by frames and metaphors, the challenge is to use such a mind to accurately characterize how the world works. That is what “reframing” is about — correcting framing that distorts truths and finding framing that allows truth to be seen.
But Pinker claims that I say the opposite, that rather than being a realist, he says I am a cognitive relativist: “All this belies Lakoff’s cognitive relativism, in which mathematics, science, and philosophy are beauty contests between rival frames rather than attempts to characterize the nature of reality. It undermines his tips in the political arena as well. Lakoff tells progressives not to engage conservatives on their own terms, not to present facts or appeal to the truth, and not to pay attention to polls. Instead, they should try to pound new frames and metaphors into voters’ heads. Don’t worry that this is just spin or propaganda…”

Here is what I actually say about spin and propaganda (Don’t Think of an Elephant, pp. 100-101):

“Spin is the manipulative use of a frame. Spin is used when something embarrassing has happened or has been said, and it’s an attempt to put an innocent frame on it—that is, to make the embarrassing occurrence sound normal or good.

Propaganda is another manipulative use of framing. Propaganda is an attempt to get the public to adopt a frame that is not true and is known not to be true, for the purpose of gaining or maintaining political control.

The reframing I am suggesting is neither spin nor propaganda. Progressives need to learn to communicate using frames that they really believe, frames that express what their moral views really are. I strongly recommend against any deceptive framing.”

Here again Pinker represents me as saying the opposite of what I actually say.

One of the findings of cognitive science that is most important for politics is that frames are mental structures that can be either associated with words (the surface frames) or that structure higher-level organizations of knowledge. The surface frames only stick easily when they fit into higher structures, such as the strict father/nurturant parent worldviews that I discuss in great detail in Moral Politics and elsewhere. Here’s what I (and my colleagues and the Rockridge Institute) say in Thinking Points:

“Surface frames are associated with phrases like “war on terror” that both activate and depend critically on deep frames. These are the most basic frames that constitute a moral worldview or a political philosophy. Deep frames define one’s overall “common sense.” Without deep frames there is nothing for surface frames to hang onto. Slogans do not make sense without the appropriate deep frames in place.” (p. 29)
The same basic point is made in my other books applying cognitive science to politics. Again, Pinker claims that I say the opposite. “Cognitive science has not shown that people absorb frames through sheer repetition. On the contrary, information is retained when it fits into a person’s greater understanding of the subject matter.” But that is exactly what I said! The deep frames characterize the “greater understanding of the subject matter;” the surface frames can be “retained” only when they fit the deep frames.

I regularly talk about the fact that Americans typically have both strict and nurturant models in their brains. For example, here is what I say on p. 70 of *Whose Freedom?*, “Finally and most important, just about every American has both models engrained in his or her brain …” *Don’t Think of an Elephant!* has a whole chapter (chapter 10) based on this phenomenon. *Thinking Points* also has a whole chapter on this phenomenon, called “Biconceptualism.” Here is what Pinker says, “Nor is the claim that people are locked into a single frame anywhere to be found in cognitive linguistics, which emphasizes that people can nimbly switch among the many framing made available by language.” Not everybody is all that nimble when it comes to conservative versus progressive worldviews, but many people can shift back and forth in a particular area of life — or an election — as I discuss.

In *Whose Freedom?* I discuss the difference between *freedom from* and *freedom to* (p. 30). Then, throughout the book, I show that both the progressive and conservative versions of freedom use both *freedom from* and *freedom to*. For example, progressives focus on *freedom from* want and fear, and well as *freedom from* government spying on citizens and interfering with family medical decisions, and also freedom of access to opportunity and fulfillment in life (e.g., education and health care). Conservatives are concerned with freedom *from* government interference in the market (e.g., via regulation) and they are concerned with *freedom to* use their property any way they want. In short, the old Isaiah Berlin claims about the distinction do not hold up.

Pinker acts as if I don’t discuss the distinction: “Lakoff again makes little use of previous analyses. Freedom comes in two flavors.” And then he acts as if he is informing me of *freedom from* and *freedom to*, when I have discussed both throughout the book. Even worse, he gets it wrong. He gives the old-fashioned claims that just don’t work. This becomes clear all through the book if you actually read it.

In another case, Chapter 7 of *Whose Freedom?* discusses direct versus systemic causation. On the first page of the chapter, I say, “It is surely not the case that conservatives are simpleminded and cannot think in terms of complex systems. Indeed, conservative strategists consistently outdo progressive strategists when I comes to long term overall strategic initiatives.” Pinker’s version: “It takes
considerable ignorance, indeed chutzpah, to boast that only a progressive such as himself can understand the difference between systemic and direct causation.” The opposite of what I say.

I’ll leave off here, though the same tactics are used throughout the review.

The results coming out of neuroscience and the cognitive sciences show that, far from there being “old-fashioned disembodied universal reason,” people really reason using frames, prototypes, image-schemas, and metaphors — and bring emotion into the mix as an inherent part of rationality. All of these mechanisms of thought are embodied — resulting from the nature of brain structure and neural computation on the one hand, and embodied experience on the other. They lie outside of the mechanisms of formal logic, which is the basis of the contemporary version of 17th Century rationalist thought.

What is one to do in the face of this reality? In Whose Freedom?, I argue (p. 257) for a “higher rationality,” a mode of thought that takes into account the understanding of the view of mind that comes from cognitive science and neuroscience — a rationality that talks about frame-based and metaphorical thought explicitly and discusses their effects, especially in politics. But this is only possible if the true nature of thought is widely understood, and that takes honest, open public discussion.

What is one to make of Pinker’s “review”? Why would he repeatedly attribute to me the opposite of what I say? I can think of two explanations:

1. He is threatened and is being nasty and underhanded — trying to survive by gaining competitive advantage any way he can.
2. He is thinking in terms of old frames that do not permit him to understand new ideas and facts that do not fit his frames. Since he can only understand what I am saying in terms of his old frames, he can only make sense of what I am saying as being nonsense — the opposite of what I actually say. That is, since the facts of what I am saying don’t fit his frames, his frames stay and the facts are adjusted to fit his frames.

I don’t know Pinker well enough to know which is true, or whether there is some third explanation.

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If you are a reader who wants to know what I have really said and what the overall evidence is, I direct you to the following books and to the long lists of references given there:
Nonpolitical books:


Applications to politics:


Sorry the list is so long, but a lot of researchers have been working out the new view. Getting informed is well worth the trouble. The issues are large, deep, and vital to the preservation of our democracy.