



Simon Blackburn

Who's Afraid of Postmodernism?

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Many philosophers find it important to oppose the view known as “relativism”: the view that different perspectives on the world, or different languages or cultures, each have their own “incommensurable” truths. But it is surprisingly difficult to combat relativism. I can illustrate the difficulty by telling of something that recently happened to a friend of mine. He was present at a high-powered ethics institute, which had put on a forum, in which representatives of the great religions held a panel. First the Buddhist talked of the ways to calm, the mastery of desire, the path of enlightenment, and the panelists all said “Wow, terrific, if that works for you that’s great.” Then the Hindu talked of the cycles of suffering and birth and rebirth, the teachings of Krishna and the way to release, and they all said “Wow, terrific, if that works for you that’s great.” And so on, until the Catholic priest talked of the message of Jesus Christ, the promise of salvation and the way to life eternal, and they all said “Wow, terrific, if that works for you that’s great.” But the priest thumped the table and shouted: “No! It’s not a question of if it works for me! It’s the true word of the living God, and if you don’t believe it you’re all damned to Hell!”

And they all said: “Wow, terrific, if that works for you that’s great.”

The joke here lies in the mismatch between what the priest intends—a claim to unique authority and truth—and what he is heard as offering, which is a particular avowal, satisfying to him, but only to be tolerated or patronized, like any other. The moral is that once a relativist frame of mind is really in place, nothing—no claims to truth, authority, certainty, or necessity—seem adapted to unseating it.

Postmodernism is a celebration of relativism. It is the movement that has actively embraced the collapse of standards that it takes this to imply. It opposes the self-image of us philosophers, just as the sophists and rhetoricians of Plato’s day opposed him.

We who work professionally with reason need to believe that we have a social role. And a satisfying role to adopt is that of the doctor of the soul: the cautious, correct watchdog of reason, the guardian whose job is to ward off the phantasms and superstitions of the night. British Prime Minister Harold Macmillan records going up to Oxford at the time of the first world war, and having his first philosophy lecture begin with the words: “young men, when you leave this place you will take up many professions. Some of you will go into the civil service; some will be lawyers, teachers, or businessmen. Some will go into academic life. Except perhaps to this last group, nothing of what I am about to say will be the slightest use. Apart from this fact, if you pay attention, and you are diligent, then ever afterwards you will be able to tell when a man is talking nonsense.” That is the kind of story analytical philosophers such as myself like.

To be a watchdog for reason, you must be able to distinguish its friends and its enemies. Many people think they can do this quite easily, and sometimes

they are right. We all think we can recognize unreason in the National Inquirer, the flat earth society, in the religious right, in the 49% of Americans who believe that people are sometimes possessed by devils, or the three and a half million who believe themselves to have been abducted, at some time or another, by aliens. On the other hand we recognize reason in mathematics, physics, engineering, medicine, astronomy, tide tables. Other cases may be more controversial, and I am going to illustrate the difficulty by talking about one of them.

In the early summer of 1996 the postmodernist journal *Social Text* published an article by the physicist Alan Sokal, in an issue devoted to the "Science Wars." All we need at this point to know about those wars is that a good many scientists had become irritated by work in the history and sociology of science: work that ranged from the very mild – suggesting, for instance, that the course of science is influenced by such matters as funding, or by professional ambitions, or by traditions and habits and prestigious authorities, as much as by any inner logic of discovery – to the very spicy, suggesting for instance that science provides us with just one set of "narratives" among many, or that its theories do not admit of truth, or that physical reality is itself a social or linguistic construct. Those irritated liked to portray the historians etc. as ignorant of the science they pretended to describe. They felt they were being challenged by "a lot of kooky, anti-intellectual, politically correct, and subversive types." The historians etc. said that this defensive reaction was what you would expect. The scientists were protecting their authority, their funding, and their importance. The sociologists and historians greeted the scientists' protestations just like the panel greeted the Roman Catholic: if that works for you, that's great. That in turn is not an explanation likely to appeal to the scientists. So sides had been taken.

This was the climate into which Sokal floated his article, which rejoiced in the rebarbative title "Transgressing the Boundaries: Toward a Transformative Hermeneutics of Quantum Gravity." As the article was published Sokal revealed, in the academic "gossip" journal *Lingua Franca* that it was a spoof or hoax. The article, in Sokal's description, was written to test "whether a leading North American journal of cultural studies – whose editorial board includes as Frederick Jameson and Andrew Ross – would include an article liberally salted with nonsense if (a) it sounded good and (b) it flattered the editors' ideological preconceptions'." If I may mix a metaphor, the editors rose magnificently to the bait, and received the egg full in their face.

The result galvanized, and polarized the little world of academe. The editors tried to regain their trousers, but with little success. Stanley Fish, the doyen of cultural studies, wrote in the *New York Times* defending them and attacking Sokal. Various social theorists, and historians of science said that Sokal had unfairly put their whole discipline on trial. But dozens of scientists and others crowed in triumph over the sight of those kooky, anti-intellectual, politically correct, and subversive types shown up for the frauds that they really are.

Sokal's article is indeed a wonderful tissue of appalling stuff, and I have

no intention of defending the editors of *Social Text*, nor the genre that he brilliantly satirized. In fact, analytic philosophers of the kind I represent have been amongst the most virulent critics of postmodernist “theory.” We regard it pretty much as a sore on the western philosophical tradition. Our intellectual background is different. We owe our allegiances to Descartes, Locke, Hume, perhaps a small dash of Kant, and then the great lucid scientific philosophers of this century: Frege, Russell, Quine, Ayer and Austin. The postmodernists doff their hats in different directions: to Heidegger, or Foucault, or Lacan, Althusser or Derrida, perfectly unreadable continentals with an unfathomable devotion to Freud and Marx – an ideological devotion, capable of flourishing without any nutrition from the way of the world.

Postmodernism is a celebration of relativism. It is the movement that has actively embraced the collapse of standards that it takes this to imply. Here are some typical examples of postmodernist texts:

SARTREIST EXISTENTIALISM AND SURREALISM

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1. *Gaiman and precultural capitalism*

If one examines the textual paradigm of narrative, one is faced with a choice: either reject surrealism or conclude that the *raison d'être* of the artist is significant form. In a sense, several narratives concerning the role of the observer as artist exist. The subject is contextualised into a neopatriarchial nationalism that includes culture as a whole.

The characteristic theme of Long's[1] essay on Sartreist existentialism is the collapse, and subsequent futility, of postcapitalist sexual identity. Thus, Parry[2] suggests that we have to choose between surrealism and predialectic theory. Precultural capitalism implies that context must come from communication, but only if consciousness is interchangeable with culture.

“Society is part of the rubicon of reality,” says Marx. However, Bataille suggests the use of the capitalist paradigm of narrative to analyse sexual identity. If surrealism holds, we have to choose between precultural capitalism and neomaterial textual theory.

“Narrativity is dead,” says Derrida. But Baudrillard uses the term “precultural capitalism” to denote a self-referential paradox. The subject is contextualised into a dialectic paradigm of discourse.

Thus, if Sartreist existentialism holds, we have to choose between surrealism and postcapitalist nihilism. The subject is contextualised into a precultural capitalism that includes sexuality as a reality.

THE POSTMODERNISM GENERATOR

THE GENRE OF SEXUAL IDENTITY: MODERNISM AND STRUCTURALIST NEOTEXTUAL THEORY

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1. Expressions of stasis

“Class is intrinsically meaningless,” says Sartre. Bataille’s analysis of modernism suggests that sexuality serves to entrench hierarchy, given that reality is equal to sexuality. However, the primary theme of the works of Madonna is the role of the participant as reader.

The futility, and thus the meaninglessness, of structuralist neotextual theory depicted in Madonna’s *Material Girl* emerges again in *Erotica*, although in a more mythopoetical sense. It could be said that Pickett[1] holds that we have to choose between the textual paradigm of narrative and neocapitalist narrative.

Several theories concerning modernism exist. Therefore, if dialectic preconceptualist theory holds, the works of Madonna are an example of self-sufficient feminism.

1. Pickett, T. D. (1986) *Modernism in the works of Glass*. O’Reilly & Associates.

Well, these aren’t actually postmodernist texts. They are the beginnings of essays, coming from the web at <http://www.elsewhere.org/cgi-bin/postmodern/>. This site provides an original essay, every visit, written by The Postmodernist Generator, a program due to a student in the Monash University Department of Computer Science and “modified slightly by Pope Dubious Provenance XI using the Dada Engine, a system for generating random text from recursive grammars.” The pages are, deliberately, meaningless.

So that’s the enemy, and a good one to fight it is. More than that, when Sokal went on to explain what his motives were, and who his targets were, much of what he said was true and appropriate. He lamented the general ignorance of science in the culture. He lamented poor science teaching. He deplored the superstitious ignorance of many Americans, and their tendency to believe in possession by devils, astrology, or the healing power of pyramids. He disliked “thinkers” who cannot distinguish, for instance, the question of whether solid states physics accurately describes things like transistors, from the question of whether military considerations motivated the research. Most

importantly, he feared that genuine left-wing political progress needs to mistrust postmodernism rather than welcome it. For example, it takes rigorous history to refute the fictions of reactionary and nationalistic movements, and a general disinclination to distinguish truth from fiction is no substitute. Conversely, belief that "postmodernism" has somehow deconstructed the very notion of truth is a convenient handhold for anyone needing to resist rational criticism, whether Hindu nationalists arguing against Western science, or right-wing historians arguing that there never was a Holocaust.

I thoroughly applaud these attitudes, and this choice of targets. So, my initial leanings are to the side of Sokal and the scientists, and against the wild writings of postmodernism. And indeed, analytical philosophers who till the same fields as I do and whose work I admire, notably Paul Boghossian, have drawn their own moral, which is very firmly on that side. We are the real guardians, and philosophy is only safe in our hands, and is not safe in the hands of the Continentals. We, analytic philosophers, believe in the real world, respect science, worship truth, objectivity, logic, reason. They, the Continentals, do not believe in the real world, do not respect science, do not worship truth, logic, objectivity and reason. And typically they do not do so for the same reason that those other enemies of academic values, the religious right, do not do so. They want to politicize the issues. It is only by denigrating the proper values that govern science and inquiry that they can pursue their own outrageous political and moral agendas, without having to take notice of the real world.

However, the late Dr. Leavis said of a similarly polarized academic quarrel, "Here, the sides line up quickly, and wherever this is so we may suspect that the differences have little to do with thinking." And although as I say many of my instincts are on the "scientific" side, or on Boghossian's analytic side, which, slightly facetiously, I shall call the right as opposed to the social constructivists etc. who make up the left, I nevertheless fear that *l'affaire Sokal* illustrated Leavis' dictum. Why?

First, although I am not defending them, let me say a few words on behalf of the hapless editors of *Social Text*. Remember Sokal tells us that his hoax tested the hypothesis that the editors would publish an article liberally salted with nonsense if (a) it sounded good and (b) it flattered the editors' ideological preconceptions. And the implication of his success, he thinks, is that, since the article was accepted "a silent tide of unreason threatens to overwhelm our institutions of higher learning, and to dictate from a pulpit of blind, intolerant, righteous ignorance what we may correctly do, say and think."

But is the description of the experiment fair, and does the experiment illustrate the threat?

Well, it is true as I have said that the article is liberally salted with nonsense, that it sounds good, and that it expresses certain kinds of "left" ideological preconceptions, which presumably belong to the editors. Sokal says, and I believe him, that "I intentionally wrote the article so that any competent physicist or mathematician (or undergraduate physics or math major) would realize that it is a spoof." "Evidently," he charges "the editors of *Social Text*

felt comfortable publishing an article on quantum physics without bothering to consult anyone knowledgeable in the subject.”

All this sounds bad. But let us look a little closer. The article comes from a Professor of physics. But it does not even purport to be an article on, i.e. contributing to, quantum physics. It purports to be an article explaining the philosophical and, potentially, the political implications of quantum physics. Now that may sound to be a fine distinction, but in fact it is not. Articles contributing to quantum physics are properly refereed by physicists. But an article purporting to explain its implications is a different thing. The editor of a journal of sociology or philosophy might suppose, surely, that a Professor of physics would get the physics right. Thus, to imagine a case which thank heavens never happened, when I was editing the journal *Mind*, had an article from a professor of history come in, purporting to relate, say, some contested aspect of Locke’s work to the English revolution of 1688, I would have had to assess the philosophical side myself, but I might quite well have taken the history for granted. That is what historians are supposed to be good at. So when, for instance, Sokal pointed out that the article talked of morphogenetic fields, “a bizarre New Age idea” that has no place in quantum gravity, and said nonsensical things about such matters as frames of reference, fields, locality or nonlinearity, I feel sorry for the editors, but not thus far scornful of them. If the physicists don’t get such things right, who will?

Things become a little more even when we realize, as well, that those on Sokal’s side are a little apt to misdescribe things. Thus, one of the most horrendous pieces of nonsense, gleefully highlighted by both Sokal and by Paul Boghossian, involves a mathematical absurdity. “Later in the article” says Sokal in his description in *Lingua Franca*, “I propose that the axiom of equality in mathematical set theory is somehow analogous to the homonymous concept in feminist politics....even readers without mathematical training might well be suspicious of the claim that the axiom of equality reflects set theory’s nineteenth century liberal origins.” Indeed they might. Boghossian also quotes the passage, and uses it to show that the editors were guilty of publishing things of which they understood nothing. I am not of course denying that the passage is blissfully potty. But whereas Sokal says that it occurs “later in the article” and Boghossian says that it is a passage from Sokal’s essay, the truth is that in the obvious sense of the words, it doesn’t occur in the article or essay at all. It is buried in a footnote to the essay, number 54, which occurs after a gigantic eleven pages of dense notes (of course, part of what Sokal was parodying was the mishmash of notes and “references” that lend false authority to writings in the postmodernist tradition, and a good target it is). Still, it seems at least possible that the editors just didn’t get that far. Sliding something by in a footnote is not new. And, incidentally, although the footnote is quite indefensible as it stands, there is at least a discernible train of thought in it, namely that since Paul Coven proved in 1966 that the axiom of choice is independent of the other axioms of Z-F set theory, alternatives to Z-F plus the axiom of choice are possible; since there are alternative mathematics of the transfinite, it is possible

that there is something blinkered or in need of explanation, if mathematicians only explore one of them. Maybe the others deserve their day in court. That much, at least, would have been understood by Gödel, who in a classic article in the philosophy of mathematics, argued that only the unpopular hyperrealism about mathematics, known as Platonism, and which he believed in, justified the belief that there was one correct mathematics of the continuum.

But we are still quite a long way from the heart of the issue. To come closer to it, I shall mention another slightly tendentious piece of reporting. In the “science wars” the principal irritant to scientists is any suggestion that their work is other than “objective,” which they interpret as meaning that the things they describe are not “real.” When the sociologists etc. say, for instance that scientific reality is a social construct, a good red-blooded scientist is going to react exactly like Samuel Johnson, kicking a stone, and saying that thus he refuted Berkeley. Now near the beginning of Sokal’s article he includes things that not only “sound good” on this issue, but actually are quite good. That is, he includes an extensive quotation from Heisenberg, and a shorter one from Niels Bohr, each testifying that in quantum mechanics we cannot separate the reality observed from the process of observation. Heisenberg is quoted as saying:

We can no longer speak of the behaviour of the particle independently of the process of observation. As a final consequence, then, natural laws formulated mathematically in quantum theory no longer deal with the elementary particles themselves, but with our knowledge of them. Nor is it any longer possible to ask whether or not these particles exist in space and time objectively.

Sokal describes this as just a “controversial” philosophical pronouncement – perhaps part of the postmodernist haze. Boghossian says that “in support of [the constructivist idea] Sokal adduces nothing but a couple of pronouncements from physicists Niels Bohr and Werner Heisenberg, pronouncements that have been shown to be dubious by sophisticated discussions in the philosophy of science over the past fifty years.” The implication is that Sokal had picked up a couple of perhaps wild sayings by perhaps crackpot philosopher-physicists, now outdated.

Well, no. What Sokal quoted is the lynchpin of the “Copenhagen” interpretation of quantum mechanics. The interpretation is debatable, certainly, and indeed has been the focus of intense discussion for more than fifty years, and formed the topic of the famous exchanges between Bohr and Einstein in the nineteen-thirties. But Heisenberg and Bohr’s view is not just dubious. On the contrary, it is actually orthodox. The Copenhagen interpretation is the dominant one, standard in textbooks, and accepted almost as gospel amongst working quantum physicists. It has been very widely supposed that Einstein, the realist, lost that particular battle, and that further results, such as Bell’s theorem, confirm that verdict. Realist, or so-called “hidden variable” theories exist, but at least until very recently have never been very popular, and I do

not think that sophisticated philosophical discussion has turned any tides here. So, far from taking in the editors with a way-out piece of crackpot philosophy, Sokal was in fact appealing to authority as impeccable as any scientist could wish, in the murky field of the foundations of quantum theory. Even in a later postscript to his piece (*Dissent*, Fall 1996) Sokal continues to lump Heisenberg and Bohr together with “sundry physicists and New Age authors” as “vulgarizers” of the conceptual problems raised by quantum mechanics. But they are more than that.

The point here is that it is essential to the polarized debate that there is absolutely nothing to be said for the other side. The scientific capture of reality, objectivity and truth has to be quite flawless, and the sociologists etc. perfect crackpots. But Bohr and Heisenberg don't fit in that picture, so it must be pretended that they are merely a fifth column, useful only as a lure to flush out the madmen on the other side. Yet that is itself a serious distortion of the picture.

As an aside I might mention that an impressive case has recently been made for retaining realism in quantum mechanics, denying that there is an observation-dependent event of the collapse of the wave packet, but at the cost of accepting a static “block universe” view of nature.¹ Unfortunately for those of a realist bent, on this account causation and time themselves become “perspective-relative,” constructions or projections from the perspective of certain kinds of being such as ourselves. One can imagine the Dr. Johnson response to that.

So, one must be a little cautious about accepting at face value all the flattering accounts of what Sokal actually did. What of the implications, or interpretation of his experiment?

Here once more we must be a little careful. To drive home the point that they really are insane, Sokal invites his opponents to try transgressing the laws of nature, which they are supposed to regard as social conventions, “from the windows of my apartment (I live on the twenty-first floor).” But this is poor philosophy, the tedious challenge to skeptics perhaps best answered on behalf of Pyrrhonists by Pierre Bayle: “they never denied, that in the ordinary Conduct of Life, men ought to trust to the testimony of their senses. They only denied, that the absolute nature of objects is just the same as it appears to be.” People refused to jump off high places long before Newton or Einstein, and our reluctance is no evidence for the status of physical laws. Heisenberg and Bohr did not make a habit of defenestrating themselves.

It is certainly fair of Sokal, or those on his side, to ask any social constructivist exactly what he does think about the way in which science answers to experience. And sometimes the answers may be extremely poor. But that is no excuse for finding the question and the answer simple. In fact, on the “realist” side, the last philosophical movement to find the question and its answer simple was, I suppose, logical positivism which professed for a short time an attachment to “protocol sentences” – what Quine later called the fancifully fanciless medium of unvarnished news – and to a single, authoritative “logic of science” or confirmation theory determining how theory is supported by the

unvarnished news. But very few philosophers of science could now be found who subscribe to either part of that account, and for excellent reasons.

Does the success of the hoax suggest that a “silent tide of unreason threatens to overwhelm our institutions of higher learning, and to dictate from a pulpit of blind, intolerant, righteous ignorance what we may correctly do, say and think”? Evidently, if the sleep of reason creates monsters, the defense of reason needs to do so as well – here, the monsters of the PC police, censoring and silencing truth in the name of politics. Does poor Social Text fit this picture?

Perhaps. There is certainly a whiff of unreason about a climate in which the drivel in Sokal’s essay can get published in an academic journal. But what about the rest: the dictatorship angle? It is a strange charge when one thinks about it. The social constructivists etc. typically emphasize pluralities of speech, alternative ways of thinking and categorizing and reacting to the world. They are not in the business, one would have thought, of intolerance, but rather of toleration. Freshman relativism is a “don’t care” attitude, not a dictatorial one. Naturally, if it is just a question of political spectrum, the left has its censors, just as much as the right does. But it is hard to see why a philosophy that insists, rightly or wrongly, upon the social construction of our ways of knowing the world, should ipso facto seem to be in the business of censoring anyone. On the contrary one might predict – and I think one would be right – that those who find epistemology easy and universal, who think that the World plus Universal Reason entail their beliefs, would be more impatient of alternatives. Historically, those who believe that they have a monopoly on truth are the ones who believe they have the right to silence dissent.

And in fact, because of their financial clout, scientists can be quite good at doing this. The April 8th 1995 issue of the journal *New Scientist*, for example, reported that the Smithsonian museum had to fight off attacks from Burton Richter, the President of the American Physical Society, and threats from the American Chemical Society to withdraw support, when it mounted an exhibition on “Science in American Life” to which they objected. It previously did have to withdraw an exhibition marking the fiftieth anniversary of Hiroshima, when an alliance of veterans, congressmen, and scientists protested against inclusion of photographs taken in the city after the bomb dropped, and showing something of what atomic weapons do to things and people. There was no hint that the photographs were doctored, or untruthful, just that they showed things that certain spokesmen for science would have preferred the public not to see. According to the *New Scientist* report, the “Science and American Life” exhibition was “balanced almost to the point of being innocuous” but this did not matter. By suggesting, for example, that “scientists are vulnerable to vanity and greed,” or that they sometimes work for the military, or by mentioning words like Bhopal or Chernobyl, the exhibition became anathema. Only uncritical worship is allowed. Against such a background, it is perhaps unwise to suggest that only the social philosophy camp have censorious leanings.

But let us turn from these melancholy events to some of the philosophy. What are the rights and wrongs of the postmodernist attack on cherished

notions like reality, objectivity, reason, and truth? Are these notions safe, but only safe, in the hands of scientists and analytical philosophers?

We could start in a number of places, but it may be convenient to fix on the publication of Thomas Kuhn's *The Structure of Scientific Revolutions*, as a pivotal moment. In round terms we can see the history like this. Before Kuhn, it was possible to believe in protocol sentences and confirmation theory. That was the darling of the logical positivists, the theory that would tell which beliefs or theories were confirmed by some given data. It would show how experience ought to generate belief. To transgress the norms of confirmation theory would be irrational; to obey them would be to be rational. But confirmation theory proved to be a broken reed. Even for Carnap, its greatest explorer, it was evident that the way confirmation worked was relative to the language in which things are framed (roughly, because the more hypotheses we can form, the less support the evidence gives to any one of them). Further problems – Hempel's paradox, Goodman's paradox – merely confirmed this kind of relativity. It seemed then that there could be no single authoritative algorithm for transmuting experience into theory.

Many philosophers and scientists took refuge in the Popperian solution, saying that what was good about science was not that it enabled you to come to believe what is true, but that it at least enabled you to reject what is false. There is a grain of truth here, provided we do not oversimplify what may be involved in falsification: the processes of scene-setting and background fixing necessary before theory can be brought into anything resembling naked contact with experience. And provided too, that we are happy to see the actual applications of science as leaps of faith, akin to blind exercises of hope.

But in fact we do not think like that, and a realist like Sokal cannot recommend that we do. Science is not a self-contained, self-referential hypothetico-deductive game. It produces knowledge, but knowledge is not the outcome of the process Popper describes. And it is here that Kuhn showed a way forward. Instead of a pure mathematical algorithm, representing reason common to all, we find instead only heavily conceptualized human inquirers. These work within traditions, they select data, they work with a specific conception of what counts as a reason for what. They have had to learn what kind of theory looks promising, what simply won't fly, what "paradigms" or models of how things are likely to be, to trust. The thing that transmutes experience into theory is not a shiny, a priori, stainless steel chute inside all of us, but nothing less than the whole specifically trained, shaped, and perhaps idiosyncratic human being, seeing things in whichever ways his or her language, experience, and traditions make salient.

Kuhn's work chimed in with a great deal else going on at the same time, and pointing to the same morals. Wittgenstein's work on language games and rule-following highlighted the contingencies behind the ways we see things "as" one thing or another, or see new applications of terms as cases of applying one rule or many. Quine highlighted the indeterminacies in translation, and thence in meaning. So people began to talk of different conceptual schemes not related by way of consistency or contradiction, but "incommensurable"

with each other, talking past one another. And stepping from one to the other would be an act of conversion, a “paradigm shift” rather than accumulation or diminution of truth.

Kuhn himself never said clearly how his picture related to ideals of objectivity and rationality. Was he implying that scientific theorizing was neither? Others certainly took that line. But in fact the connection is obscure, as I can illustrate with a standard example. Consider the enterprise of making a map of a landscape. Kuhn reminds us of the choices that are explicit or implicit in such an undertaking. A cartographer can make a geological map, a map of physical geology, an economic map, small scale, large scale, and so on. There is no one map of a landscape. And the cartographer's enterprise is under-specified, if her instruction is just to map the landscape truly. Truly, yes, but how? What to select, what to leave out: what is salient, what is relatively unimportant? And that in turn will depend upon the intended use of the map.

Notice that none of this implies that there is no landscape, or no “real” landscape. On the contrary, the comparison of science to map-making is used by two of philosophy's arch-realists, Leibniz himself (no scientific or mathematical slouch), and the father of analytical philosophy, Frege. Nor does it imply that maps cannot be better or worse, more or less accurate, more or less comprehensive, more or less useful. It gives us a handy example of paradigm shifts and incommensurability, however: to visualize the landscape in the light of an economic map is just different from doing so in the light of a geological map. Not better or worse, just different. But to visualize it in the light of some maps – false maps – means going wrong.

I like the map-making analogy, but it can be attacked both from the right, and from the left. I shall begin with the leftist, or social constructionist problem with it.

Frege used the analogy to support realism, for the reality and independence of the landscape should not be in doubt. But why do we think this? Primarily because we have available an authoritative way of comparing maps with landscapes. Crudely, we go and look, and what we find, as we use our perceptual faculties on the landscape, either accords with the map or it does not. We can compare the two things, map and landscape, and if the one accords with the other, all is well. But if we are talking of our epistemological faculties in general, no such direct comparison ever happens, and since Descartes very few philosophers have believed that it does. None of the Cartesians in France, nor Leibniz, Bayle, Berkeley, Hume, Kant, Russell or Wittgenstein would think of perception like that. Now these are not kooky types, denying that you can verify a map. Rather, they are trying to give an adequate account of what verifying a map involves, and it turns out to involve, in their view, more than simple absorption of the landscape into the mind. Seeing the landscape, observing it, they would say, involves work of the mind: it involves seeing it as, for instance, colored or cultivated or containing a westward strike of igneous rock, or whatever. We find some of these judgments easier to make than others, in the light of familiarity, training, interpretive traditions, or custom and habit.

We find some positions – that of looking, for instance – authoritative, and in their light correct hypotheses or descriptions made from less favored positions. But we don't thereby escape from the human business of making judgment, into a different realm of naked confrontation with self-interpreting fact.

When we come to theoretical science, the problem of a “comparison” model is more obvious. If you have a theory, say, of the size or shape of the universe, you can hope, certainly, that it is verifiable or falsifiable in the light of observations. But these observations won't be anything like a comparison of, on the one hand what the theory says (the map) and on the other hand, what the size actually is. Because the theory is the only arbiter on offer of what the size actually is. As it is often said, we cannot jump outside our own skins, or obtain an independent, objective point of view from which to determine how well our theories are mirroring the world.

None of this is “anti-science,” of course. On the contrary, the scientist becomes duly credited, not only with making observations or accumulating facts, nor even with dreaming up theories and mechanically checking them against facts. He or she becomes credited with creating ways of seeing: creating the very concepts, such as mass, acceleration, energy, and so on, with which we can classify and organize and appreciate the facts for what they are.

Still, the strand in philosophy known as “idealism,” of which “social constructionism” is a descendant, takes this ubiquitous work of the mind to suggest that the reality itself, insofar as we can understand it or do anything with it, is a “construct” of the mind. The real fountainhead is Kant:

Hitherto it has been assumed that all our knowledge must conform to objects. But all attempts to extend our knowledge of objects by establishing something in regard to them a priori, by means of concepts, have, on this assumption, ended in failure. We must therefore make trial whether we may not have more success in the tasks of metaphysics, if we suppose that objects must conform to our knowledge. This would agree better with what is desired, namely, that it should be possible to have knowledge of objects a priori, determining something in regard them prior to their being given. We should then be proceeding precisely on the lines of Copernicus' primary hypothesis. Failing of satisfactory progress in explaining the movements of the heavenly bodies on the supposition that they all revolved round the spectator, he tried whether he might not have better success if he made the spectator to revolve and the stars to remain at rest. A similar experiment can be tried in metaphysics, as regards the intuition of objects. If intuition must conform to the constitution of the objects, I do not see how we could know anything of the latter a priori; but if the object (as object of the senses) must conform to the constitution of our faculty of intuition, I have no difficulty in conceiving such a possibility.²

(Kant, incidentally, was not given to jumping out of twenty-first floor windows either).

But the move from Kant to Kuhn is easy to see. If we continue to take seriously the contribution of the mind to the world-as-we-know-it, and we lose faith in the unique, a priori (stainless steel) structures that the mind imposes – a loss of faith encouraged by every development in science since Kant – then we end up emphasizing the way the world, as it is for us, is a “contingent” – that is, interpreted, social or linguistic – “construction.”

Well, that may not be the best way to put where we end up. Idealists have always had trouble finding the right words. They know full well that they have to deal with the “incredulous stares” of realists. The problem is to say that, for instance, photons or gravitation, or for that matter continental drift or the age of the dinosaurs, are “social constructions” without either sounding mad, or retreating to something bland, such as the uncontroversial view that the language with which we talk about them is a social construction.

Does all this preserve room for reason, objectivity, truth? Yes, but it may do so only at the cost of stripping them of some of their Platonic luster – taking off their stainless steel ornaments, as it were. Thus a plausible view, endorsed by Boghossian in his *Times Literary Supplement* article, is that we can divide the cake. It is a creative act, or a feature of a tradition, or in general contingent and culturally determined which concepts or principles for organizing experience we latch onto. But there freedom stops. There is then no room for creativity, and it is the world itself that determines whether our application of those concepts is true or false. Our pre-existent actions generate rules, and the rules determine what we can now say. We form the rules, but what we predict by means of them is determined as true or false by the world independently of us. Meaning comes down to us, but then truth is down to the world.

There may eventually be something right about this view, surely, but as Boghossian knows, it is not only the kooky types who find the division of labour, to use his word, dubious. Many analytical philosophers, for the last thirty years, have doubted whether it is true because they have failed to see how it could be true. The difficulty is foreshadowed in the analytic tradition in work by Russell, Goodman, and Quine and clusters around Wittgenstein’s “rule following considerations.” The burden of his work is that you can envisage different learners, each given the same training in the application of a term to things, but who then surprisingly diverge in future applications. They have picked up different dispositions to apply the terms: it is as if they associate them with different rules, and we could say that they understand them differently. But such rules are not themselves uninterpreted realities that our practices can simply be seen to bump against. The rules are not there constraining practices, but are constantly re-read and refigured in the light of practices. Yet in the light of one rule, applying the term is correct, in the light of the other, incorrect. The problem with the simple division of labor is that truths are not assessable independently of understanding. There is no contact between mind and truth that is not contaminated by understanding, and if understanding is endlessly

reinterpretable, then so is any truth that we can articulate, which means all the truths we know.

I have put the argument at its most simple. In actually contested cases the application of a term will not be a matter of a particular individual's "arbitrary" or subjective disposition, but of a collaborative, and competitive process, a political process. That is, the contending parties will be engaged in a public process of reinterpreting the history in such a way that their own solution becomes seen as natural or inevitable (calling a proposal arbitrary or subjective is in fact just a crude move in this practice). Each may claim to have identified a "core" of hard usage that supports only their preferred extension. But, according to the "interpretive turn," and in light of the rule-following considerations, the selection of a core and a principle for extending it to cover this or that case is already an act of interpretation. This argument blocks an easy separation between anthropocentric, soft and culturally tainted rules, on the one hand, and hard reality and truth on the other. It looks as if, when rules go soft, applications go soft with them. So victory over idealism is postponed for another round.

This is not a "kooky" piece of theory, but a version of one of the oldest oppositions in philosophy – that between Plato and the sophists or relativists, or between philosophy itself and its disreputable cousin, rhetoric. Plato believed himself to have won, but then as any historian would remind us, Plato wrote the history. Boghossian himself deploys, in his article, one very common rejoinder to the relativistic line of thought, the famous "peritrope" whereby Plato turned the tables on Protagoras and Gorgias. The argument is presented to someone who says, for instance that truth is relative to us or our ways. "You say that," goes the rebuttal, "but then you must admit that my contrary statement, that truth is absolute, is true for me, or relative to my ways. In that case, there is nothing superior about your view to mine. Each is true relative to its own standpoint, and I am free to go on believing that truth is absolute."

Versions of this argument have been popular in recent philosophy. Hilary Putnam uses it, while nevertheless himself steering perilously close to some kind of relativism. I am often surprised at this, for the argument was forcibly rebutted by William James, himself as lurid a social constructivist or relativist as you could find. James writes:

Only the believer in the ante-rem brand of truth (absolutism) can on this theory seek to make converts without self-stultification. But can there be self-stultification in urging any account whatever of truth? Can the definition ever contradict the deed? "Truth is what I feel like saying" – Suppose that to be the definition. "Well, I feel like saying that, and I want you to feel like saying it, and shall continue to say it until I get you to agree." Where is there any contradiction? Whatever truth may be said to be, that is the kind of truth which the saying can be held to carry.³

James goes on to remark that the temper, i.e. the enthusiasm with which the definition is trumpeted is an extra-logical matter: "the humanist (postmodernist, relativist) is perfectly consistent in compassing sea and land to make one proselyte, if his nature be enthusiastic enough." The point is that enthusiasm for the definition or the approach can perfectly properly laugh at the peritrope, for the aim is not to show the absolutist that he is wrong, but to convert him. True, the issue becomes a political one, one of whose rhetoric or "force" overcomes the other, but the postmodernist rejoices in that conclusion. He or she thinks that the movement from one discourse to another is typically political in its essence. It is never a case of "reason" as an abstract force winning, but only of ordinary human influences on mind and action. It was the opponent who wanted to see only the workings of objectivity and truth. So the Platonic defence against extending the relativistic view is, to use Boghossian's own word again, dubious.

It would be nice if analytical philosophy had shown us a way out of this labyrinth, but I do not think it has done so.

So far I have been largely sympathizing with the "left" and doing something to puncture the triumphalism of the right. But naturally the left is just as capable of as much or more unreason. I suppose that the central monster to fight in this case is an inference. It is the inference from the bare possibility of alternative concepts, alternative classification, points of salience, paradigms, or traditions, to the view either that we know what these are like, or that we know that they would be as good as whatever is now on offer, or that what has kept the ones we do have working is "merely" a kind of conspiracy of elitist white males who have the right conservative power. Thus some radical feminists speak in terms of there being no "objective" science, merely a variety of perspectives, one of which – patriarchal science – has been "valorized" and "empowered" so as to preclude until now the possibility of a feminist science.

Now although James, or Kuhn, Quine or Wittgenstein may be taken to suggest that alternative ways of thinking are always possible, none of them do anything to suggest that they can be had for free. Wittgenstein's comparison between use of a concept and the mastery of a technique may help us here. To adopt any scheme of description, be it of history, or nature, or numbers, involves sensitivity to the norms governing the scheme. The norms may, as we have admitted, be subject to indeterminacy, to reinterpretation, and to change. It may be contested what they are. But in our minds they have to be something, in order to distinguish the production of thought from the production of noise. A technique cannot be had for free: in particular it cannot be had without sensitivity to the distinction between correct and incorrect application of terms: truth and falsity. This is why, whatever else they are trying to say, no postmodernist is well-advised to deny a distinction between rigorous history (or physics or mathematics) and fiction. Doing so does not reevaluate thought, but denies its possibility.

Thus it may be true that in principle, someone might approach, say, the phenomena of electromagnetism with a different conceptual tool-kit from Faraday

and Maxwell. So long as we have no idea what this way might be – and it would take a genius of Maxwell's order even to begin to indicate it – then suggesting that Maxwell's equations were arbitrarily selected, valorized or empowered for external, political reasons, is crazy. They were valorized and empowered first because they struck all those who had investigated electromagnetic phenomena as working, and second because they were, and remain, the only game in town.

(Similarly, suggesting that a new way of thinking about electromagnetism would inevitably be of help to progressive political causes is equally crazy. Far the most likely upshot of any such new way would be that its actual equations have no political implications at all, for the same reason that pure theory in other non-social sciences has none. The social order is not the topic of physics. But that is not to say that the enterprise of producing it, or that of applying it, would have no social and political implications, and in fact of course it would, just like any other human activity).

I want to conclude by cutting one philosophical layer deeper than we have done so far. It is quite clear in these battles that very powerful emotions are engaged: emotions perhaps disproportionate to the strength of the arguments on offer. How should we think about this? I suggest that a useful comparison is with a well-known “gestalt switch” that can happen in our personal interactions, highlighted by Peter Strawson in his famous article “Freedom and Resentment.” Suppose I am earnestly putting forward my view of something to someone. They are supposed to be listening, to be evaluating what I say, to be thinking whether they share my approach, share my attitudes and beliefs. But suppose instead that I become aware that they are regarding me “objectively,” like a specimen or a phenomenon: someone, or perhaps better some thing that is there, as Strawson put it, to be “manipulated, controlled, or managed.” They regard my words not as potential bearers of truth or falsity, but as the causal upshot of forces of which I know nothing, like symptoms of an unsuspected disease. This is, in a very obvious way, the stuff of nightmare. By so regarding me they strip me of my humanity. It is as if I am mad. If all the world were deaf to my voice in this way, I would doubtless actually go mad.

The scientist, I am suggesting, or the rigorous historian, or for that matter the analytic philosopher, feels this fear when confronted with the historian or sociologist. They feel like an adolescent earnestly explaining the virtues of his or her style of life, and realizing that their parents are not listening, only appearing to do so insofar as this helps to calm the animal. Similarly the postmodernist comes on as having seen through the actual content – if indeed there is any – of what is being put forward, to the real plane, conceived as that of social forces or hormones or other causes, that lie behind the production of speech or text. Suddenly, instead of my remarks mattering because they represent a view of nature, they are diagnosed as symptoms of my place in the social order: the sayings you would expect from a middle class white male of a certain age, for instance.

No wonder, then, that the stakes are high. These monsters represent one of

our deepest fears, the fear of being stripped of humanity. We can do it to each other. But we shouldn't, until the process of understanding – the process of seeing the matter as the person who is being interpreted sees it – has ground to a halt. It is only then that the external, objectifying stance is called upon, to provide an explanation that the actual conduct of the discipline fails to provide. As Collingwood clearly saw, it is only the failures of science and history and other subjects, at particular periods, that call for the “objectifying” stance. If, for example, a culture holds beliefs about some matter of fact that bear no relation to the truth, then, but only then, we have to look to other explanations of why they held them. The postmodernist may be at fault for objectifying too quickly the scientist or historian. But then, the scientist or historian may be at fault for doing it to the postmodernist: for supposing, say, that it only social or political factors in the academy that cause the popularity of feminist or other standpoints. (I came across a splendid recent example of this pointed out by the reviewer of a book by the anti-feminist writer Christine Hoff Sommers. The reviewer pointed out that having inveighed against social and political explanations of the acceptance of beliefs, Hoff Sommers goes on to speculate about why feminists and others go in for such explanations, and cites, not surprisingly, social and political explanations of the kind she has just been discounting).

The standpoint from which you advance explanation without understanding denies the human standpoint, the standpoint of *Geisteswissenschaften* rather than *Naturwissenschaften*. But the standpoint of human thought is a delicate and amazing thing, the more wonderful the more we think about it. We should thank the Kuhns and Wittgensteins, Quine and James and their successors, for reminding us of the wonderful nature of the reasoning, truth seeking and truth-delivering person. And if we feel proper gratitude, I think we will find that we are surrounded by persons, not monsters.

What can we learn from this little storm? Perhaps an old moral, voiced in the *New Essays on Human Understanding*. Leibniz gives his spokesman Theophilus a speech which starts by echoing Locke's views on toleration:

What we are justified in censuring are not men's opinions but their immoderate condemnation of the opinions of others...

But Leibniz qualifies his liberalism:

An exception should be made of opinions which advocate crimes which ought not to be tolerated; we have the right to stamp these out by stern measures – even if the person who holds them cannot shake himself free of them – just as we have the right to destroy a venomous beast, innocent as it is. But I am speaking of stamping out the sect, not the men, since we can prevent them from doing harm and preaching their dogmas.⁴

We might find the qualification more sinister than the toleration. And it is certainly easy to believe that one's opponents are committing crimes against reason. The scientists will believe it of the postmodernists. And they will believe it not of scientists practicing science, but of scientists practicing the religion of science and the defence of its economic and political hegemony. Standing in the middle is extremely dangerous, but I fortify myself by believing that it is the only place from which no monsters are visible, which also makes it the reasonable place to be.

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¹ Huw Price, *Time's Arrow and Archimedes' Point*, New York: Oxford University Press, 1995.

² Immanuel Kant, *Critique of Pure Reason*, trans. by Norman Kemp Smith, London: Macmillan, 1963, Bxvi-xvii.

³ William James, "Humanism and Truth" in *The Meaning of Truth*, New York: Longmans, 1909, p. 48.

⁴ Leibniz, *New Essays on Human Understanding*, ed. Peter Remnant and Jonathan Bennett, Cambridge: Cambridge University press, 1966, para. 462.