Why Mizrahi Needs to Replace Weak Scientism With an Even Weaker Scientism

Bernard Wills, Memorial University of Newfoundland and Labrador


Short url: https://wp.me/p1Bfg0-3WS (provided by WordPress)
Moti Mizrahi has been defending something he calls ‘weak scientism’ against Christopher Brown in a series of exchanges in the Social Epistemology Review and Reply Collective. His animus seems to be against philosophy in particular though he asserts that other disciplines in the humanities do not produce knowledge either. He also shows remarkable candor in admitting that it all comes down to money: money spent on philosophy would be better spent on the sciences because scientific knowledge is better qualitatively (i.e. because it makes true predictions) and quantitatively (scientists pump out more stuff than philosophers). (11)

Measuring Success

As he tells us: “Scientific knowledge can be said to be qualitatively better than non-scientific knowledge insofar as such knowledge is explanatorily, instrumentally and predictively more successful than non-scientific knowledge.” (Mizrahi; 7). Furthermore: “Scientific knowledge can be said to be quantitatively better than non-scientific knowledge insofar as scientific disciplines produce more impactful knowledge- in the form of scholarly publications-than non-scientific disciplines (as measured by research output and research impact)” (7)

The relevance of this latter claim seems to me unclear: surely by a quantitative measure, Shakespeare scholars have all of us beat.¹ A German professor once told me that in the first half of the 20th Century there were 40,000 monographs on Franz Kafka alone! I will not, however, spend time scratching my head over what seems a tangential point. The quantity of work produced in the sciences would be of little significance were it not valuable by some other measure. No one would think commercials great works of art on the grounds that there are so many of them.

Then again some concerned by the problem of over-specialization might view the sheer quantity of scientific research as a problem not an advantage. I will focus, then, on the qualitative question and particularly on the claim that science produces knowledge and all the other things we tend to call knowledge are in fact not knowledge at all but something else. I will then consider Mr. Mizrahi’s peculiar version of this claim ‘weak scientism’ which is that while there may be knowledge of some sort outside of the sciences (it is hard, he thinks, to show otherwise) this knowledge is of a qualitatively lesser kind.

He says this is so “in certain relevant aspects”. (10) I’m not sure what he means by this hedge. What makes an aspect relevant in this context? I will proceed though on the assumption that whatever these relevant aspects are they make for an over-all context independent superiority of science over non-science.²

---

¹ Does Mirhazi mean to say that if a particular sub-discipline of English produces more articles in a given year than a small subfield of science then that discipline of English is superior to that subfield of science? I’m sure he does not mean to say this but it seems to follow from his words.

² The qualitative superiority of science must be based on the value of its goals firstly (like curing disease or discovering alien life) and, secondly, its superiority in achieving those goals over all other methods. The discussion surely assumes that the things done by science must be worth doing more than their opposites. The question has of necessity an axiological component in spite of Mizrahi’s claim to the contrary (9). This means the values of science must be commensurable with the values of non-science if we are to say one is better
Of course, were I a practitioner of the hermeneutic of suspicion I would point out the glaring conflict of interest in Mr. Mizrahi making these claims from the fastness of a technical institute. If someone pops up claiming that only half the university really earns its keep it is a little bit suspect (if not surprising exactly) when that half of the university happens to the very one in which he resides. I might also point out the colonialist and sexist implications of his account, which is so contrived to conveniently exclude all sorts of ‘others’ from the circle of knowledge. Is Mr. Mizrahi producing an argument or a mere rationalization of his privilege?

However, as Mr. Mizrahi seems unlikely to be overly impressed by such an analysis I will stick to something simpler. Does science alone produce knowledge or do other epistemic forms produce knowledge as well? This is the question of whether ‘strong scientism’ is correct. Secondly, if strong scientism is not correct does weak scientism offer a more defensible alternative or does it suffer from the same drawbacks? Accordingly, I will refute strong scientism and then show that weak scientism is vulnerable to precisely the same objections.

**Politicized Words and Politicizing Ideas**

There are dangers to antagonizing philosophers. We may not be pulling in the big grants, true, but we can do a great deal of damage regardless for when the ‘scientific class’ is not accusing philosophy of being useless and ineffectual it is accusing it of corrupting the entire world with its po-mo nonsense. This is because one of the functions of philosophy is the skeptical or critical one. When scientists go on about verification and falsification or claim the principle of induction can be justified by induction philosophers perform the Socratic function of puncturing their hubris. Thus, one of the functions of philosophy is deflationary.

A philosopher of science who makes himself unpopular with scientists by raising questions the scientist is unequipped to answer and has no time for anyway is only doing her job. I think this is a case in point. Since Descartes at least we been fascinated by the idea of the great epistemic purge. There is so much ‘stuff’ out there claiming to be knowledge that we need to light a great bonfire and burn all of it. This bonfire might be Cartesian doubt. It might be ‘scientific method’. Either way all the ‘pretend’ knowledge is burned off leaving the useful core. This may well be a worthwhile endeavour and in the time of Descartes it surely was.

---

overall than the other. Not only must science be instrumentally superior at answering scientific questions it must answer the questions of other disciplines better than those disciplines. Otherwise one is simply making the innocuous claim that science answers scientific questions better than geometry or rhetoric can. Mizrahi marshals only one example here: he tells us that the social sciences produce more knowledge about friendship than philosophy does. (19) Of course this assumes that philosophers and social scientists are asking the same or at least commensurable questions about friendship but even if I grant this there are still a vast multitude of instances where this is manifestly not the case, where non-scientists can produce better explanations on non-trivial questions than scientists can. I shall note some of these below.

3 Mr. Mizrahi might consider, though, whether ideological self-critique might, after all, be a useful way of acquiring self-knowledge (which may not be so contemptible an attainment after all).

4 This is the ‘Schrodinger’ phenomenon where an antagonist makes two contradictory accusations at once. (https://davewebster.org/2018/02/28/schrodingers-snowflake/) For what seems to be the *fons et origo* of this narrative see Theocharis and Psimpoulos “Where Science Has Gone Wrong” *Nature* (1987).
However, I suspect this tradition has created a misleading impression. The real problem is not that we have too little knowledge but too much: as a phenomenologist might say it is a saturated phenomenon. Knowledge is all around us so that like bats our eyes are blinded by the sun. This is why I find the idea that only scientists produce knowledge the very definition of an ivory tower notion that has no basis in experience. To show this let me make a list of the kinds of non-scientific knowledge people have.

As we shall see, the problem is not making this list long but keeping it short. I offer this list to create an overwhelming presumption that strong scientism at very least is not true (I shall then argue that weak scientism is in no better a case). This procedure may not be decisive in itself but I do think it puts the ball in the court of the ‘strong scientist’ who must show that all the things I (and most everybody else) call knowledge are in fact something else.

What is more, the ‘strong scientist’ must do this without violating the criterion of strong scientism itself: he cannot avail himself of any but scientific arguments. Moreover, he must show that science itself meets the criterion of knowledge he sets out which is not an easy task given such well known difficulties as the problem of induction. At any rate, *prima facie*, there seems overwhelming empirical evidence that strong scientism is incorrect: a claim so extraordinary should have an unusually strong justification, to paraphrase Hume. Let’s see if the ‘strong scientist’ can produce one.

**Making a Problem of “Results”**

To begin, I should point out is that there are bodies of knowledge that produce ‘results’ not through scientific method but through analysis and application to cases. Two prominent examples would be Law and Music Theory, practitioners of which use an established body of theory to solve problems like whether Trinity Western should have a law school or how Scriabin invented the ‘Prometheus chord’. What sense of ‘know’ can we appeal to in order to show that my daughter, who is a music theory student, does not ‘know’ that the Prometheus chord was derived from the over-tone series?

Secondly, there is knowledge about the past that historians uncover through the interpretation of primary documents and other evidence. In what sense do we not ‘know’ that the Weimar Republic fell? This claim is even more remarkable given there are sciences that deal with the past, like Paleontology, which ‘interpret’ signs such as fossils or tools in a manner much more like historians (there is hermeneutic judgment in science which functions no differently than hermeneutic judgment elsewhere).

Thirdly, there is first person knowledge which is direct. “Did that hurt?” asks the doctor because without accepting first-person reportage he cannot proceed with treatment. This is a kind of knowledge without which we could not even do science so that if Strong scientism wants to deny this is knowledge science itself will be the primary victim. Again science can go nowhere without direct factual knowledge (the strip turned green when I put it in water) that is not produced by science but which science itself rests upon.
What about know how? Craftsmen and engineers know all kinds of things by accumulated experience. They know how a shoe is made or what makes for good beer. They also built the Great Wall of China and the Pyramids. What are we to make of disciplines like mathematics, geometry or logic? What about ethical or aesthetic or critical judgments? In what sense does a translator not ‘know’ Japanese? Does anyone really think literature scholars don’t ‘know’ anything about the texts they discuss even on a factual level? What scientific justification does the claim “Marlowe did not write King Lear” have or even require? And while we are at it may well be that philosophers do not know much but they do know things like ‘logical positivism fails its own criterion of meaning’ or ‘Berkeley cannot be refuted by kicking a stone’. 5

It could well be that in regarding all the above as instances of knowledge I am missing something fundamental. If so I wish someone would point it out to me. Let’s take a hypothetical knower, Jill: Jill knows she is feeling cold, knows how to repair watches, knows why the Weimar Republic fell, knows how to speak Portuguese, knows there are 114 Surahs in the Quran, knows how Beethoven transformed the sonata form, has extensive topographical knowledge of places she has travelled, prefers the plays of Shakespeare to those of Thomas Preston, can identify Barbara as valid syllogism, considers racial prejudice indefensible, understands how attorney client privilege applies to the Stormy Daniels affair, can tell an stone age arrowhead from a rock, can comment on the philology of Hebrew, can explain the Quine/Duhem thesis and its relevance to the question of falsification, has written a commentary on Kant’s third critique and on top of all this is performing experiments in chemistry.

Strong scientism may be correct that only the last endeavour constitutes Jill’s ‘knowledge’ but on what grounds can it defeat what to me looks like the overwhelming presumption that Jill is not just a Chemist who wastes her time at hobbies but a genuine polymath who knows many things in many fields along with all the ordinary knowledge all humans possess?

Problems of Both the Strong and the Weak

The ‘strong scientist’ has surprisingly few options here. Will he point out that science makes true predictions? So have craftsmen for millennia. Further, many of these forms of knowledge do not need to make true predictions: I don’t need to test the hypothesis that there 114 Surahs in the Quran because I know already having checked.6 Is science more

---

5 The underlying question here is one of Platonism vs. Aristotelianism. Strong Scientism argues that there is one paradigmatic form of ‘knowledge in itself’. I argue the Aristotelian position that just as ‘being’ is said in many senses (Metaphysics; 9, 992b 15) so there are many analogical forms of knowledge. What all the things I have listed have in common is that each in its own peculiar way supports beliefs by appeals to evidence or other forms of justification. Everyday discourse may be wrong to use the word knowledge for these other forms of justified belief but I think the onus is on the ‘strong scientist’ to show this. Another thing I should point out is that I do not confuse the word knowledge to beliefs that are indefeasible: a knower might say “to the best of knowledge” and still be a knower. I say this to head off the problem of skepticism which asks whether the criterion of indefeasible knowledge (whatever it is said to be) is ever actually fulfilled. There are valid responses to this problem but consideration of them would take us far afield.

6 It is silly to imagine me hypothesizing the various numbers of Surahs the Quran could contain before testing my hypothesis by opening the book. Of course, if Mizrahi wishes, I can always put ordinary factual knowledge
certain of its conclusions? According to the post-Popper consensus at least, scientific statements are always tentative and revisable and in any case first person knowledge so surpasses it in certainty that some of it is arguably infallible. Is science more instrumentally successful?

Craftsmen and hunters kept the species alive for millennia before science even existed in difficult circumstances under which no science would have been possible. What is more some craft knowledge remains instrumentally superior to science to this day: no baseball player chooses a physicist over a batting coach.\(^7\) At any rate success is relative to one’s aims and lawyers successfully produce legal arguments just as philologists successfully solve problems of Homeric grammar.

Now as Aristotle would say science does have the advantage over craft of being explanatory but is explanation unique to science? No; because hermeneutic practices in history, literature, classics and so on also produce explanations of the meaning of things like documents and if the ‘strong scientist’ wants to say that these explanations are tentative and changing (abductions as it were not inductions) then the same is true of a great deal of science. In short, none of the features that supposedly make for the superiority of science are unique to science and some are not even especially exemplified by it. It seems then that there is no criterion by which scientific claims can be shown to be knowledge in a unique and exclusive sense. Until such a criterion is identified it seems to me that my initial presupposition about Jill being a polymath rather than a chemist with distractions stands.

Perhaps it is the awareness of such difficulties that leads Mizhari to his stance of ‘Weak Scientism’. It is not a stance he himself entirely sticks to. Some of his statements imply the strong version of scientism as when he tells us the knowledge is “the scholarly work or research produced in scientific fields of study, such as the natural sciences, as opposed to non-scientific fields, such as the humanities.” (22)\(^8\) Still, when pushed, he seems content with the position that all the things I mentioned above might count as knowledge in a weaker sense but that scientific knowledge is still better and, presumably, more worthy of grants. Unfortunately, the exact same objections which tell against strong scientism tell against weak scientism too. It is interesting that at this point Mizrahi employs a kind of knowledge I did in the form of a testable proposition. Open War and Peace and you will find it contains an account of the battle of Borodino. Why is a true prediction of this kind any different than a true prediction in science?

\(^7\) Here in fact we get to the nub of the problem. The ultimate problem with scientism weak or strong is that in the real world different knowledge forms interact with each other constantly. Science advances with the help of craftsmen as with the invention of the telescope. Craftsmen make use of science as when a running coach consults a physician. Archeologists and paleontologists employ abduction or hermeneutic reasoning. Art historians call on chemists while biologists call on the local knowledge of indigenous peoples. In a sense there is no such thing as ‘science’ pure and simple as other knowledge forms are inherent to its own structure (even deductive reasoning, the proper province of logicians, is essential to standard accounts of scientific method). This is one reason why, in fact, there is no one superior knowledge form but rather systematic interdependence of ALL knowledge forms.

\(^8\) This is not the only instance of Mizrahi, apparently, trying to use a persuasive definition to win what looks like a mere verbal victory. Of course you can define knowledge as “what the sciences do”, assign another word to “what the humanities do” and go home waving the flag of triumph. But why should any of the rest of take note of such an arbitrary procedure?
not discuss above: to defend weak scientism he appeals to the authority of textbooks! (17) These textbooks tell him that science is instrumentally successful, explanatory and makes true predictions. He then tells us that while other disciplines may also betray these traits they do not do so to the same extent so that any money spent on them would be better spent on science on the maxim of prudence (another knowledge form I did not discuss) that one should seek the most bang for one’s buck.

Mizrahi gains little by this move for the question immediately arises better how and at what? Better in what context? By what standard of value? Just take the example of quantity so favored by Mizrahi. Does science produce more knowledge that anything else? Hardly. As Augustine pointed out I can produce a potential infinity of knowledge simply by reflecting recursively on the fact of my own existence. (City of God, XI, 26) Indeed, I can do this by reflecting recursively on my knowledge of ANY fact. Similar recursive processes can extend our knowledge indefinitely in the field of mathematics.

Does science have (taken in bulk) more instrumental success than other knowledge forms? How would you even count given that craft knowledge has a roughly 3 million-year head start? This does not even count the successful record of problem solving in law, politics, or art.\(^9\) Is science more successful at explanation? Hardly, if science could solve problems in literature or history then these fields would not even exist. Science only explains the things it is good at explaining which is no more and no less than one can say of any other discipline. This is why many proponents of scientism tacitly assume that the explanations produced in other disciplines only concern frilly, trivial things that science needn’t bother about anyway.\(^{10}\)

Does science make more true predictions? Again how would you even count given that for millions of years, human beings survived by making hundreds of true predictions daily? What is more, the inductive procedures of science seem relatively useless in the many endeavours that do not involve true prediction but some other method of justification like deduction or direct observation.

Thus, weak scientism seems in no better a case than strong scientism for the same reasons: there is no clearly applicable, context-independent, criterion that shows the superiority the ‘weak scientist’ claims: certainty, instrumental success, utilitarian value, predictive power and explanation all exist elsewhere in ways that are often not directly commensurable with the way they exist in science. As I told someone once (who asserted the superiority of the

\(^9\) Again the problem is that the instrumental success of science rests on the instrumental success of a multitude of other things like the knowledge of bus schedules that gets us to the lab or the social knowledge that allows us to navigate modern institutions. No science tells us how to write a winning grant proposal or informs us that for as longs as Dr. Smith is chief editor of Widgetology the truth about widgets is whatever he says it is. Thus even if we confined the question to the last 50 years it is clear that science cannot claim instrumental superiority over the myriad other anonymous, unmarked processes that make science possible in the first place.

\(^{10}\) My son, when he was a toddler, ran about the playground proclaiming himself ‘the greatest’. When he failed at any task or challenge he would casually turn to his mother and say “well, the greatest doesn’t do that!” This seems to be the position of many proponents of scientism. If scientists cannot produce good explanations in a field like literature or classics, then it must be that those fields are not really knowledge.
French language over all others) French is indeed the best language for speaking French in.\textsuperscript{11} Science is the best way to do science.

**Why Make Science an Ism at All?**

Thus, if Mr. Mizrahi wants a thesis to defend it may well be possible to show that science is at least somewhat better on average at certain things than other approaches. He may call that ‘even weaker’ scientism. This would be to admit after all, that science is superior only in ‘certain relevant aspects’ leaving it to be inferred that it is not superior in others and that the ‘superiority’ that science demonstrates in one context, like particle physics, may vanish in another, like film criticism. If that is what ‘scientism’ amounts to then we are all proponents of it and it is hard to escape the impression that a mountain of argument has given birth to a mouse.

What is more, he informs us: “Brown admits that both scientific and philosophical theories are instruments of explanation. To provide good explanations, then, both scientific and philosophical theories must be testable.” (17) I suppose then it remains open to say that, after all, Joyce scholars ‘test’ their assertions about *Ulysses* against the text of *Ulysses* and are to that extent scientists. Perhaps, craftsmen, music theorists, historians and (gasp!) even philosophers, all in their various ways, do likewise: testing their assertions in the ways peculiar to their disciplines. Perhaps, then, all these endeavours are just iterations of science in which case Mirhazi’s mouse has shrunk to something the size of a pygmy shrew.

**Contact details:** bwills@grenfell.mun.ca

**References**


\textsuperscript{11} Aristotle made this point ages ago. No inquiry into ethics he tells can have the rigor of geometry any more than the geometer need employ the art of rhetoric. (*Nicomachean Ethics*, 3, 20,25) Ethics employs *phronesis* or prudential judgment not logical deduction. Each discipline is answerable to its own internal standards which do not apply outside that discipline. There is, then, no overall ‘super-science’ (like the Platonic dialectic) that embodies a universal method for dealing with all subjects. Aristotle’s world is pluralist, discontinuous and analogue. For this reason, scientists have tended to be Platonists and modern science might be viewed as the revenge of the Platonic/Pythagorean tradition against its wayward pupil. Contemporary philosophy of science, if this author understands it correctly, seems to have restored Aristotelian *praxis* to the center of the scientific enterprise. Students of Wittgenstein will no doubt appreciate the point that knowledge comes in as many varieties as games do and there is no more a single account of the first than there is of the second.