fact, value, God, and reality:
How Wittgenstein’s Ethics Clarifies the Fact-value Distinction and, in the Process, Perhaps Subverts a Scientific Holy War.

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**Fruitless Discussion**

Wittgenstein tells us why ontological, metaphysical, and theological discussions within the linguistic culture of scientific inquiry will always be fruitless. It is because participants in discussions of transcendental themes can never and will never specify the concepts they utilize to the degree that scientific discourse demands. Indeed, the very essence of a discussion of transcendental or metaphysical or absolute reality depends on the fact that it is a topic which can never be properly described. Even purveyors of exceptionally vivid religious descriptions of, say, the afterlife or the personality of God will still maintain the indescribable nature of their revealed Truth or God. Wittgenstein explains:

> I see now that these nonsensical expressions were not nonsensical because I had not yet found the correct expressions, but that their nonsensicality was their very essence. For all I wanted to do with them was just to go beyond the world and that is to say beyond significant language. (p. 296)

For Wittgenstein, discussions of “reality,” or “God,” or “Truth,” or “absolute goodness” are nonsense, not because they are not true, but because there is no way to understand them in a concrete real-world way. We cannot point to any object or phenomenon and say *that* is “reality”, or “God”, or “absolute value.” And if we can, then we have made the term relative to a situation and it therefore loses its transcendental or absolute quality.

If God is a person, or an experience, then science can evaluate God. If reality is a phenomenon or a perspective, then science can evaluate it. But it seems that words like ‘God’ and ‘reality’ and ‘goodness’ seek to express something greater—in fact, so great as to be beyond language. As such, we cannot really talk about them scientifically.ii

That said, scientists seem to want to talk about these things more and more recently.
The specter of Comte

Auguste Comte hoped to create a “religion of humanity” in which sociology would apply reason to solve social problems, determine values, and replace religious and philosophical traditions. Since Comte, natural and social scientists tend to balk at such lofty pursuits and often evoke the fact-value distinction to indicate that they wish to avoid the bothersome speed bumps of moral dogma, ethical riddles, or postmodernist relativism. Niggling religious and philosophical criticisms, not to mention historical attempts at worldly utopia, have long since derailed Comte’s dream of a sociology-based universal worldview.iii

Many working scientists think it nice to side-step the politics of, say, rituals of female genital mutilation and simply report what the practice entails, how often and where it occurs, and why it takes place.iv “Just the facts” is the mantra of serious scientists hoping to stand clear of culture warriors of the left, right, and in between. But maybe that isn’t so liberating after all. In fact, contemporary scientists complain about how the fact-value distinction is actually more constrictive to their science. They want to be able to condemn female genital mutilation (and other such bad things) as scientists and not just global citizens. They tell us that there is no such thing as a fact devoid of value (as do the postmodernists), but they crucially add that there should never be a value devoid of fact.

Assertion 1: A popular intellectual movement in the natural and social sciences argues that science can determine values, thereby calling into question the value and accuracy of the classical fact-value distinction.

Max Weber outlined a fashionable take on the fact-value distinction in his essay “Science as a Vocation,” which is still read by many graduate students as a general guide to scientific professionalism. Weber succinctly asserts

One can only demand of the teacher that he have the intellectual integrity to see that it is one thing to state facts, to determine mathematical or logical relations or the internal structure of cultural values, while it is another thing to answer questions of the value of culture and its individual contents and the question of how one should act in the cultural community and in political associations. (italics in original)v

In the modern era, there have always been philosophical debates about whether “ought” can be derived from “is,” but a growing number of natural and social scientists ponder whether Weber’s idea of the scientific
profession makes any sense or, for that matter, is good. They boldly assert their ethical duty to make explicit value judgments from what they know to be scientific fact.\textsuperscript{vi}

Sam Harris outlines the basic argument for a “science of morality” in \textit{Moral Landscape: How Science Can Determine Human Values}. Harris asserts that “the moment we admit that we know anything about human well-being scientifically, we must admit that certain individuals or cultures can be absolutely wrong about it.”\textsuperscript{vii} While Harris’s argument is not philosophically new, his achievement in book sales and, by inference, his influence is.\textsuperscript{viii}

In \textit{What is a Person?}, the sociologist Christian Smith echoes Harris’s disapproval of fact-value distinctions. Smith too worries that a science, or more specifically a social science, which eschews ethical responsibility is necessarily unethical. In support of this point, Smith contends that the fact-value distinction is itself unsupported by the facts. He urges:

One key to reconciling is and ought as well as fact and value after their needless divorces is to modify the common assumption that is and ought (and fact and value) are totally different and unrelated sorts of things. . . . Many philosophers today have come to think, to the contrary, that normative ideas are often entailed in descriptive statements, and that descriptive ideas are often involved in normative statements. The two are often mutually implicated.\textsuperscript{ix}

Consequently, does invoking the fact-value distinction make a scientist somehow dishonest? And might we even hold the scientist accountable for social ills when her scientific neutrality allows scientific language and technology to be misappropriated by bad people?\textsuperscript{x}

To protect the legitimacy of science and the well-being of humanity, both Smith and Harris want to open values up to scientific thinking. And they are not alone. Harris is linked to an intellectual movement widely known as “the New Atheism”; many writers aligned with this movement are professional scientists who feel a scientific certainty in how they answer questions of metaphysical truth. And Smith devotedly draws ideas from thinkers allied under the philosophical label of Critical Realism. Like the British philosopher Roy Bhaskar, who is a primary figure in the development of Critical Realism, Smith seeks to bring questions of ultimate reality into the language of science and incorporate his belief in ontological realism into the methods of social science.

Essentially, the movements of the New Atheism and Critical Realism contain scientists hoping to expand the domain of science to questions of ultimate value and truth.
Enter God

Assertion 2: Within the scientific movement to debunk the fact-value distinction emerge very different
glimpses of the ultimate nature of reality. Certain advocates appear committed to atheism while others
commit to theism.

The New Atheists necessarily disregard the fact-value distinction when proclaiming the scientific and
ethical superiority of atheism. They feel that the fact-value distinction is evoked chiefly to justify the intellectual
ridiculousness of religious believers, who decry any attempts that science makes to penetrate their bubble of
“faith.” But for the New Atheists, ultimate reality is godless and obviously so. Having established this firm
credo, the New Atheists move on to posit that science should be the sole arbiter of moral goodness. xi

Similarly, Critical Realists directly assert the veracity of ontological realism and its importance to the
foundation of science. But the essence of this ultimate reality is at direct odds with the reality of the New
Atheists. Roy Bhaskar, the father of Critical Realism, horrified some of his followers and pleased others, by
telling us exactly what reality entails. Bhaskar confides:

Ultimately the dialectic of self-realisation ushers in a dialectic of God-realisation, conveying (in one
sense or inflection of ‘God-realisation’) the conatus to the embodiment of heaven on earth. xii

And stipulates:

To reclaim and re-enchant reality, we only have to become what we really, essentially, truly, are and
will never cease to be, however occluded that realisation currently appears (italics in original). xiii

Bhaskar’s technique of “God-realisation” and his call to “re-enchant reality” provide us with some
sense of why an assertion of ontological realism is important to him—it is necessary in establishing that the
existence of God is compatible with contemporary science. Critical Realists who disagree with Bhaskar’s
epiphany need to either disown him, ignore him, or relinquish their ties to Critical Realism. But perhaps some
Critical Realists are relieved that these ideas were finally expressed, because many scientists in the Critical
Realist movement are religiously affiliated. xiv

So what are we to make of the fact that many of the scientists questioning the worth of the fact-value
distinction are either convinced atheists or committed theists? Is this the rumblings of a scientific holy war—a
battle between scientists about the essence or personality of transcendent reality?
While perhaps this cannot be labeled an out-and-out war, it is interesting that many high-profile scientists see the need to weigh in on the issue of something like God’s existence. Stephen Hawking, in his recent book *The Grand Design*, which is intended to explicate the current state of theoretical physics for a popular audience, directly addresses the idea of God and asserts a number of times that questions about the existence of the universe can be answered “without invoking any divine beings.”

But John Polkinghorne, a mathematical physicist turned Anglican priest, is unconvinced that God is unnecessary to understanding the universe and asserts that “the question of the existence of God is the single most important question we face about the nature of reality.” A self-proclaimed Critical Realist, Polkinghorne espouses a faith that science is ultimately about discovering or coming to better understand God.

The New Atheists are especially enraged when respected scientists, like Polkinghorne, enter into God talk. For instance, Harris lambasts Francis Collins, the director of the Human Genome Project, for his espoused faith, accusing him directly of “intellectual dishonesty.” And Harris dismisses Polkinghorne’s attempts to reconcile his theology with his science as “pseudoscience, pseudoscholarship, and pseudoreasoning.”

This kind of rebuke is feared by many scientists who are religious believers. Elaine Howard Ecklund reports that, unlike Collins and Polkinghorne, religious scientists tend to be quite secretive about their religious commitments. In *Science vs. Religion*, she investigates the religious beliefs of successful scholars and finds that faith is present in the halls of academia, but scarce and often shrouded. Because atheism and agnosticism are more prevalent in academic circles, religious academics are loath to speak openly about their inner faith.

Perhaps this explains why the religious yearnings of some Critical Realists seem written between the lines of their philosophizing about ontological reality. Bhaskar only recently revealed his theism, after a long and successful career in the philosophy of science. In contrast, the New Atheists are emboldened in their open distain for all faith. Their confidence is certainly a reaction to a lengthy history of suppression of non-belief. But the tides have long since turned in academia, for now the atheists speak with authority while the religionists shelter themselves from professional humiliation.

Still, the question of God’s existence remains salient among these scientists. While the popularity of the New Atheists indicates the current state of academia’s theological disposition, it by no means indicates a secular state of affairs. If such were to come to pass, academics would simply relegate religious matters to the private realm.
But both atheistic and theistic scientists who decry the fact-value distinction and advocate for a scientific commitment to ontological realism force the issue and seemingly demand a statement of faith from the rest of us. The New Atheists threaten to “out” scientists of faith as charlatans and the scientific philosophy of Critical Realism questions the intellectual and ethical integrity of scientists who continue to promote fact as distinct from value.

The Templeton Foundation also sees the need to bring questions of meaning, purpose, and faith to the forefront of popular discussions of science. In addition to generously funding research and writing which seeks to integrate theological, philosophical, and scientific thinking, it fosters open discussions about how science is related to faith. For instance, the Templeton Foundation asks a wide range of thinkers and scientists whether “science makes belief in God obsolete?” Answers range from physicist Victor Stenger’s forceful “yes” to physicist William Phillips’ “absolutely not!” to one of drollest responses from Christopher Hitchens, who argues “no, but it should.”

While these discussions are intellectually absorbing, rife with personal passions and currently of popular interest, do they enhance our scientific knowledge? This deserves consideration.

**Revisiting Fact-Value**

According to the classical or common conception of the fact-value distinction, judgments of ultimate value and metaphysical reality are outside the purview of science. But contemporary critics make a good point that the line between fact and value is much more blurry than proponents often pretend. Smith points out:

[The fact-value distinction] seems ultimately to derive from the nature of language and logic, which observe that descriptive and normative statements are simply different sorts of things and that there is something illogical or wrong about switching back and forth between them. But getting from that “is” to the eventual “ought” seems somehow to compromise the injunction of the is-ought problem. Smith is correct to remind us that even talking about what science should be concerned with is a discussion which asserts values. But this is still a very different kind of value discussion than one which ponders absolute values.

**Assertion 3:** Wittgenstein’s distinction between relative and absolute values offers a clearer way to think about the fact-value distinction.
Specifically, Wittgenstein contends that there are two distinct types of value statements. The first, statements of *relative value*, are sometimes indistinguishable from fact. In this way, statements about fact can and do assert values. Technically, this is not supposed to happen according to a rigid fact-value distinction, but it happens all the time. And, in fact, it is rarely controversial.

The second, statements of *absolute value*, have no relationship to fact. They utilize words that Wittgenstein maintains are ultimately indefinable in a concrete sense, although they may well illicit powerful emotions from listeners. For this reason, Wittgenstein asserts that these types of "language games"—in this specific instance, discussions containing words which purport to reference absolute values, absolute truth, and absolute beings—have no discernible relationship to fact.

If we are to believe Wittgenstein, it seems that a science which concerns itself with fact will automatically make relative-value statements but still cannot make absolute-value statements. Consequently, it is essential that we are able to tell the difference between absolute and relative values in order to conduct good science. Wittgenstein explains that statements of relative value are easy to spot:

> the word *good* in a relative sense simply means coming up to a certain predetermined standard. Thus when we say that this man is a good pianist we mean that he can play pieces of a certain degree of difficulty with a certain degree of dexterity.\(^{xxv}\)

As such, natural and social scientists can appropriately make relative-value statements and do all the time. For instance, the sociologist can say that one school is better than another because it more fully integrates students of different races. This statement asserts multiple value sentiments, but all have predetermined standards if we query the sociologist further. Why is a school better? Because it integrates. Why is integration desirable? Because it fosters understanding and cooperation between people of different races. Why do we want that? Because there is a history of conflict between people of different races and we want to end that. This line of questioning can go on forever but the sociologist will probably have answers to this infinite regress of questioning until the questioner lands on a reason that he or she considers foundational. It isn’t really foundational (because that would suggest an absolute value) but it is so commonly accepted as to be pragmatically silly to question. Who would want racial conflict?

Of course, it is possible that the listener wants conflict between racial groups for personal or political reasons. In this case, he or she rejects the predetermined standards of the sociologist out of hand. There is no
scientific need to reconcile this person’s individual hatred of racial harmony with the sociologist’s value statement. It can easily be re-expressed as “if you want to foster racial harmony, this type of school is a good way to do it.” Of course, another sociologist can question the accuracy of this statement with further empirical testing. For instance, further studies might find that integrated schools actually promote more racial conflict. In this case, the sociologist would have to amend her relative-value statement to fit the new data. And this is the very essence of relative values—they can be amended with new data.

Wittgenstein feels that relative-value statements are facts, as we understand the term ‘fact’ to refer to things in the world. As we come to better understand things in the world, relative-value statements change accordingly. But absolute values are a different category of things. He explains:

what I wish to contend is that, although all judgments of relative value can be shown to be mere statements of fact, no statements of fact can ever be, or imply, a judgment of absolute value. xx

Why? Because the concepts of absolute value, absolute truth, and absolute good are not “of this world.” For Wittgenstein, discussions concerning ultimate value and metaphysical reality invoke language and words which are necessarily nonsensical. This is not to say that things like God, ultimate reality, or absolute goodness do not exist, but we simply cannot scientifically define them.

But science can and does define relative values. We can define things like well-being, freedom, fairness, repression, democracy, totalitarianism, and dogmatism. I call these words relative values for two reasons. First, these words tend to communicate positive or negative connotations in ways that table, person, and sky do not. These connotations pervade normal usage of these terms with a high degree of moral consensus.xxi

Second, while they are not things in the world, they are still ideal types. As ideal types, we understand that their absolute forms do not exist outside of our minds. We recognize that there is no absolute democracy, no absolute well-being, no absolute freedom, and no absolute fairness. In contrast, absolute values supposedly exist independent of us in the fabric of reality.

If we treat relative values as ideal types then we can clearly outline the basic observable characteristics of each with the understanding that no phenomenon will meet all criteria perfectly. Natural and social scientists already openly discuss these kinds of things. For instance, medical scientists ponder when to actively end life, and in the process better define the value of well-being. Sociologists ponder the results of different legal
structures, and in the process better define the value of fairness. And political scientists ponder the relationship
between public opinion and policy outcomes, and in the process better define the value of democracy. This is
science informing values in a very real and influential way. Scientists shape values by giving more concrete
definitions to concepts already widely thought to be good or bad.

Do we need to invoke an absolute value to evaluate an assumed good? No. In fact, the efforts to do so
are so convoluted as to be counter-productive.

**Why science should not discuss absolute value**

*Assertion 4: Science should assert relative values but should remain mute concerning absolute values.*

*The fact-value distinction mainly works like this in practice, although this is a slightly more concise
statement of its intent.*

Scientists need a more refined rendering of the fact-value distinction, or more precisely, the *fact-absolute value
distinction* for two important relative value reasons. The fact-absolute value distinction enhances: 1) the
conceptual elegance of scientific discussions, and 2) the public authority of scientific discussions. Both of these
outcomes are *good*, as defined as the advancement of science.

Under the microscope of scientific inquiry, terms of absolute value only become less intelligible and,
thereby, less scientific. It is the equivalent of explaining why a joke is funny to someone who has not found it
funny—the explanation will not evoke laughter. As stated earlier, concepts like God, reality, and good are
absolute to the extent that the intention of the speaker is to leave them relatively undefined. If the scientist
attempts to define them, she is missing their point. In fact, their meaning lies wholly in the swirl of emotions,
imagery, and awe they invoke or fail to invoke in the listener.

While terms which intend to invoke the absolute are socially full of meaning, they are scientifically
meaningless. As such, scientists can only seek to understand how words which represent absolute values are
used and how they correlate with behavior. Seeking to parse out the logical meaning of a prayer to God, or the
basis of a universal good, or an assertion about ultimate reality is scientific folly. These are important social
language games but not subject to scientific validation or disconfirmation. John Searle explains:

Wittgenstein insists that we shouldn’t look for the *foundation* of language games any more than we
should look for foundations of games such as football or baseball. All of these are just human activities.
. . . A characteristic philosophical mistake is to think that there must be some foundation, some transcendental justification, for each language game.\textsuperscript{xxii} This is the mistake made by scientists hoping to justify their science-based value statements within a philosophy of realism. Their justifications become as scientifically hollow and philosophically confusing as those of religionists who point to the Bible or ideologues who point to Reason to justify their faiths. They are ultimately unconvincing because they point to something which is both obscure and unbounded by its very essence.

Consequently, discussions concerning absolute moral authority or the existence of God are scientific roadblocks. Saying that “God does not exist” or that “human well-being is an ultimate good” does not liberate the scientist but mires her in an endless pursuit of how to properly explicate the words of these sentences—words that exist to subvert clear definition. This seems to be the error of the Critical Realists. They are intent on understanding the distinction between what is “real” as opposed to what is “actual” as opposed to what is “empirical.” But to analyze these terms seems to burden us with endless foundational challenges rather than bring some new science to light. It is not a way forward but an enticement to chase our tails.

The error of the New Atheists is much more ironic. Their public attacks on God essentially undermine the popular authority of science—the opposite of their intent. We live in a religious world, even if most academics purport to be irreligious. With this in mind, it is not politically pragmatic or even humane to depict science as a force of secularization.\textsuperscript{xxiii} This will foster hatred of individual scientists and widespread suspicion of science.

Currently, the value and authority of science is largely unquestioned by popular culture, conservative religions, and even the most rarified academic elites. Certainly, there are religious conservatives that question the validity of evolutionary theory in debates about public school curriculum, there are corporations who plant seeds of public doubt concerning global warming, and there are erudite academics who question the philosophical foundations of science. But how many religious fundamentalist, corporate CEOs, and professional postmodernists actually eschew the luxuries of modern technologies or the miracles of modern medicine? Few at present. Beneath the surface of these political and personal attacks on the work and thought of professional scientists is a deep-held respect for science.

In fact, Creationists are obsessed with amassing scientific-sounding evidence for the story of Genesis. Corporations pay huge sums to individuals with scientific credentials so that they may refute the mounting
evidence for global warming in scientific-sounding language. And academics intent on undermining the foundations of science seek to appear as logical, rigorous, and disinterested as possible. These language games, while intent on diminishing the authority of professional scientists, ironically indicate a yearning to become what is popularly understood as science. Consequently, the best way to counter these religious and political agendas is with real science, published in peer-reviewed journals and books.

Science shows us that Creationism is not true, that global warming is real, and that a lack of philosophical foundations does not prevent science from finding tangible solutions to social and medical problems. But with these assertions we must be careful to point out that the words “true,” “real,” and “problem” can be precisely defined relative to particular scopes of inquiry, timeframes, and/or perspectives. In fact, part of science is showing how these statements are relative to situations. The New Atheists have made the error of pretending that science can evaluate and determine absolute value, and in doing so, undermine science’s public authority to evaluate and determine relative value.

The rhetoric and anti-religious agenda of the New Atheists provide the necessary evidence for Creationists and religious-based political movements to demonstrate that “scientists” are not objective, do not rely on facts, and should not be trusted. This is fodder that the devious few who hope to fool the uneducated with religious pseudo-science should never be given. In the end, the political platitudes of the New Atheists offer ignorant religionists justification in the guise of condemnation.

This is not to say that scientists should let religionists and political pundits get away with scientific hogwash. But by not treading into the realm of absolute value, scientists may be better able to define relative values and protect their science from being undermined by the agendas of hostile politicians and religious traditions.

Final Thoughts

On the topic of faith, Wittgenstein tactfully responded that it is something that “I personally cannot help respecting deeply and I would not for my life ridicule”. This is good advice. Scientists should not ridicule religious or transcendental language, not only because it is potentially offensive, but because religious and transcendental concepts paradoxically seek to express something which exists in a realm beyond language or, at
least, the language that scientists use. Is religious faith or a belief in ontological reality ultimately true? Science cannot say, because *ultimate truth* has yet to be defined.

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2 That said, we can still utilize ideal types. Because ideal types are understood not to have some transcendental quality, in that they are intellectual concepts which offer a means to group facts in new and interesting ways. Take “democracy”—it does not exist beyond but we can conjure up indicators of the concept.

3 Marxist-Leninism and Maoism are just two attempts at social perfection purported to be based in science and which have gone decidedly awry.

4 I utilize the example of female genital mutilation because it appears an oft-used illustration by those hoping to show that a moral relativism which seeks to accept all cultural practices is moribund. And obviously so, because who wants to morally defend something called female genital mutilation?


6 Within sociology, gender and race studies tend to assume and sometimes demand a shared moral perspective.


8 Harris’s book is on the best-seller list—quite a feat for a book which is largely a philosophical and personal diatribe and contains little if anything about the methods and findings of a “science of morality.”


10 Smith calls attention to historical examples of misappropriated science, such as “Eugenics Science,” Nazi experimentation, and the development of nuclear weapons (2010, p. 396).

11 This is mainly done by being better than religion or ideology at systematically determining the extent to which social policy and cultural traditions further our collective well-being.


13 Bhaskar 2000, p. 5.

14 For instance, prominent Critical Realist thinkers such as Bernard Lonergan (an economist and Jesuit Priest) and John Pokington (a physicist turned priest) are Roman Catholic.


17 Harris 2010, p. 167.

18 Smith 2010, p. 387.


21 Clearly, there can be people who will argue that “well-being” or “democracy” is bad. But even in international and influential hubs of value legitimation like the United Nations, these terms are assumed good.


23 This was actively done in the Soviet Union, China, and Cuba with very dismal results. The real world examples of trying to make a science out of atheism have all eventually undermined the intellectual freedom required to conduct science in the first place.