DOWNLOAD PDF IS SCIENCE VALUE NEUTRAL

Chapter 1 : Science is Not Value-Neutral: Why Some Preventable Diseases Are Unpreventable

Therefore, the ideal science is presumed to be value-free or value-neutral. The value in this context specifically refers to 'moral values' not 'cognitive values'. In other words, science has to adhere to cognitive values but not to the moral values.

Page 6 Share Cite Suggested Citation: On Being a Scientist: Responsible Conduct in Research, Second Edition. The National Academies Press. He was using methods that were accepted by the astronomical community as the best available at the time, and his results were accepted by most astronomers. But in hindsight he relied on a technique so susceptible to observer effects that even a careful investigator could be misled. The fallibility of methods is a valuable reminder of the importance of skepticism in science. Scientific knowledge and scientific methods, whether old or new, must be continually scrutinized for possible errors. Such skepticism can conflict with other important features of science, such as the need for creativity and for conviction in arguing a given position. But organized and searching skepticism as well as an openness to new ideas are essential to guard against the intrusion of dogma or collective bias into scientific results. Scientist must also make complex decisions about the interpretation of data, about which problems to pursue, and about when to conclude an experiment. They have to decide the best ways to work with others and exchange information. Much of the knowledge and skill needed to make good decisions in science is learned through personal experience and interactions with other scientists. But some of this ability is hard to teach or even describe. Many of the intangible influences on scientific discoveryâ€”curiosity, intuition, creativityâ€”largely defy rational analysis, yet they are among the tools that scientists bring to their work. When judgment is recognized as a scientific tool, it is easier to see how science can be influenced by values. Consider, for example, the way people judge between competing hypotheses. In a given area of science, several different explanations may account for the available facts equally well, with each suggesting an alternate route for further research. How do researchers pick among them? Scientists and philosophers have proposed several criteria by which promising scientific hypotheses can be distinguished from less fruitful ones. Hypotheses should be internally consistent so that they do not generate contradictory conclusions. Their ability to provide accurate experimental predictions, sometimes in areas far removed from the original domain of the hypothesis, is viewed with great favor. With disciplines in which experimentation is less straightforward, such as geology, astronomy, or many of the social sciences, good hypotheses should be able to unify disparate observations. Also highly prized are simplicity and its more refined cousin, elegance. Other kinds of values also come into play in science. Historians, sociologists, and other students of science have shown that social and personal beliefsâ€”including philosophical, thematic, religious, cultural, political, and economic beliefsâ€”can Page 7 Share Cite Suggested Citation: The nineteenth-century geologist Charles Lyell, who championed the idea that geological change occurs incrementally rather than catastrophically, may have been influenced as much by his religious views as by his geological observations. He favored the notion of a God who is an unmoved mover and does not intervene in His creation. Such a God, thought Lyell, would produce a world in which the same causes and effects keep cycling eternally, producing a uniform geological history. In some cases the answer has to be "yes. The field of eugenics used the techniques of science to try to demonstrate the inferiority of certain races. The ideological rejection of Mendelian genetics in the Soviet Union beginning in the s crippled Soviet biology for decades. Despite such cautionary episodes, it is clear that values cannotâ€”and should notâ€”be separated from science. The desire to do good work is a human value. So is the conviction that standards of honesty and objectivity need to be maintained. The belief that the universe is simple and coherent has led to great advances in science. If researchers did not believe that the world can be described in terms of a relatively small number of fundamental principles, science would amount to no more than organized observation. In the Soviet scientist Boris Valdimirovich Derjaguin lectured in England on a new form of water that he claimed had been discovered by another Soviet scientist, N. Formed by heating water and letting it condense in quartz capillaries, this "anomalous water," as it was originally called, had a density higher than normal water, a viscosity 15 times that of normal water, a boiling point higher than degrees Centigrade, and a

freezing point lower than zero degrees. Over the next several years, hundreds of papers appeared in the scientific literature describing the properties of what soon came to be known as polywater. Theorists developed models, supported by some experimental measurements, in which strong hydrogen bonds were causing water to polymerize. Then the case for polywater began to crumble. Because polywater could only be formed in minuscule capillaries, very little was available for analysis. When small samples were analyzed, polywater proved to be contaminated with a variety of other substances, from silicon to phospholipids. Electron microscopy revealed that polywater actually consisted of finely divided particulate matter suspended in ordinary water. Gradually, the scientists who had described the properties of polywater admitted that it did not exist. They had been misled by poorly controlled experiments and problems with experimental procedures. As the problems were resolved and experiments gained better controls, evidence for the existence of polywater disappeared. Page 8 Share Cite Suggested Citation: The empirical link between scientific knowledge and the physical, biological, and social world constrains the influence of values in science. Researchers are continually testing their theories about the world against observations. If hypotheses do not accord with observations, they will eventually fall from favor though scientists may hold on to a hypothesis even in the face of some conflicting evidence since sometimes it is the evidence rather than the hypothesis that is mistaken. The social mechanisms of science also help eliminate distorting effects that personal values might have. They subject scientific claims to the process of collective validation, applying different perspectives to the same body of observations and hypotheses. The challenge for individual scientists is to acknowledge and try to understand the suppositions and beliefs that lie behind their own work so that they can use that self-knowledge to advance their work. Such self-examination can be informed by study in many areas outside of science, including history, philosophy, sociology, literature, art, religion, and ethics. For example, a particular circumstance might compromiseâ€”or appear to compromiseâ€”professional judgments. Maybe a researcher has a financial interest in a particular company, which might create a bias in scientific decisions affecting the future of that company as might be the case if a researcher with stock in a company were paid to determine the usefulness of a new device produced by the company. Or a scientist might receive a manuscript or proposal to review that discusses work similar to but a step ahead of that being done by the reviewer. These are difficult situations that require trade-offs and hard choices, and the scientific community is still debating what is and is not proper when many of these situations arise. Virtually all institutions that conduct research now have policies and procedures for managing conflicts of interest. In addition, many editors of scientific journals have established explicit policies regarding conflicts of interest. These policies and procedures are designed to protect the integrity of the scientific process, the missions of the institutions, the investment of stakeholders in institutions including A CONFLICT OF INTEREST John, a third-year graduate student, is participating in a department-wide seminar where students, postdocs, and faculty members discuss work in progress. An assistant professor prefaces her comments by saying that the work she is about to discuss is sponsored by both a federal grant and a biotechnology firm for which she consults. In the course of the talk John realizes that he has been working on a technique that could make a major contribution to the work being discussed. But his faculty advisor consults for a different, and competing, biotechnology firm. How should John participate in this seminar? What, if anything, should he say to his advisor-and when? What implications does this case raise for the traditional openness and sharing of data, materials, and findings that have characterized modern science?

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Chapter 2 : Leslie Stevenson, Is scientific research value-neutral? - PhilPapers

More Essay Examples on Science Rubric Values and truth, and science have always been the two contending forces; the two opposing forces; the forces that do not see eye to eye with each other.

Product and Process Objectivity Objectivity is a value. To call a thing objective implies that it has a certain importance to us and that we approve of it. Objectivity comes in degrees. Claims, methods and results can be more or less objective, and, other things being equal, the more objective, the better. The admiration of science among the general public and the authority science enjoys in public life stems to a large extent from the view that science is objective or at least more objective than other modes of inquiry. Understanding scientific objectivity is therefore central to understanding the nature of science and the role it plays in society. Given the centrality of the concept for science and everyday life, it is not surprising that attempts to find ready characterizations are bound to fail. For one thing, there are two fundamentally different ways to understand the term: According to the first understanding, science is objective in that, or to the extent that, its productsâ€"theories, laws, experimental results and observationsâ€"constitute accurate representations of the external world. The products of science are not tainted by human desires, goals, capabilities or experience. According to the second understanding, science is objective in that, or to the extent that, the processes and methods that characterize it neither depend on contingent social and ethical values, nor on the individual bias of a scientist. Especially this second understanding is itself multi-faceted; it contains, inter alia, explications in terms of measurement procedures, individual reasoning processes, or the social and institutional dimension of science. The semantic richness of scientific objectivity is also reflected in the multitude of categorizations and subdivisions of the concept e. If what is so great about science is its objectivity, then objectivity should be worth defending. The close examinations of scientific practice that philosophers of science have undertaken in the past fifty years have shown, however, that several conceptions of the ideal of objectivity are either questionable or unattainable. This article discusses several proposals to characterize the idea and ideal of objectivity in such a way that it is both strong enough to be valuable, and weak enough to be attainable and workable in practice. We begin with a natural conception of objectivity: We motivate the intuitive appeal of this conception, discuss its relation to scientific method and discuss arguments challenging both its attainability as well as its desirability. We then move on to a second conception of objectivity as absence of normative commitments and value-freedom, and once more we contrast arguments in favor of such a conception with the challenges it faces. The third conception of objectivity which we discuss at length is the idea of absence of personal bias. After discussing three case studies about objectivity in scientific practice from economics, social science and medicine as well as a radical alternative to the traditional conceptions of objectivity, instrumentalism, we draw some conclusions about what aspects of objectivity remain defensible and desirable in the light of the difficulties we have discussed. Objectivity as Faithfulness to Facts The idea of this first conception of objectivity is that scientific claims are objective in so far as they faithfully describe facts about the world. In this view, science is objective to the degree that it succeeds at discovering and generalizing facts, abstracting from the perspective of the individual scientist. Although few philosophers have fully endorsed such a conception of scientific objectivity, the idea figures recurrently in the work of prominent 20th century philosophers of science such as Carnap, Hempel, Popper, and Reichenbach. It is also, in an evident way, related to the claims of scientific realism, according to which it is the goal of science to find out the truths about the world, and according to which we have reason to believe in the truth of our best-confirmed scientific theories. While the experiences vary, there seems to be something that remains constant. The object in front of a person does not, at least not necessarily, disappear just because the lights are turned off. There is a conception of objectivity that presupposes that there are two kinds of qualities: The latter are the objective properties. Thomas Nagel explains that we arrive at the idea of objective properties in three steps Nagel The first step is to realize or postulate that our perceptions are caused by the actions of things on us, through their effects on our bodies. The second step is to realize or postulate that since the same properties that cause perceptions in us also have effects on other things and can exist without causing any perceptions at all, their

true nature must be detachable from their perspectival appearance and need not resemble it. Many scientific realists maintain that science, or at least natural science, does and indeed ought to aim to describe the world in terms of this absolute conception and that it is to some extent successful in doing so for a detailed discussion of scientific realism, see the entry on scientific realism. There is an immediate sense in which the absolute conception is an attractive one to have. If two people looking at a colored patch in front of them disagree whether it is green or brown, the absolute conception provides an answer to the question e. By making these facts accessible through, say, a spectroscope, we can arbitrate between the conflicting viewpoints viz. Another reason for this conception to be attractive is that it will provide for a simpler and more unified representation of the world. To the extent, then, that science aims to provide explanations for natural phenomena, casting them in terms of the absolute conception would help to realize this aim. Bernard Williams makes a related point about explanation: A third reason to find the view from nowhere attractive is that if the world came in structures as characterized by it and we did have access to it, we could use our knowledge of it to ground predictions which, to the extent that our theories do track the absolute structures, will be borne out. A fourth and related reason is that attempts to manipulate and control phenomena can similarly be grounded in our knowledge of these structures. To attain any of the four purposesâ€”settling disagreements, explaining the world, predicting phenomena and manipulation and controlâ€”the absolute conception is at best sufficient but not necessary. We can, for instance, settle disagreements by imposing the rule that the person who speaks first is always right or the person who is of higher social rank or by an agreed-upon measurement procedure that does not track absolute properties. We can explain the world and our image of it by means of theories that do not represent absolute structures and properties, and there is no need to get things absolutely right in order to predict successfully. No matter how desirable, it is clear that our ability to use scientific claims to represent all and only facts about the world depends on whether these claims can unambiguously be established on the basis of evidence. We test scientific claims by means of their implications, and it is an elementary principle of logic that claims whose implications are true need not themselves be true. It is the job of scientific method to make sure that observations, measurements, experiments, testsâ€”pieces of the scientific evidenceâ€”speak in favor of the scientific claim at hand. Alas, the relation between evidence and scientific hypothesis is not straightforward. By making these theories more and more verisimilar, that is, truthlike, scientific knowledge grows over time e. If this picture is correct, then over time scientific knowledge will become more objective, that is, more faithful to facts. However, scientific theories often change, and sometimes several theories compete for the place of the best scientific account of the world. It is inherent in the above picture of scientific objectivity that observations can, at least in principle, decide between competing theories: This position has been adopted by Karl R. Popper, Rudolf Carnap and other leading figures in broadly empiricist philosophy of science. Many philosophers have argued that the relation between observation and theory is way more complex and that influences can actually run both ways e. The most lasting criticism, however, was delivered by Thomas S. Kuhn provided several historical examples in favor of this claim. Can observations undermine such a paradigm, and speak for a different one? This hypothesis has two important aspects. First, the meaning of observational concepts is influenced by theoretical assumptions and presuppositions. In other words, Kuhn denies that there is a theory-independent observation language. Second, not only the observational concepts, but also the perception of a scientist depends on the paradigm she is working in. Practicing in different worlds, the two groups of scientists [who work in different paradigms, J. Where a Ptolemaic astronomer like Tycho Brahe sees a sun setting behind the horizon, a Copernican astronomer like Johannes Kepler sees the horizon moving up to a stationary sun. If this picture is correct, then it is hard to assess which theory or paradigm is more faithful to the facts, that is, more objective. The thesis of the theory-ladenness of observation has also been extended to the incommensurability of different paradigms or scientific theories, problematized independently by Thomas S. Kuhn [] and Paul Feyerabend For instance, the Special Theory of Relativity appears to be more faithful to the facts and therefore more objective than Newtonian mechanics because it reduces, for low speeds, to the latter, and it accounts for some additional facts that are not predicted correctly by Newtonian mechanics. This picture is undermined, however, by two central aspects of incommensurability. First, not only do the observational concepts in both theories differ, but the principles for specifying their

meaning may be inconsistent with each other Feyerabend Second, scientific research methods and standards of evaluation change with the theories or paradigms. A meaningful use of objectivity presupposes, according to Feyerabend, to perceive and to describe the world from a specific perspective, e. Only within a peculiar scientific worldview, the concept of objectivity may be applied meaningfully. That is, scientific method cannot free itself from the particular scientific theory to which it is applied; the door to standpoint-independence is locked. As Feyerabend puts it: Therefore Kuhn later returned to the topic of scientific objectivity, of which he gives his own characterization in terms of the shared cognitive values of a scientific community. For a more profound coverage, see section 4 in the entry on theory and observation in science , section 3 in the entry on the incommensurability of scientific theories and section 4. There is a sense in which the claim that this relation is problematic is not so surprising. Scientific theories contain highly abstract claims that describe states of affairs far removed from the immediacy of sense experience. This is for a good reason: But surely, one might think, the evidence itself is objective. So even if we do have reasons to doubt that abstract theories faithfully represent the world, we should stand on firmer grounds when it comes to the evidence against which we test abstract theories. Theories are seldom tested against brute observations, however. This too is for good reason: Genuine scientific theories are tested against experimental facts or phenomena, which are themselves unobservable to the unaided senses. Experimental facts or phenomena are instead established using intricate procedures of scientific measurement and experimentation. We therefore need to ask whether the results of scientific measurements and experiments can be aperspectival. Collins, a prominent sociologist of science, claims that in order to know whether an experimental result is correct, one first needs to know whether the apparatus producing the result is reliable. But what he does argue is that the experimental results do not represent the world according to the absolute conception. Rather, they are produced jointly by the world, scientific apparatuses, and the psychological and sociological factors mentioned above. The facts and phenomena of science are therefore necessarily perspectival. In a series of contributions, Allan Franklin, a physicist-turned-philosopher of science, has tried to show that while there are indeed no algorithmic procedures for establishing experimental facts, disagreements can nevertheless be settled by reasoned judgement on the basis of bona fide epistemological criteria such as experimental checks and calibration, elimination of possible sources of error, using apparatuses based on well-corroborated theory and so on Franklin , The main issue for us in this debate is whether there are any reasons to believe that experimental results provide an aperspectival view on the world. According to Collins, experimental results are co-determined by the facts as well as social and psychological factors. According to Franklin, whatever else influences experimental results other than facts is not arbitrary but instead based on reasoned judgment. What he has not shown is that reasoned judgment guarantees that experimental results reflect the facts alone and are therefore aperspectival in any interesting sense. But they argue more than that. Not only is perspectivality the human condition, it is also a good thing to have. This is because perspectives, especially the perspectives of underprivileged classes, come along with certain epistemic advantages.

Chapter 3 : What is meant by the term â€œvalue neutralityâ€•? (in sociology)? | Yahoo Answers

I think science can be value neutral in theory. If the fact/value distinction holds, and science only discovers facts, then value judgments are separate from what science discovers. The charge that science is often filled with value judgments is correct, but that is more a point on science in practice than science in theory.

Is science value neutral or not? Essay - Paper Example Is science value neutral or not? Essay Is science value neutral or not? Is science value neutral? Before answering this question, it is necessary for us to know the limitations of the scientist. The greatest enemy of the scientist is his mind. He has to conclude his researches and terminate enquiries at the final frontier of the mind. The authors, Stevenson and Byerly put a question and try to answer it. Perhaps the authors lack conviction about their own answer. Rather these are considered as obstacles because they bar inquiryâ€”they consider values as prejudices that keep people from being open-minded. We will write a custom essay sample on Is science value neutral or not? Scientists do not like the pure value and truth seekers, but the truth seekers have no aversion for the scientists; they rather pity them. For those who research, investigate and enquire about nature by observing, comparing, organizing, communicating, relating, inferring and applying, these skills are meant to be value-free. What is this truth the scientists are speaking about? There is no truth for a human being other than communion with God also known as Self-Realization. Science might have succeeded in retaining certain authority on human culture as for its achievements in providing and increasing materialistic comforts to humanity. But has this sum total of materialistic comforts brought forth peace in the real sense to humanity? Therefore, what should be the goal of science education? To create great scientists or to mould great, noble human beings! Or can pure science or scientific approach from the materialistic point of view lead a human being to nobility? I have performed thousands of operations on human beings. I have dissected each and every part of the human anatomy. I have not come across the Divine Spirit God anywhere in the body. Now the Realized Soul confronted him with the clincher. Divinity is something that transcends the mind. There is a divine procedure to transcend the mind and experience the state of bliss. The laboratory for this experience is the inner world of each and every human being. Someone else can not experience it for you! Scientists, as such, have no functional freedom. They are the servants working for their masters and have to carry out the orders. The weaponry researched by the scientists, produced by the concerned authorities, and stored at strategic points, is alone sufficient to destroy the entire humanity, within a matter of minutes. Can one say science is value neutral and be satisfied with this empty consolation? God forbidâ€” there will be none left on this Planet Earth to answer this question! The Many Faces of Science: Westview Press; 2nd edition August 21, Language:

Chapter 4 : Selling translational research: is science a value-neutral autonomous enterprise?

Inquiry, 32, Is Scientific Research Value-neutral? Leslie Stevenson University of St. Andrews The conventional wisdom about the practice of science is that it is value-free in the.

Based on their objective criteria, the Harvard press release would not score highly. At least one study failed to show that surgical checklists improve outcomes. Reporting RRR is now considered a cardinal sin in healthcare journalism because RRR inflates therapeutic optimism by making the intervention sound more efficacious than it is. The press release mentioned one other study which showed an even higher mortality benefit of surgical checklists. The press release goes on to say, "Adoption of a safe surgery checklist has been demonstrated to reduce deaths in controlled research studies since But the ability to produce improved outcomes at large scale has remained questioned. But there is no mention of the Canadian study which failed to show surgical checklists improve outcomes. The reader is lulled into a false sense of certainty about the benefits of surgical checklists. If this was a press release for a statin or a device, which, ironically, subjects itself to greater methodological rigor, it would have been taken to task. Yet, no one batted an eyelid over the press release about surgical checklists. Why does a sensational press release about an inferior-quality study about surgical checklists not induce the same ire as a sensational press release about an RCT of a drug or device? Future anthropologists might better answer this question. But I will speculate. Witnessing pharma make big bucks on false therapeutic optimism gets under our skin. Nothing else quite corrupts to the same degree, we believe. The nobility of their intent -- they wish to make surgery safer -- shields them from the harsh scrutiny reserved for drug and device industries. In this regard, the reaction of Atul Gawande, the author of The Checklist Manifesto, who is self-evidently a true believer of checklists, to the Canadian study is instructive. He "wished the Ontario study was better. I have my biases. My question is why do we not see the same skepticism for surgical checklists, and other policy measures, that we see for drugs and devices. Of course, there are differences between checklists and drugs. Simple checklists cost nearly nothing to implement. But the differential standards, as justified as they may be, may lead to a deep mistrust of science and of dabblers in science. A casual observer, unfamiliar with epistemic nuances, may suspect that ideology is at play. The observer may see, in the sliding scale of methodological rigor, blatant double standards. The observer may lose faith in statistics seeing that it can be fine-tuned, like the thermostat of a shower, to prove and disprove what we wish proven or disproven. When Anne Case and Angus Deaton showed that middle-class white men were not reaping the mortality benefits of other demographics, the demolition of their analysis was swift. In a sense, this is good because science needs refutation. But would their study have inspired the same statistical scrutiny if it had shown that Hispanic or South Asian men were dying sooner than white men? Skepticism loses credibility if seen to be applied selectively. Statisticians can debunk or defend a study using their deep knowledge of statistics by selectively highlighting the strengths and weaknesses of a study -- no study design is perfect. Thus, statisticians have become the new lawyers. I wonder how long before we have a "right to a statistician. The ideologue who claims God or history is on their side is easy to identify. The ideologue who claims to have science, which really means statistical technique, on their side is more difficult to identify and refute. Few have deep enough knowledge of statistics to call BS on the callers of BS. The result is that people mistrust science. Science has become a substitute for morality. It has become a weapon to fight social injustice whatever that term means , to reduce inequality, to mock incompatible world views. This is a blow for both science and morality. Historically, our species never resorted to science to do the right thing. Slavery was bad because it was morally bad. The Civil Rights Movement was right because it was morally right. The suffragettes were right because they were morally right. It may be morally right to be politically correct. Then we should say so and keep science away from political correctness. Science loses most credibility when seen to selectively address the favored social injustices of the time. It is not fashionable in elite circles to be perturbed by the plight of the working class white man. In this circle, which I sometimes frequent, a physician seeping social justice from every pore, once said that it was imperative that we developed a vaccine for malaria, because the Africans have suffered enough from imperialism. He was right

and wrong. He was right that a malaria vaccine will reduce the suffering of Africans tremendously, and that it was imperative that it be developed. But he was wrong. The vaccine is no more, or no less, important because of the history of the African continent. We may discourage reporting RRR for drugs and devices to curb therapeutic optimism and encourage reporting RRR for surgical checklists to encourage compliance. This is understandable, because how we frame a message, and reporting relative risk reduction is just a way of framing, depends on what we wish to achieve. But here lies another problem. Note, science is not informing us what to do. Science is helping us implement, helping us engineer, helping us design, not a bridge, not a spacecraft, not a computer, but ourselves and society. This was once the dominion of religion. That this is now the dominion of science is ironic. But more troubling than irony is that science is no longer value-neutral. And when science ceases to be value-neutral, science ceases to be science. Saurabh Jha is a radiologist and can be reached on Twitter RogueRad.

Chapter 5 : Sociology as a value-free science, Research Methods and Statistics

The nature and place of science in our world has long been a topic of the most heated and vehement debate in many levels of society. People have myriad ways of understanding and thinking about science: to some, it is a golden child which will bring truth and beauty into the world, to others, it creates devilish monstrosities which should not even be considered, and to some, it is neither of.

We recommend checking if there is one available at your local high school chemistry laboratory before purchasing. Various models are available from Amazon. Suitable for more advanced research where the exact pH of a solution matters. For example, when creating buffers for a biotechnology project. The items above can be used to measure pH for science projects and other hobby and home applications. Clicking the purchasing links will take you directly to the product at www. To get accurate pH readings always remember to: Wait a minute or two after you add an acid or a base to a solution. This will allow the reaction ions being either donated [acid] or accepted [base] to complete before you measure. Swirl or mix a solution well before measuring. This will help ensure that the solution is uniform. Do not wait more than 5 minutes after the color has stabilized or it may start to fade and affect the accuracy of your reading. When using a pH meter you should also: Carefully read the manual for the pH meter before using it. Rinse the pH meter probe with distilled water before every reading. Use solutions with known pH values, see Table 2, to make sure the pH meter is accurately calibrated. Make sure the pH meter probe is properly submerged in the solution before taking a reading. Bibliography For more information about the pH scale, try these references: Retrieved July 24, , from http: Retrieved May 1, , from http: When printing this document, you may NOT modify it in any way. For any other use, please contact Science Buddies.

Chapter 6 : Scientific Objectivity (Stanford Encyclopedia of Philosophy)

And when science ceases to be value-neutral, science ceases to be science. Saurabh Jha is a radiologist and can be reached on Twitter @RogueRad. This article originally appeared in the Health Care Blog.

There are internal debates within political science that are themselves political, and which have a wider bearing on how ideas are produced and promoted beyond academia. These debates are not "academic" in the narrow sense. They affect political discourse more generally, and so concern us all. The prevailing view within the discipline is that scholars should set aside moral values and political concerns in favour of detached enquiry into the mechanics of how the political world functions. This often involves borrowing the trappings of the natural sciences in attempts to establish generalisable theories of causation through the testing of hypotheses. Learning from the disciplines of "hard science", where appropriate, can certainly yield benefits. But I have yet to be convinced by the idea that the study of politics can be apolitical and value-neutral. Our choice of research topics will inevitably reflect our own political and moral priorities, and the way in which that research is framed and conducted is bound to reflect assumptions which â€” whether held consciously, semi-consciously or unconsciously â€” remain of a moral and political nature. Additionally, striving for "policy relevance" can result in the production of research that conforms to the priorities of power. Examples are not hard to come by. The field of terrorism studies focuses almost exclusively on the terrorism of non-state actors, as opposed to the greater problem of state terrorism. Those academic studies of the developing world that are produced in the UK and the US tend to present the global south purely as a problem for, or a threat to, the global north. Some topics are simply passed over altogether. In the s, the UK helped maintain a sanctions regime on Iraq that, as documented by Unicef, resulted in the deaths of hundreds of thousands of civilians , around half of them children under the age of five. Yet of the scores of articles produced in British international relations journals during that time, only three discussed the sanctions regime and its appalling effects. It is difficult to see why choosing to investigate state terrorism would be "political", while choosing not to would be non-political, or why discussing the effect of sanctions on Iraqi society constitutes any more of a moral choice than choosing not to do so. The suspicion must arise that, when some scholarship is described as too political or too polemical, what is really meant is that it is insufficiently consistent with, or too critical of, mainstream priorities and assumptions. If it is inevitable that our politics and values will have an effect on our research, then it is surely in the interests of scholarly integrity that this is openly acknowledged. The intellectual rigour of our work is bound to be enhanced by our explicitly accounting for how it is shaped by our own politics and moral values. There is a difference between truth and falsehood, between rigorous and faulty reasoning. What is important is to acknowledge that our attempts to discern what is true or false, and to engage in rational analysis, occur within an ideological framework. Ideology is not the same as dogma: Ideology â€” the place where theory and morality meet â€” is, at its best, a dynamic rational tool, vital to the task of building knowledge. It is when our personal ideologies are taken for granted, or left unexamined, that they lapse into dogma, and it is therefore important that this is not allowed to happen. Excusing research that adheres to conventional wisdom from the task of accounting for its politics and values, while delegitimising less conservative work on the basis of its being "political" or "ideological" as though this distinguished it in some way from the rest of the field cannot be a productive way to proceed. In fact, the Enlightenment philosophical tradition, which so many mainstream scholars aspire to uphold, is full of prominent examples of intellectuals criticising power from an explicitly moral standpoint. Few would argue that the socio-political analysis provided by such thinkers as Wollstonecraft, Paine and Smith suffered, rather than benefited from, their freely acknowledged moral and political priorities. The good news is that this tradition has not been abandoned. Doug Stokes and Ruth Blakeley at the University of Kent have helped redress the balance in terrorism studies by examining acts of terrorism committed by states. Eric Herring at Bristol University has articulated a way forward for activist scholarship in international relations. This scholarship belongs in the mainstream, not on the margins. The willingness to critique is vital to intellectual activity, and the contribution to wider political discourse of scholarship that challenges power is crucial in a

functioning democracy. Given the particular responsibilities that come with the ability to inform and participate in political debate, it is to be hoped that we can start to rethink what it means to be a "political scientist".

Chapter 7 : How scientific is political science? | David Wearing | Opinion | The Guardian

Provisionally, (1) science is impartial: there is no proper role for moral, social and any other non-cognitive values, alongside the cognitive (or epistemic) values, in the appraisal of the soundness of scientific understanding; (2) well conceived scientific practices produce a body of understanding that is neutral among contending value.

Most particularly, are there now compelling reasons for declaring that mainstream economics needs to recognize that the distinction is wholly untenable? Is the zeal for insisting on "positive" economics now unsupportable? Walsh and Putnam argue that the answer to each of these questions is definitive: The issue of facts and values has a number of sources within the empiricist tradition. The two propositions together imply that moral sentences are meaningless or "non-cognitive", since the first proposition concedes that no empirical experience can demonstrate the truth or falsity of a normative statement. Another source was internal to debates within neoclassical economics itself: The attempt to draw a sharp line between "fact" and "value" turns out to be impossible. And this is equally so in economics. The concept of Pareto efficiency is defined in value-neutral terms: The concept of distributive justice is not value-neutral; it invokes the idea that some distributions are better because they are more fair or more just than others. The positive economist holds that the latter set of distinctions are legitimate to make -- in some other arena. But within economics, the language of justice and equity has no place. The economist, according to this view, can work out the technical characteristics of various economic arrangements; but it is up to the political process or the policy decision-maker to arrive at a governing set of normative standards. Walsh and Putnam as well as Amartya Sen dispute this view on logical grounds; and this leaves the discipline free to have a rational and reasoned discussion of the pros and cons of various principles of distributive justice. Raising the issue of value-neutrality for economics is a frontal assault on the uncritical positivism that neoclassical economics incorporated from the s and forward. But it is also an attack on something else--the no-longer acceptable idea that economists can only tell us how things are, not how they should be. Is famine worse than food sufficiency? Is literacy better than illiteracy? Is good health an improvement in wellbeing? If we take the view that "positive economics" cannot contain normative judgments, then none of these questions could be answered by an economist. Of course economics, and economists, can find that starvation is a bad thing. Instead, they maintain that the best philosophy of language and philosophy of science supports the idea that value concepts and descriptive concepts are intermingled or "entangled", and that we can offer good reasons and evidence for evaluating claims involving both. Why, some readers will ask, has Hilary Putnam become a central figure in this emerging debate? Putnam is known as a technically astute philosopher of mathematics, logic, and physics, and a philosopher of language; he is known for a sometimes wavering adherence to several versions of scientific realism; and he has made contributions of the greatest importance to each of these fields. But how did he come to get deeply immersed in the issue of the role of values in economics? Vivian Walsh is one important part of the answer. Walsh undertook a series of articles in the s and s that were critical of the logical positivist assumptions that have lingered within the methodology of neoclassical economics. He took encouragement from the writings of Amartya Sen on welfare economics that confidently dismissed these positivist assumptions -- for example, the idea that science could not incorporate values or that statements about values were meaningless. Lionel Robbins is offered as a particularly clear advocate of these views. A key construct in the collaborative thinking that Putnam and Walsh have done together is the idea of the "second phase of classical theory. Walsh introduces the idea and Putnam follows up in his essay. What this refers to is the fact that classical political economy, as expressed by Smith and Ricardo, underwent a major intellectual revival in the s when thinkers like Piero Sraffa proposed reappropriating some of their key analytical ideas. Prelude to a Critique of Economic Theory was a key product of this rethinking. The rethinking itself came about because of an uneasiness about the premises of neoclassical economics, and it stayed close to the core logical ideas. The first revival focused on Ricardo, but the second phase, Walsh argues, has given a much more nuanced interpretation of Smith himself. Walsh finds that this reconsideration has been led by Amartya Sen and is more wide-ranging. Here is why Walsh thinks this reconsideration of

Smith is important: This is because Smith embedded a remarkable understanding of the core concepts of a political economy whose implications for moral philosophy he understood and explored. The Smith texts as a whole offer a rich tapestry, interweaving threads of classical analysis, moral philosophy, jurisprudence, and history. This is something that Sen himself stresses. Much of what Sen brings to this debate within economics, according to Walsh and Putnam, is found in his capabilities theory as a foundation for a theory of welfare or wellbeing. This theory is based on the idea of human functionings; and there is a plain intermingling of factual and evaluative ideas associated with this notion. We need to know what human beings can and want to do, before we can say how well off they are. And this means bringing in orienting human values at the foundations. Anyone reading these descriptions would agree that they presuppose human values. And Nussbaum as well as Sen and Putnam believes that we can rationally discuss and evaluate these. But if welfare economics is to incorporate a substantive notion of human wellbeing, then it plainly cannot be maintained that it is "value-free". As Sen puts the point in "Rational Fools" link , A person thus described may be "rational"in the limited sense of revealing no inconsistencies in his choice behavior, but if he has no use for these distinctions between quite different concepts, he must be a bit of a fool. The purely economic man is indeed close to being a social moron. Economic theory has been much preoccupied with this rational fool decked in the glory of his one all-purpose preference ordering. To make room for the different concepts related to his behavior we need a more elaborate structure. Individuals choose among preference rankings based on their commitments -- to each other, to political ideas, to groups with whom they have decided to affiliate. And this brings normative ideas directly into economic decision-making -- and therefore into the domain of economics. Walsh and Putnam insist on a point that seems very important to me as well: They do not reject the idea that there are facts and there are values. But they believe in important respects these categories are intertwined and inseparable. They argue for "entanglement" and "rich description. And they believe that science can handle its goals without this sharp dichotomy.

Chapter 8 : Science: Value-neutral or Value-laden - Article :: Enlightenment

Science is Not Value-Neutral: Why Some Preventable Diseases Are Unpreventable Subscribe to Blog via Email Enter your email address to subscribe to this blog and receive notifications of new posts by email.

All social behavior is guided by values. Thus the study of social behavior can never be value-free if value freedom is interpreted in the sense of absence of values because values of the society under investigation form a part of the social facts to be studied by sociology. Moreover social research is in itself a type of social behavior and is guided by the value of search for true knowledge. Then what is meant as clarified by Max Weber value-free sociology means that the sociologist while carrying social research must confine called value relevance. Thus the values can operate at three levels: At the level of philological interpretation. At the level of ethical interpretation in assigning value to an object of enquiry. At the level of rational interpretation in which the sociologists seeks the meaningful relationship between phenomena in terms of causal analysis. The point of value interpretation is to establish the value towards which an activity is directed. Sociologists should observe value neutrality while conducting social research. It means that he should exclude ideological or non -scientific assumption from research. He should not make evaluative judgment about empirical evidence. He should make his own values open and clear and refrain from advocating particular values. Value neutrality enables the social scientists to fulfill the basic value of scientific enquiry that is search for true knowledge. Thus sociology being a science cherishes the goal of value neutrality. According to Alvin Gouldner value-free principle did enhance the autonomy of sociology where it could steadily pursue basic problems rather than journalistically react to passing events and allowed it more freedom to pursue questions uninteresting either to the respectable or to the rebellious. It made sociology freer as Comte had wanted it to be -to pursue all its own theoretical implications. Value free principle did contribute to the intellectual growth and emancipation of the enterprise. Effective internalization of the value-free principle has always encouraged at least a temporary suspension of the moralizing reflexes built into the sociologist by his own society. The value-free doctrine has a paradoxical potentiality; it might enable men to make better value judgments rather than none. It could encourage a habit of mind that might help men in discriminating between their punitive drives and their ethical sentiments. However in practice it has been extremely difficult to fulfill this goal of value neutrality. Values creep in various stages in sociological research. According to Gunnar Myrdal total value neutrality is impossible. We need view points. These view-points involve valuations and also while formulating the hypothesis. Thus a sociologist has to be value frank and should make the values which have got incorporated in the choice of the topic of the research of the formulation of hypothesis clear and explicit at the very outset in the research. The value-free doctrine is useful both to those who want to escape from the world and to those who want to escape into it. They think of sociology as a way of getting ahead in the world by providing them with neutral techniques that may be sold on the open market to any buyer. The belief that it is not the business of sociologist to make value judgments is taken by some to mean that the market on which they can vend their skills is unlimited. Some sociologists have had no hesitation about doing market research designed to sell more cigarettes although well aware of the implications of recent cancer research. Like Freud, Weber never really believed in an enduring peace or in a final resolution of this conflict. What he did was to seek a truce through the segregation of the contenders by allowing each to dominate in different spheres of life.

Chapter 9 : Is knowledge value-neutral? | Yahoo Answers

Value neutrality in Social Science. Values are defined as measures of desirability. They provide general guidelines for conduct. They are general conceptions of the good ideas about the kind of ends that people should pursue throughout the many different activities in which they engage.

How much is that? Should the risk increase to 12 percent? What would you consider a significant raise? The observation was made in a large study of 88, women and 47, men who were monitored over a year period for many risk factors and diseases, including alcohol consumption and cancer. The relationship between alcohol consumption and cancer was thoroughly investigated, in multiple statistical analyses, taking into account several potential alternative explanations for the observed relationship such as smoking, family history of breast cancer and age. Of all women, 19, developed breast cancer at some time during the 30 years of the study. They consistently found that women who consumed The relative risk was 1. The scientific article does not give the answer. But this is understandable in light of the design of the study and the type of analysis that was performed. The researchers followed women over a longer period of time, but appropriately took into account that not all women participated the entire 30 years. Women died, they moved or were loss to follow-up for other reasons, and this shorter participation needs to be considered when calculating risks. Also, providing risk estimates is not evidently informative. Participants were between 30 and 55 years of age at the start of the study, and the year risk of breast cancer varies with age. A year risk would imply the risk of developing breast cancer between ages 30 and 60 for a year women, and between ages 55 and 85 for a year old, the latter risk being much higher than the first. Yet, while these reasons for not providing risk estimates are valid, the detailed corrections and considerations take away the attention from the bigger picture: A back of the envelop calculation might give some insight. Knowing that 1 in 8 women develop breast cancer during their life tells me that this approximation of year risk is good enough. This 8 percent is an average among all women, irrespective of how much alcohol they drink. The nondrinkers will have a lower risk and the heavy drinkers a higher. Without further information, we do not know how much the risk is lower and higher in nondrinkers and heavy drinkers, but we do know that the risk in nondrinkers is not higher than the average of 8 percent. When the risk of nondrinkers is 8 percent, the risk of those who drink one glass per day is increased by 1. The risk of breast cancer increases from 8 to 9 percent in women who drink one glass of wine per day. Assuming a lower risk for nondrinkers is lower makes this difference even smaller. Of course, from a public health perspective, the number of breast cancer cases that can be prevented when women refrain from drinking that daily glass of wine, is substantial. When a small relative risk is multiplied by a big number, even the tiniest risks become worth preventing. But public health prevention only works when individuals can be motivated to change their lifestyles, and, for that, knowing that breast cancer risk decreases with only one percent might not be enough to stop drinking. Alcohol-related diseases are considered preventable, because alcohol consumption is a behavioral risk factor and behavior can be changed. Yet, this population-level conceptual reasoning is in sharp contrast with how women decide to take that glass of wine with dinner, while watching television or having a chat with friends: Women just drink a glass of wine every now and then, and scientific studies should take that into account. For a realistic perspective on prevention, the researchers better had assumed that women who drink a glass of wine every day might be motivated to reduce their alcohol consumption to occasional drinking a glass of wine, but not every day but not to going sober. For that, they then had to compare the risk of breast cancer in women who drink a glass per day to the risk among occasional drinkers. To find out that their risk is hardly increased, and likely not statistically significant. Not all preventable diseases are preventable.