

Chapter 1 : Uncovering the Constitution's Moral Design (): Paul R. DeHart - BiblioVault

Critical thinkers notice the inferences they are making, the assumptions upon which they are basing those inferences, and the point of view about the world they are developing. To develop these skills, students need practice in noticing their inferences and then figuring the assumptions that lead to them.

They hold that there is nothing more to the mental, biological and social realms than arrangements of physical entities. The driving motivation for this kind of ontological naturalism is the need to explain how special entities can have physical effects. Thus many contemporary thinkers adopt a physicalist view of the mental realm because they think that otherwise we will be unable to explain how mental processes can causally influence our bodies and other physical items. Similar considerations motivate ontologically naturalist views of the biological realm, the social realm, and so on. It may not be immediately obvious why this need to account for physical effects should impose any substantial naturalist constraints on some category. However, there may be a posteriori objections to such non-natural causal influences on the physical world, even if there are no a priori objections. We shall see below how modern scientific theory places strong restrictions on the kinds of entities that can have physical effects. Given that mental, biological and social phenomena do have such effects, it follows that they must satisfy the relevant restrictions. Note how this kind of argument bites directly only on those categories that do have physical effects. It places no immediate constraints on categories that lack any such effects, which arguably include the mathematical and modal realms, and perhaps the moral realm. We shall return to the question of whether there are any further reasons for ontologically naturalist views about causally non-efficacious categories in sections 1. It will be worth rehearsing this history in outline, if only to forestall a common reaction to ontological naturalism. However, familiarity with the relevant scientific history casts the matter in a different light. It turns out that naturalist doctrines, far from varying with ephemeral fashion, are closely responsive to received scientific opinion about the range of causes that can have physical effects. A short version of this history runs like this: Let us now rehearse this story more slowly. So stated, the mechanical philosophy immediately precludes anything except impacting material particles from producing physical effects. Views which avoid ontological naturalistic views of the mind by denying that it has any physical effects will be discussed further in section 1. This reinstated the possibility of interactive dualism, since it allowed disembodied forces as well as impacts to cause physical effects. Newtonian physics was open-ended about the kinds of forces that exist. Early Newtonians posited fundamental mental and vital forces alongside magnetic, chemical, cohesive, gravitational and impact forces. Accordingly, they took sui generis mental action in the material world to be perfectly consistent with the principle of physics. Moreover, there is nothing in the original principles of Newtonian mechanics to stop mental forces arising autonomously and spontaneously, in line with common assumptions about the operation of the mind Papineau However, the conservation of energy does imply that any such special forces must be governed by strict deterministic laws: Detailed physiological research, especially into nerve cells, gave no indication of any physical effects that cannot be explained in terms of basic physical forces that also occur outside living bodies. By the middle of the twentieth century, belief in sui generis mental or vital forces had become a minority view. In the initial seventeenth-century mechanical phase, there was a tension, as Leibniz observed, between the dominant strict mechanism and interactive dualism. However, once mechanism was replaced by the more liberal doctrines of Newtonian physics in the second phase, science ceased to raise any objections to dualism and more generally to non-physical causes of physical effects. In the third phase, the nineteenth-century discovery of the conservation of energy continued to allow that sui generis non-physical forces can interact with the physical world, but required that they be governed by strict force laws. We might usefully view this as a species of ontological naturalism that falls short of full physicalism. Mental and other special forces were non-physical in the sense that they arose only in special circumstances and not throughout the spatiotemporal realm, but even so they fell within the realm of scientific law and lacked spontaneous autonomy. As many commentators at the time recognized, this weaker form of naturalism already carried significant philosophical implications, particularly for the possibility of free will. The causal closure thesis

implied that, if mental and other special causes are to produce physical effects, they must themselves be physically constituted. It thus gave rise to the strong physicalist doctrine that anything that has physical effects must itself be physical. In support of this understanding of the twentieth-century history, it is noteworthy how philosophers began to formulate arguments for physicalism from the 1950s onwards. Some of these arguments appealed explicitly to the causal closure of the physical realm Feigl ; Oppenheim and Putnam In other cases, the reliance on causal closure lay below the surface. However, it is not hard to see that even in these latter cases the causal closure thesis played a crucial role. Thus, for example, consider J. At first sight, it might not be obvious that these arguments require the causal closure thesis. Sometimes it is suggested that the indeterminism of modern quantum mechanics creates room for sui generis non-physical causes to influence the physical world. However, even if quantum mechanics implies that some physical effects are themselves undetermined, it provides no reason to doubt a quantum version of the causal closure thesis, to the effect that the chances of those effects are fully fixed by prior physical circumstances. And this alone is enough to rule out sui generis non-physical causes. For such sui generis causes, if they are to be genuinely efficacious, must presumably make an independent difference to the chances of physical effects, and this in itself would be inconsistent with the quantum causal closure claim that such chances are already fixed by prior physical circumstances. Once more, it seems that anything that makes a difference to the physical realm must itself be physical. First we assume that mental causes biological, social, etc. have physical effects. Then the causal closure principle tells us that those physical effects have physical causes. However, even if this general line of argument is accepted, there is room for differing views about exactly what its denial of ontological separateness requires. At this point, however, there are divergent views about how tight a constraint this imposes. One school holds that it requires type-identity, the strict identity of the relevant special properties with physical properties. Type-identity is the most obvious way to ensure the non-separateness of special and physical causes: Still, type-identity is a very strong doctrine. Type identity about thoughts, for example, would imply that the property of thinking about the square root of two is identical with some physical property. And this seems highly implausible. Even if all human beings with this thought must be distinguished by some common physical property of their brains—which itself seems unlikely—there remains the argument that other life-forms, or intelligent androids, will also be able to think about the square root of two, even though their brains may share no significant physical properties with ours Fodor ; Bickle So, for example, any being who thinks about the square root of two will do so in virtue of instantiating some physical properties, but these can be different physical properties in different cases—in one human being it may be one set of neural arrangements, in another a different set, and in other life forms it might involve nothing like neural properties at all. There are various more detailed ways of filling out this idea of non-reductive physicalism. A common feature is the requirement that special properties should metaphysically supervene on physical properties, in the sense that any two beings who share the realizing physical properties will necessarily share the same special properties, even though the physical properties which so realize the special ones can be different in different beings. This arguably ensures that nothing more is required for any specific instantiation of a special property than its physical realization—even God could not have created your brain states without thereby creating your feelings—yet avoids any reductive identification of special properties with physical ones. This is a rough sketch of the supervenience formulation of physicalism. For more see Stoljar Some philosophers object that non-reductive physicalism does not in fact satisfy the original motivation for physicalism, on the grounds that it does not really reconcile the efficacy of mental and other special causes with the causal closure thesis Kim ; Robb and Heil According to non-reductive physicalism, special properties are not type-identical with any strictly physical properties, even though they supervene on them. But this then seems to imply that any given special cause will be distinguishable from the physical cause that realizes it, to the extent that it involves the instantiation of a different property. The property of thinking about the square root of two is definitely a different property from the neural property that realizes it in me, say, since another being could share the former property without sharing the latter. The opponents of non-reductive physicalism then insist that this gives us an unacceptable proliferation of causes for the physical effects of special causes after all—both the physical cause implied by the causal closure thesis and the distinct special cause. In response,

advocates of non-reductive physicalism respond that there is nothing wrong with such an apparent duplication of causes if it is also specified that the latter metaphysically supervene on the former. The issue here hinges on the acceptability of different kinds of systematic overdetermination Bennett. All can agree that it would be absurd if the physical effects of special causes always had two metaphysically independent causes. Plugging this into the causal closure argument for physicalism, we can conclude that there can be no metaphysically independent non-physical causes such as Cartesian dualist mental causes for effects that already have full physical causes. Suppose a pigeon pecks at crimson tiles. Is the pecking caused by the specific shade, crimson, or the more generic colour, red? The natural answer is that it depends. If the pigeon pecks only at crimson tiles, and not at other shades of red, then it is the crimsonness that is causing the pecking, whereas, if the pigeon pecks at any shade of red, it is the redness. Examples like these have led a number of writers to require that causes be proportional to their effects Yablo ; Menzies ; List and Menzies , We should attribute the effect to that property that is specific enough to suffice for it, but no more specific than that. This suggests that sometimes special causes and not their physical realizers might be responsible for physical effects. Suppose I want to hail a taxi, and that this desire is realized by some brain state, and that I then wave my arm. Some will say that in such cases the desire causally explains the waving, but that it is still the brain state that causes it. This thought appeals to the intuition that real causal relations are always constituted by basic physical interactions, by bits of matter bumping into each other. But this intuition is not decisive, and a number of theoretical considerations speak against it. It is worth observing that physicalists who advocate this kind of downwards special causation are in some danger of sawing off the branch they are sitting on, in that they now seem to be advocating counter-examples to the causal closure of the physical. And it is arguable that this in itself rules out the possibility of some metaphysically independent non-physical factor making any causal difference to the unfolding of the physical world. However, whether this intuition can be parlayed into a sound argument is a highly controversial issue, and one that lies beyond the scope of this entry. A majority of contemporary philosophers probably hold that physicalism can resist these arguments. In itself, epiphenomenalism is not an attractive position. It requires us to suppose that conscious states, even though they are caused by processes in the physical world, have no effects on that world. This is a very odd kind of causal structure. Nature displays no other examples of such one-way causal intercourse between realms. By contrast, a physicalist naturalism about conscious states will integrate the mental realm with the causal unfolding of the spatiotemporal world in an entirely familiar way. Given this, general principles of theory choice would seem to argue strongly for physicalism over epiphenomenalism. If general principles of theory choice can justify physicalism, why bring in all the complications associated with causal closure? The answer is that causal closure is needed to rule out interactionist dualism. General principles of theory choice may dismiss epiphenomenalism in favour of physicalism, but they do not similarly discredit interactionist dualism. As the brief historical sketch earlier will have made clear, interactionist dualism offers a perfectly straightforward theoretical option requiring no commitment to any bizarre causal structures. Certainly the historical norm has been to regard it as the default account of the causal role of the mental realm. Given this, arguments from theoretical simplicity cut no ice against interactionist dualism. Rather, the case against interactionist dualism hinges crucially on the empirical thesis that all physical effects already have physical causes. It is specifically this claim that makes it difficult to see how dualist states can make a causal difference to the physical world.

Chapter 2 : Inferences And Assumptions Research Paper Sample, Outline, Citations

Inferring an Answer. Inference is an integral facet of the critical thinking process; your students should be able to explain a problem with an inference, or educated guess. One important lesson is to teach students the difference between explaining by inference or by assumptions based on previous ideas.

Definition[edit] The process by which a conclusion is inferred from multiple observations is called inductive reasoning. The conclusion may be correct or incorrect, or correct to within a certain degree of accuracy, or correct in certain situations. Conclusions inferred from multiple observations may be tested by additional observations. This definition is disputable due to its lack of clarity. Logic the inference of a general law from particular instances. Two possible definitions of "inference" are: A conclusion reached on the basis of evidence and reasoning. The process of reaching such a conclusion. Examples[edit] Example for definition 1[edit] Ancient Greek philosophers defined a number of syllogisms , correct three part inferences, that can be used as building blocks for more complex reasoning. We begin with a famous example: All humans are mortal. All Greeks are humans. All Greeks are mortal. The reader can check that the premises and conclusion are true, but logic is concerned with inference: The validity of an inference depends on the form of the inference. That is, the word "valid" does not refer to the truth of the premises or the conclusion, but rather to the form of the inference. An inference can be valid even if the parts are false, and can be invalid even if some parts are true. But a valid form with true premises will always have a true conclusion. For example, consider the form of the following symbolical track: All meat comes from animals. All beef is meat. Therefore, all beef comes from animals. If the premises are true, then the conclusion is necessarily true, too. Now we turn to an invalid form. All A are B. All C are B. Therefore, all C are A. To show that this form is invalid, we demonstrate how it can lead from true premises to a false conclusion. All apples are fruit. True All bananas are fruit. True Therefore, all bananas are apples. False A valid argument with a false premise may lead to a false conclusion, this and the following examples do not follow the Greek syllogism: All tall people are French. False John Lennon was tall. True Therefore, John Lennon was French. False When a valid argument is used to derive a false conclusion from a false premise, the inference is valid because it follows the form of a correct inference. A valid argument can also be used to derive a true conclusion from a false premise: All tall people are musicians. Valid, False John Lennon was tall. Valid, True Therefore, John Lennon was a musician. Valid, True In this case we have one false premise and one true premise where a true conclusion has been inferred. Example for definition 2[edit] Evidence: It is the early s and you are an American stationed in the Soviet Union. You read in the Moscow newspaper that a soccer team from a small city in Siberia starts winning game after game. The team even defeats the Moscow team. The small city in Siberia is not a small city anymore. The Soviets are working on their own nuclear or high-value secret weapons program. The Soviet Union is a command economy: The small city was remote and historically had never distinguished itself; its soccer season was typically short because of the weather. In a command economy , people and material are moved where they are needed. Large cities might field good teams due to the greater availability of high quality players; and teams that can practice longer weather, facilities can reasonably be expected to be better. In addition, you put your best and brightest in places where they can do the most goodâ€”such as on high-value weapons programs. It is an anomaly for a small city to field such a good team. Why would you put a large city of your best and brightest in the middle of nowhere? To hide them, of course. Incorrect inference[edit] An incorrect inference is known as a fallacy. Philosophers who study informal logic have compiled large lists of them, and cognitive psychologists have documented many biases in human reasoning that favor incorrect reasoning.

Chapter 3 : Presupposition (Stanford Encyclopedia of Philosophy)

model of intention inference as an input into a computational model of moral permissibility and test how well the model explains both well-studied and novel trolley dilemmas.

Translate this page from English Print Page Change Text Size: The first step in this process is understanding the parts of thinking, or elements of reasoning. They are present in the mind whenever we reason. To take command of our thinking, we need to formulate both our purpose and the question at issue clearly. We need to use information in our thinking that is both relevant to the question we are dealing with, and accurate. We need to make logical inferences based on sound assumptions. We need to understand our own point of view and fully consider other relevant viewpoints. We need to use concepts justifiably and follow out the implications of decisions we are considering. In this article we focus on two of the elements of reasoning: Learning to distinguish inferences from assumptions is an important intellectual skill. Many confuse the two elements. Let us begin with a review of the basic meanings: If you come at me with a knife in your hand, I probably would infer that you mean to do me harm. Inferences can be accurate or inaccurate, logical or illogical, justified or unjustified. An assumption is something we take for granted or presuppose. Usually it is something we previously learned and do not question. It is part of our system of beliefs. We assume our beliefs to be true and use them to interpret the world about us. If we believe that it is dangerous to walk late at night in big cities and we are staying in Chicago, we will infer that it is dangerous to go for a walk late at night. We take for granted our belief that it is dangerous to walk late at night in big cities. If our belief is a sound one, our assumption is sound. If our belief is not sound, our assumption is not sound. Beliefs, and hence assumptions, can be unjustified or justified, depending upon whether we do or do not have good reasons for them. I got up to let the cat in. We humans naturally and regularly use our beliefs as assumptions and make inferences based on those assumptions. We must do so to make sense of where we are, what we are about, and what is happening. Assumptions and inferences permeate our lives precisely because we cannot act without them. We make judgments, form interpretations, and come to conclusions based on the beliefs we have formed. If you put humans in any situation, they start to give it some meaning or other. People automatically make inferences to gain a basis for understanding and action. So quickly and automatically do we make inferences that we do not, without training, notice them as inferences. We see dark clouds and infer rain. We hear the door slam and infer that someone has arrived. We see a frowning face and infer that the person is upset. If our friend is late, we infer that she is being inconsiderate. We meet a tall guy and infer that he is good at basketball, an Asian and infer that she will be good at math. We listen to what people say and make a series of inferences as to what they mean. As we write, we make inferences as to what readers will make of what we are writing. We make inferences as to the clarity of what we are saying, what requires further explanation, what has to be exemplified or illustrated, and what does not. Many of our inferences are justified and reasonable, but some are not. As always, an important part of critical thinking is the art of bringing what is subconscious in our thought to the level of conscious realization. This includes the recognition that our experiences are shaped by the inferences we make during those experiences. It enables us to separate our experiences into two categories: Eventually we need to realize that the inferences we make are heavily influenced by our point of view and the assumptions we have made about people and situations. This puts us in the position of being able to broaden the scope of our outlook, to see situations from more than one point of view, and hence to become more open-minded. Often different people make different inferences because they bring to situations different viewpoints. They see the data differently. To put it another way, they make different assumptions about what they see. The second may have developed the point of view that the problems people have are often caused by forces and events beyond their control. The reasoning of these two people, in terms of their inferences and assumptions, could be characterized in the following way: A man is lying in the gutter. That man is in need of help. Only bums lie in gutters. Critical thinkers notice the inferences they are making, the assumptions upon which they are basing those inferences, and the point of view about the world they are developing. To develop these skills, students need practice in noticing their inferences and then

figuring the assumptions that lead to them. As students become aware of the inferences they make and the assumptions that underlie those inferences, they begin to gain command over their thinking. Because all human thinking is inferential in nature, command of thinking depends on command of the inferences embedded in it and thus of the assumptions that underlie it. Consider the way in which we plan and think our way through everyday events. We think of ourselves as preparing for breakfast, eating our breakfast, getting ready for class, arriving on time, leading class discussions, grading student papers, making plans for lunch, paying bills, engaging in an intellectual discussion, and so on. We can do none of these things without interpreting our actions, giving them meanings, making inferences about what is happening. This is to say that we must choose among a variety of possible meanings. As humans, we continually make assumptions about ourselves, our jobs, our mates, our students, our children, the world in general. Sometimes we take the wrong things for granted. For example, I run off to the store assuming that I have enough money with me and arrive to find that I have left my money at home. I assume that I have enough gas in the car only to find that I have run out of gas. I assume that an item marked down in price is a good buy only to find that it was marked up before it was marked down. I assume that it will not, or that it will, rain. I assume that my car will start when I turn the key and press the gas pedal. I assume that I mean well in my dealings with others. Humans make hundreds of assumptions without knowing it without thinking about it. Many assumptions are sound and justifiable. Many, however, are not. The question then becomes: For one thing, all disciplined subject-matter thinking requires that students learn to make accurate assumptions about the content they are studying and become practiced in making justifiable inferences within that content. In doing math, students make mathematical inferences based on their mathematical assumptions. In doing science, they make scientific inferences based on their scientific assumptions. In constructing historical accounts, they make historical inferences based on their historical assumptions. In each case, the assumptions students make depend on their understanding of fundamental concepts and principles. As a matter of daily practice, then, we can help students begin to notice the inferences they are making within the content we teach. We can help them identify inferences made by authors of a textbook, or of an article we give them. Once they have identified these inferences, we can ask them to figure out the assumptions that led to those inferences. When we give them routine practice in identifying inferences and assumptions, they begin to see that inferences will be illogical when the assumptions that lead to them are not justifiable. They begin to see that whenever they make an inference, there are other perhaps more logical inferences they could have made. They begin to see high quality inferences as coming from good reasoning. We can also help students think about the inferences they make in daily situations, and the assumptions that lead to those inferences. As they become skilled in identifying their inferences and assumptions, they are in a better position to question the extent to which any of their assumptions is justified. They can begin to ask questions, for example, like: Am I justified in assuming that everyone eats lunch at Am I justified in assuming that it usually rains when there are black clouds in the sky? Am I justified in assuming that bumps on the head are only caused by blows? The point is that we all make many assumptions as we go about our daily life and we ought to be able to recognize and question them. As students develop these critical intuitions, they increasingly notice their inferences and those of others. They increasingly notice what they and others are taking for granted. They increasingly notice how their point of view shapes their experiences.

Chapter 4 : Axiom - Wikipedia

INFERENCES AND ASSUMPTIONS A) *ASSUMPTIONS* This gang warfare is getting out of hand; corporal punishment should be rein d in the schools. Answer: It is a general assumption as well as a universal reality that physical punishments appear more effective than oral snubbing as well as fines and penalties in order to educate and train the school students and develop their personalities.

Among the ancient Greek philosophers an axiom was a claim which could be seen to be true without any need for proof. The root meaning of the word postulate is to "demand"; for instance, Euclid demands that one agree that some things can be done, e. Early Greeks[edit] The logico-deductive method whereby conclusions new knowledge follow from premises old knowledge through the application of sound arguments syllogisms , rules of inference , was developed by the ancient Greeks, and has become the core principle of modern mathematics. Tautologies excluded, nothing can be deduced if nothing is assumed. Axioms and postulates are the basic assumptions underlying a given body of deductive knowledge. They are accepted without demonstration. All other assertions theorems , if we are talking about mathematics must be proven with the aid of these basic assumptions. However, the interpretation of mathematical knowledge has changed from ancient times to the modern, and consequently the terms axiom and postulate hold a slightly different meaning for the present day mathematician, than they did for Aristotle and Euclid. The ancient Greeks considered geometry as just one of several sciences , and held the theorems of geometry on par with scientific facts. As such, they developed and used the logico-deductive method as a means of avoiding error, and for structuring and communicating knowledge. An "axiom", in classical terminology, referred to a self-evident assumption common to many branches of science. A good example would be the assertion that When an equal amount is taken from equals, an equal amount results. At the foundation of the various sciences lay certain additional hypotheses which were accepted without proof. Such a hypothesis was termed a postulate. While the axioms were common to many sciences, the postulates of each particular science were different. Their validity had to be established by means of real-world experience. Indeed, Aristotle warns that the content of a science cannot be successfully communicated, if the learner is in doubt about the truth of the postulates. Postulates It is possible to draw a straight line from any point to any other point. It is possible to extend a line segment continuously in both directions. It is possible to describe a circle with any center and any radius. It is true that all right angles are equal to one another. Common notions Things which are equal to the same thing are also equal to one another. If equals are added to equals, the wholes are equal. If equals are subtracted from equals, the remainders are equal. Things which coincide with one another are equal to one another. The whole is greater than the part. Modern development[edit] A lesson learned by mathematics in the last years is that it is useful to strip the meaning away from the mathematical assertions axioms, postulates, propositions , theorems and definitions. One must concede the need for primitive notions , or undefined terms or concepts, in any study. Such abstraction or formalization makes mathematical knowledge more general, capable of multiple different meanings, and therefore useful in multiple contexts. Structuralist mathematics goes further, and develops theories and axioms e. The distinction between an "axiom" and a "postulate" disappears. The postulates of Euclid are profitably motivated by saying that they lead to a great wealth of geometric facts. The truth of these complicated facts rests on the acceptance of the basic hypotheses. We must simply be prepared to use labels like "line" and "parallel" with greater flexibility. The development of hyperbolic geometry taught mathematicians that postulates should be regarded as purely formal statements, and not as facts based on experience. When mathematicians employ the field axioms, the intentions are even more abstract. The propositions of field theory do not concern any one particular application; the mathematician now works in complete abstraction. There are many examples of fields; field theory gives correct knowledge about them all. It is not correct to say that the axioms of field theory are "propositions that are regarded as true without proof. If any given system of addition and multiplication satisfies these constraints, then one is in a position to instantly know a great deal of extra information about this system. Modern mathematics formalizes its foundations to such an extent that mathematical theories can be regarded as mathematical objects, and

mathematics itself can be regarded as a branch of logic. In the modern understanding, a set of axioms is any collection of formally stated assertions from which other formally stated assertions follow by the application of certain well-defined rules. In this view, logic becomes just another formal system. A set of axioms should be consistent ; it should be impossible to derive a contradiction from the axiom. A set of axioms should also be non-redundant; an assertion that can be deduced from other axioms need not be regarded as an axiom. It was the early hope of modern logicians that various branches of mathematics, perhaps all of mathematics, could be derived from a consistent collection of basic axioms. It is reasonable to believe in the consistency of Peano arithmetic because it is satisfied by the system of natural numbers , an infinite but intuitively accessible formal system. However, at present, there is no known way of demonstrating the consistency of the modern Zermelo–Fraenkel axioms for set theory. Furthermore, using techniques of forcing Cohen one can show that the continuum hypothesis Cantor is independent of the Zermelo–Fraenkel axioms. Thus, even this very general set of axioms cannot be regarded as the definitive foundation for mathematics. Other sciences[edit] Axioms play a key role not only in mathematics, but also in other sciences, notably in theoretical physics. Another paper of Albert Einstein and coworkers see EPR paradox , almost immediately contradicted by Niels Bohr , concerned the interpretation of quantum mechanics. This was in According to Bohr, this new theory should be probabilistic , whereas according to Einstein it should be deterministic. Notably, the underlying quantum mechanical theory, i. Einstein even assumed that it would be sufficient to add to quantum mechanics "hidden variables" to enforce determinism. The theory should be probabilistic in the sense of the Copenhagen interpretation. Regardless, the role of axioms in mathematics and in the above-mentioned sciences is different. In mathematics one neither "proves" nor "disproves" an axiom for a set of theorems; the point is simply that in the conceptual realm identified by the axioms, the theorems logically follow. In contrast, in physics a comparison with experiments always makes sense, since a falsified physical theory needs modification. Mathematical logic[edit] In the field of mathematical logic , a clear distinction is made between two notions of axioms: Logical axioms[edit] These are certain formulas in a formal language that are universally valid , that is, formulas that are satisfied by every assignment of values. Usually one takes as logical axioms at least some minimal set of tautologies that is sufficient for proving all tautologies in the language; in the case of predicate logic more logical axioms than that are required, in order to prove logical truths that are not tautologies in the strict sense.

This process of moral persuasion and system implementation is itself a moral endeavor. Sure, it's not the focus of Harris's book, but it's absolutely essential to a deeper conversation about morality.

Now consider the following example: Using Definition 1, it suffices to find at least one model where 11 has a classical truth value, but in which there is no knave. In fact, Strong Kleene predicts no presupposition for This is in contradistinction to Weak Kleene, which would fail to give 11 a classical value in knave-less models, and hence predict that 11 presupposes the existence of a knave. There are other cases where Strong Kleene does predict a presupposition, and the presupposition predicted is not what we might have expected. Thus Strong Kleene gives 12a a classical truth value in all models where there is a knave, and in all models where there was trouble. So while we might have expected the presupposition in 12b, Strong Kleene predicts the presupposition in 12c. Much of the discussion of partial and multivalent approaches to presupposition over the last three decades has centered on the treatment of negation. Specifically, the issue has been the treatment of cancellation examples like A standard approach is to propose that negation is ambiguous between a presupposition-preserving negation and a presupposition-denying negation; see e. The presupposition-preserving negation aka choice negation we have already seen, and it is found in both the Weak and Strong Kleene systems. The presupposition-denying or exclusion negation is typically taken to map true to false and false to true, as usual, but also to map an argument lacking a classical value to true. However, the idea that negation is ambiguous between a presupposition-preserving and a presupposition-denying sense is controversial, e. A pragmatic presupposition associated with a sentence is a condition that a speaker would normally expect to hold in the common ground between discourse participants when that sentence is uttered. There are, however, two weaker types of failure that can occur: But, as Karttunen himself realized, such a stipulation is unmotivated. What Stalnaker noticed was that in the context of his pragmatic account of presupposition, these examples are not problematic. On the other hand, when a hearer is confronted by 14b, it is consistent to assume that Luke was alive. Generally speaking, the approach is to justify presuppositional inferences using the maxims of relevance and quantity. Thus, for example, Atlas suggests that an embedding of a definite under a negation will tend to produce a meaning that is ruled out as insufficiently strong to satisfy the maxim of quantity, unless it is strengthened by treating the definite as if it had wide scope and could act referentially. Contemporary descendants of this pragmatic tradition include Abbott ; ; , Simons ; ; ; , and Schlenker ; Both Abbott and Simons are at pains to distinguish between different presupposition triggers, rather than lumping them all together. Schlenker does not make such fine-grained distinctions between presupposition triggers. Instead, he concentrates on deriving projection properties pragmatically, using both standard maxims and at least one rule specific to presuppositions. Those discussed in the preceding paragraph attempt to derive presuppositional inferences from general conversational principles, thus explaining both the source of presuppositions, and the phenomenon of projection. But Stalnaker made no attempt whatsoever to explain where presuppositions came from, beyond indicating that they are inferential tendencies that might or might not be associated with semantic presuppositions. This emphasis on the projection of presuppositions rather than their source, which holds also of the contemporaneous work by Karttunen ; , to which we shall turn shortly, lived on in much of the work influenced by these theories. It is particularly obvious in what we can collectively term cancellation-based theories of presupposition, led by Gazdar a; b, and including Soames ; , Mercer ; , Gunji , Marcu , Horton , Horton and Hirst , Bridge , and, of particular note, van der Sandt ; All remaining presuppositions are cancelled. Consider 15a, and assume there are no relevant pre-existing commitments: According to Gazdar, 15a entails is that if there is an angry king then there is a knave and he stole some set of tarts. This much all theories agree on; some theories may predict stronger entailments. In this case, all the entailments, implicatures, and presuppositions are consistent, and all can be added without any being cancelled. But now consider 15b, repeated from The hearer accepts this and other implicatures, and then considers the presuppositions that there is a knave and that there are some tarts. The presupposition that there are tarts is unproblematic, and is added, but the hearer cannot consistently add the presupposition that

there is a knave. So this presupposition is canceled, and 15b does not presuppose that there is a knave. Hence, according to Gazdar, presuppositions are sometimes blocked by conversational implicatures. Some conceptual questions remain, however, such as why it should be that presuppositions are the last things to be added in the process of updating commitments. Definition 6 Van der Sandt: In the case of 15, fronting the presupposition that there are some tarts yields the sentences in These do not clash with any Gricean principles, so the presuppositions are predicted to project. Similarly, adding the presupposition that there is a knave to 15a, as in 17a, produces no clash, so 15a presupposes that there is a knave. But adding the presupposition that there is a knave to 15b, as in 17b, does result in a clash: So 15b is correctly predicted not to presuppose that there is a knave. The issue is not simply whether a discourse is felicitous, but whether there is any clash with the maxims. And this will of course depend on how exactly the maxims are formulated. But by the early 80s, more linguistically oriented work had expanded the empirical domain of presupposition theory from definite descriptions to other trigger types, including factives Kiparsky and Kiparsky, , implicatives Karttunen, a, focus particles Horn, , verbs of judging Fillmore, and sortal constraints Thomason, Also by the early 80s, linguists had expanded the empirical domain in another direction. The philosophical literature was largely oriented towards unembedded presupposition triggers and triggers under negation, but as we have already mentioned, Morgan and Langendoen and Savin generalized the issue by considering arbitrary embeddings. However, it was not until Karttunen that the full complexity of the projection problem became apparent. By methodically considering projection behavior construction by construction, Karttunen showed that there was more variation in projection behavior than had been previously described, making it quite clear that none of the extant Frege-Strawson derived systems could hope to cover every case. Plugs comprise a class of predicates and operators which Karttunen claimed block the projection of presuppositions, while holes are a class of predicates and operators which allow presuppositions to project freely. The intuition behind the filter metaphor is that these constructions allow only some presuppositions to project, and we have already seen examples of this phenomenon. Thus example 11 showed that sometimes a presupposition in the consequent of a conditional does not project: Karttunen concluded that the consequent of a conditional acts as a hole to some presuppositions, but filters out all those presuppositions which are entailed by the antecedent, or, more generally, by a combination of the antecedent and contextually supplied background information. The second half of 20 contains at least two presupposition triggers: Now consider a context supporting the proposition that all mormons have holy underwear which they wear regularly. It follows from this proposition and the negation of the left disjunct, i. But these are exactly the presuppositions triggered in the right disjunct, so they are filtered out. It follows that 20 has no presuppositions. What remained completely unclear in the paper was why certain presuppositions should be filtered out if they were entailed by other material. Karttunen suggests an alternative conception based on the idea of local contexts of evaluation. The idea is that the parts of a sentence are not necessarily evaluated with respect to the same context as that in which the sentence as a whole is evaluated: For example, when evaluating a conjunction, the second conjunct is evaluated in a local context which contains not only the information in the global context, but also whatever information was given by the first conjunct. Karttunen defined local contexts of evaluation for a range of constructions, and suggested the following requirement: Given this requirement, the overall presuppositions of a sentence will just be whatever propositions must be in a context of an utterance in order to guarantee that the presuppositions associated with presupposition triggers are satisfied in their local contexts of interpretation. Karttunen spelled out how local satisfaction should be calculated separately for each connective and operator he considered. However, recent developments in Schlenker provide a general way of calculating what the local context should be. Let us say that some clause in a complex sentence is redundant relative to some context of utterance if you can replace that clause by a tautology without affecting the amount of factual information conveyed by the sentence in that context. For example, in 21, the first conjunct is redundant in any context of utterance. Now let us say that a clause is left-redundant if it is possible to tell by looking at the material in the sentence to the left of the clause that the clause is redundant. Presupposition via satisfaction A presupposition P is satisfied at point X in S iff P would be left-redundant if added at point X. A sentence presupposes whatever propositions must hold in global contexts of utterance such that each locally triggered presupposition

is satisfied where its trigger occurs. As an example, let us consider the presuppositions predicted for 20 , repeated below: And more generally, anything entailed by a combination of propositions in the context and the negation of the left disjunct will be satisfied in the right disjunct. This presupposition will be satisfied provided the global context of utterance, combined with the negation of the left disjunct, entails that she has had holy underwear that she wore. One notable property of the Karttunen treatment of examples like 20 , a property not found in his model, is that the presupposition predicted is conditionalized. That is, 20 is not predicted to presuppose that Geraldine has had holy underwear that she wore, but that if she is a mormon then she has had such underwear. We already encountered such conditionalized presuppositions in our discussion of Strong Kleene; in fact, Strong Kleene predicts exactly the same conditionalized presupposition in this case. In 15b , the conditional presupposition that if there is a knave, then there is a knave is trivial, so in effect there is no net presupposition. An observation made by Peters showed that the model is surprisingly closely related to the semantic accounts of presupposition discussed above. Here is a general way of defining the Peters Connectives, inspired both by Schlenker ; and George For each argument X that takes a non-classical value, check whether on the basis of material on its left, assigning an arbitrary classical value to X could conceivably have an effect on the overall value. If so, the sentence as a whole lacks a classical truth value. If not, just assign X an arbitrary value, and carry on. If this procedure allows all non-classical values to be filled in classically, then the sentence can be assigned a classical value. For example, this procedure makes a conjunction classical if both its arguments are classical, false if the left conjunct is false, and undefined otherwise. Thus undefinedness of the left conjunct forces undefinedness of the entire conjunction, whereas undefinedness of the right conjunct only sometimes yields undefinedness of the entire conjunct, as seen in the following comparison of truth tables in various systems. The net effect is that presuppositions of the left conjunct project in the Middle Kleene system, just as in the Weak Kleene system, but presuppositions of the right conjunct are conditionalized, just as in the Strong Kleene system. The net effect is behavior that precisely mirrors that of the Karttunen model. Definition 9 Trivalent truth tables for conjunction Weak Kleene.

Chapter 6 : What Are the Key Ideas for Critical Thinking Skills? | The Classroom

Inferences are steps in reasoning, moving from premises to logical consequences. Charles Sanders Peirce divided inference into three kinds: deduction, induction, and abduction. Deduction is inference deriving logical conclusions from premises known or assumed to be true, with the laws of valid inference being studied in logic.

Ethicists in general, and utilitarians in particular, often ask people to change their behavior for some greater purpose that is linked to concepts of right and wrong. Traditional views suggest that right and wrong are defined by or embodied by divine beings. Consequentialists suggest that right and wrong can be evaluated by observing consequences in the physical universe. In the first case, ethicists who assert that right and wrong exist independently of human existence must rely on revelation or some other process that allows humans to know right and wrong. Some theologians might argue that right and wrong are defined by a god who communicates those ideas to humans, while others might argue that right and wrong exist independently of a god or that the two concepts are one and the same. Deontologists and virtue ethicists likewise might rely on a human faculty that allows discovery of right and wrong. Those who argue that right and wrong exist independently from human existence would need to assert the existence of a human faculty of identifying this. Contrary to each of these positions is the hypothesis that there is no morality or that the exercise of power in the absence of conventional morality is itself the best thing similar to social Darwinism. Consequentialists and utilitarians have more freedom in defining and understanding concepts of right and wrong. They have the option of constructing ideas of right and wrong based on inferences from empirical assessment of preferences. From this he argued that legislators should consider only pleasure and pain when formulating laws see chp. Although utilitarians have the option to derive their understanding of right and wrong from their understanding of pleasure and pain, it is unclear if they are compelled to exclude the possibility that right and wrong exist independently of human existence. This is the assumption that, for a given event, the net effect of positive and negative repercussions that affect one person or being can be identified and assigned a value that is adequately precise. The value of some events might be clearly different from zero, as in the case of being tortured or winning a large amount of money. The value of other events might be less clear or perhaps undifferentiable from the value of similar events. Apart from weighting the scores of each individual, attempts to maximize happiness in the strictest sense would rely on a consistent, objectively constant scale by which all happiness is measured and aggregated. If the scale is not objective, then the scale used by one observer could be different from the scale used by another observer, and maximization according to one scale would likely not correspond to the maximum on the other scale. A possible solution to the problem is to recognize the limits of precision in the analysis. If happiness is rated on a nonlinear scale, then individuals would need to understand how to rate their happiness with respect to the appropriate data transformation algorithm. Measurement that does not allow for maximization in the strict sense might intentionally or otherwise base decisions on rank-sums. Such systems would not systematically maximize happiness, but might be able to maximize the number of people who are happy. Modifications of such systems might allow for a rough weighting to account for the most extreme types of happiness or unhappiness. In other words, such a system would lack precision to differentiate between many types of pleasures and pains but might be able to approximate the utility or disutility of torture and extreme pleasure. The degree of precision and the degree of objectivity might be far from perfect but might be better than alternatives. If there is no standardization, then one person can assign higher or lower priority toward immediate gratification than another person would. What makes time valuation more difficult is the evaluation of the current value of indirect consequences. Psychological research has demonstrated that preference for immediate versus distant reward varies as a relatively persistent individual difference [2] [3]. In other words, some people tend to favor immediate gratification and others are willing to delay immediate gratification for what they consider to be a greater reward in the future. People with different time-value dispositions would tend to assign different utility scores for events in the future. If individuals do not accept the same time value of happiness, maximization of aggregate utility. As with any lack of an objective measurement scale, attempts to maximize aggregate utility

would be compromised, but other solutions might be possible see Aggregation is Objective assumption. The assumption that the value of utility can be added and compared to a criteria assumes that the calculations are of ratio level of measurement. A lesser assumption, that the measurements are of ordinal scale, would imply that happiness within or between people can be ranked but cannot be aggregated. Different methods of utilitarian calculus make different assumptions. The first method, the rank-sum method, amounts to a sum of ranks that are of ordinal level of measurement and whose aggregation is more closely related to a democratic vote than to a direct measurement of utility. The appropriateness of measures of utility and their corresponding scales can be evaluated using the representational theory of measurement or the theory of conjoint measurement. Conjoint analysis might be useful in testing the composition rules that are used to add, subtract, multiply or divide numbers that were obtained from empirical measurements and that are presumably of ordinal scale such as utility ratings or measurement of psychological constructs [4]. A more recent article presented a new justification for the representational theory of measurement [5], but application to utilitarian theory is lacking please improve this section by contributing here if you can. Economists have developed methods for working with data that is only of ordinal scale. These methods include construction of indifference curves, Edgeworth boxes, and Pareto frontier graphs. Although the methods can become complicated when many goods are involved, and precision can be low, they can be useful. Observer Valuations Are Independent of Cognitive Bias Edit For versions of utilitarianism other than those that use rank-sum aggregation of self-reported happiness, valuations of happiness that are made by observers must be largely free from cognitive bias. Utilitarian systems might assume that individuals or legislators accept the logical task of basing decisions on utility and that these people strive to rid themselves of beliefs that are inconsistent with this task. If the assumption holds, then people would be working toward diminishment of cognitive bias. If the assumption fails, people who claim to be making utilitarian judgments might have rejected the first principle of utilitarianism the principle of utility or failed to judiciously rid themselves of their old beliefs. Even without overt cognitive bias, one observer legislator might assign different values to utility than would another. In the presence of cognitive bias, the difference could become substantial. An example is that one person might assign a nearly infinite negative value to a death caused by euthanasia while another assigns a large positive value according to the perceived reduction in suffering. The difference of opinion is attributable to cognitive bias when the decision-makers are either unaware of or mistaken about the origins of their beliefs while they argue that their beliefs are either objective or derived from an unbiased intuition. As the biases grow, the system becomes increasingly similar to theological, deontological, or virtue-based morality disguised in a thin wrapper of allegedly objective measures of utility. The lay person can look toward political divisiveness and polarization as an indication of the degree to which humans tend to adhere to a worldview that alters their interpretation of new evidence. Some of the mental processes behind valuations are described by research of cognitive dissonance, which has documented the tendency of people to alter valuations to resolve conflicting beliefs and to do so in a self-serving manner [6] [7]. The implication is that unconscious processes impede the ability of decision-makers to both make objective evaluations and to acknowledge the internal, mental processes that underlie that process. Another line of research suggests a structure to human values. The structure of values itself is not problematic, but lack of insight can lead people to assume that their value orientation is revealed to them through a process that connects them to objective information--research supports an alternative hypothesis. Shalom Schwartz found relatively consistent structure to human values such that the perceived value of power was correlated with that for need for security and achievement and inversely correlated with a collection of traits called universalism, which includes value in equality, social justice, and protection of the environment [8] [9]. Universalism is closely related to perceived value of benevolence and self-direction. Somewhat orthogonal to these values were those for tradition, hedonism, and stimulation. Similar analysis can be performed on a variety of other dispositions. One example is the structure of right-wing authoritarianism. One study suggested a three-factor structure of right-wing authoritarianism comprised of Conventionalism, Aggression, and Submission [10]. Some part of this and other dispositions arises from physiological origins, as is the case with empathy [11] and aggression [12] Given the origins of and persistence of some dispositions to value one thing over another, and considering the difficulties of

obtaining insight into our own valuations [13] , reaching consensus on valuation would be difficult. Many philosophers, including Hume, have argued that observations of the physical universe cannot lead to an ethical valuation of right or wrong. In this way, the is-ought problem is a problem of the transition from empirical evidence to ethical valuation. Hampshire suggested that this "unbridgeable separation between moral judgments and factual judgments Solutions to some forms of the is-ought problem can be found in truth-functional propositions, such as saying that if individuals want to maximize their pleasure, then they must avoid adopting self-mutilation as a pastime. The problem becomes more challenging when trying to justify the first principle of such systems e. The challenge for utilitarianism is the degree to which people can objectively assign a numeric value to utility. The transition from empirical evidence to ethical valuation might be different for utilitarianism as a personal philosophy as opposed to utilitarianism as a political philosophy. The difference lay in the way that utility-ratings preferences are treated. Psychologists often consider stated preferences as empirical evidence or as evidence for latent traits. Utilitarianism as a personal philosophy might attain internal consistency by simply retaining preferences based on perceived pleasure and pain of self and others as ordinal-scale rankings. Additional difficulties arise when legislators attempt to measure and add the utility of others, thereby complicating the transition from empirical evidence to ethical valuation. Efforts to reduce the problems with this transition include adopting only a minimum set of the most defensible values as is intended by negative utilitarianism and perhaps libertarian political philosophy , although the choice of such approaches is itself affected by an implicit statement of values. Sam Harris argued that science will increasingly enable people to answer ethical questions [15] p. His founding principle is that the well-being of conscious beings is the criterion upon which ethical questions can be evaluated p. He appeared to rely on an a priori argument: In other words, he asserted that if no conscious being is affected by an act in any way, then the act is not morally relevant, otherwise it is morally relevant see also p. He suggested that focusing our attention on human cooperation is of the greatest importance and that increasing scientific understanding of the brain will help people to evaluate the emotionally relevant components of morality p. Harris did not offer a full explanation of how to count or weight positive versus negative mental states to resolve the measurement problem, but he suggested that our scientific understanding of these things will improve. Embedded in the framing of the is-ought problem is the assertion that there exists some attribute of right and wrong that is beyond the domain of the physical universe and therefore beyond the domain of consequentialism. A moral realist approach to the problem would be to not assume that any such things exist and to instead evaluate actions on their observable consequences. In this way, traditional views of right and wrong might carry with them too many vestiges of old belief-systems to be used to discuss scientifically preferred actions. Consequently, a moral realist might determine the preferred course of action by using the chosen criteria such as happiness or well-being instead of trying to map that measure to a scale of goodness or rightness. Without the need to express a measurement on a scale of goodness or rightness, there would be no need to address the is-ought problem except perhaps to justify the first principle of the system e. Primary Commitment to Truth Edit If humans are to recognize and objectively view their own values and physiological dispositions toward empathy, aggression, and the like, then they might first need a collection of skills, beliefs, dispositions, or other attributes that facilitate the process. Prichard suggested that the solution to endless debate between moral philosophers is to first find a criterion of knowledge that allows philosophers to distinguish between true ideas and false ones [16]. Success of the endeavor will be determined by future research. It seems that if humans are to view their pre-existing values and dispositions objectively or nearly objectively, they must have a prior commitment to truth that would compel them to pursue, to the best of their ability, an objective understanding of their existing values and dispositions. That commitment must be strong enough to compel people to free themselves from beliefs or values that are not supported by an adequate foundation. Some have asked for a justification for assuming or requiring a commitment to truth, and Popper suggested that those who adopt a rational attitude have tentatively or from force of habit adopted "an irrational faith in reason" [17] p. He also considered this to be a moral choice because the adoption of an attitude toward reason would affect how societies divide themselves into leaders and the led or perhaps masters and slaves, and this is clearly a moral decision p. Putting Time in Perspective: Journal of Personality and Social Psychology, 6 The Consideration of

Future Consequences: Weighing Immediate and Distant Outcomes of Behavior. *Journal of Personality and Social Psychology*, 66 4 , Conjoint-Measurement analysis of composition rules in psychology. *Psychological Review*, 78 2

Chapter 7 : Distinguishing Between Inferences and Assumptions

The reader needs to infer overarching ideas about the theme, main point or moral of a text by drawing on local pieces of information. On-line inferences: inferences drawn automatically during reading.

The main ones are that people have rational preferences, they are self-interested, they are utility maximisers and they have access to all relevant information including information about the future. The economy is assumed to be in equilibrium, markets are efficient and perfect competition reigns of course this is a simplification. These assumptions come in for a lot of criticism but they are defended as necessary simplifications. However, the assumptions economists make have a huge effect on the world of economics and therefore world economies. One response to these assumptions that is popular among non-economists is to deride economists and call for their assumptions to be dumped. A great many people feel that viewing the economy as governed by self-interested utility maximisers as so unrealistic as to be useless. They say we should ditch it all and start afresh. Most of the key pillars of neo-classical economics have been debunked. There are numerous studies showing that people are not rational, preferences are not stable, people do not have perfect information, markets are not efficient and people do not have utility curves. Particularly since the Financial Crisis there has been anger at economists, many of whom are seen as out of touch with reality. Economists respond to this by either ignoring complaints or arguing that the assumptions must be simple to make their work easier. Economists claim that the economy is too complex to accurately model, so they must use a simplified model in order to provide insights. They claim they can still learn a lot about the economy from these simplified assumptions. One lecturer I had begun her class on utility functions by saying that none of this was true in the real world, but we had to learn it in order to construct models. Of course no one really believes in perfect competition, she said, but it is too complicated to create an accurate model and a simplified one gets us as near to the mark as possible. I have two main objections to this. First of all, economists have a tendency to forget they are simplifying. It is common to hear economists criticise minimum wages or unions or taxes based your standard economic textbook explanation, seemingly forgetting about the unrealistic assumptions behind such theories. For example, take a look at this post. I choose Bryan Caplan as he is one of the more respected and well-known economists. Yet his post essentially argues that when history contradicts basic economics the unrealistic assumptions no economist supposedly takes seriously he believes that history must be wrong. He assumes that all workers had perfect information and were paid their marginal productivity of labour. When heterodox economists criticise these theories they are sometimes accused of attacking a straw man. In case you think that was a once off, see here Secondly, it is somewhat absurd for a discipline to base itself on foundations generally agreed to be false. If we know people are not rational, should it not make more sense to build theories on how people really do behave? Is it not better to be roughly right than precisely wrong? Think about what unrealistic assumptions do to economics. Finally it leads to stagnation. If we close off large parts of economics and refuse to listen to criticism of the core assumptions, then how is the field of economics supposed to grow? If new ideas or changes to neo-classical economics is dismissed or ignored how can economics advance? Is economics supposed to be forced into more and more obscure areas or more and more complicated though no more accurate models? Other economists would say that perfect competition etc is only a starting pointing and that distortions and market failures get added on to models. However, your starting point has a strong impact on your end point, just as there is a large difference between assuming innocence until proven otherwise and assuming guilt. If markets are assumed efficient and consumers rational until proven otherwise this leads to an overly rosy view of markets and consumers, giving them powers they do not have. This would be easy to model and no less accurate than assuming perfect competition. But this view of the market would be far more negative with a much greater emphasis on government intervention. Not only is a large core of economics especially microeconomics unhelpful in describing the real world, but economists are largely looking in the wrong direction. Economists could study how consumers really make decisions in all their irrational glory. It would be imprecise, inexact and not very mathematical, but it would be real. Or they could keep drawing indifference curves and constructing mathematically impressive but

functionally useless models. They could look at how economies really function, with their inefficiencies, market failures or they can create perfect economies in the clouds. They can either look in the weeds where the key is or under the streetlamp where the light is better. I once went to a talk by the lecturer I mentioned above, who admitted that the utility curves she had to teach were not real. She was presenting some game theory research of hers where she examined interactions between inventors and firms in the world of innovation. It was an interesting paper, but there was one glaring hole in it. None of it was real. All she did was make a lot of assumptions, create an algorithm and get a result which in this case was that private sector funding of research was more efficient than public sector. She voted for a left wing European party and was critical of many economic assumptions. Yet she too created a model with little connection to the real world. There are many serious problems affecting economies over the world. They have been badly damaged by the Financial Crisis, the policies of austerity and most have still not recovered. If we want to effectively combat these recessions, we need economists who are willing to examine the world as it really is, not as they wish it was. Simplified models with only one consumer in the economy or world where people have perfect information, leads economics in the wrong direction. If you take a perfect economy as your starting point, then the idea of systematic failure will never cross your mind. The problem is these crises occur whether we are ready for them or not. It is time economists climbed down from their towers and got to work on the real problems of society.

Chapter 8 : Sam Harris's Moral Assumptions | Cognitive Philosophy

Examples of reality assumptions include time, free will and ethics. Another example of a reality assumption arose after the discovery that light traveled in waves. The assumption was that there must be an "ether" that the light waves travel through.

References and Further Reading 1. Metaethical assumptions In this section, we will introduce some preliminary linguistic notions that will allow us to give a better account of the cognitivism vs. Canonically, forms of language are mainly divided in two species: Cognitive sentences are fact-dependent or bear truth-values, while non-cognitive sentences are, on the contrary, fact independent and do not bear truth-values.

Different illocutionary acts Before introducing the notion of illocutionary force, we need to say more about language and its usage. We are rather referring to a class including all the possible empirical performances made by a possible speaker in any language and in any occurrence of that determined expression. On the other hand, propositions are the meaning of sentences: The same proposition may be used in different occurrences for doing different things. In other words, the same proposition can be used for asserting, questioning, asking, demanding and so on. A sentence, therefore, can be understood as an illocutionary act. The general form of illocutionary acts, according to Searle, is: In this way, we can symbolize different kinds of illocutionary acts such as assertions: They are indeed instruments constructed with the help of propositions, and therefore they belong to language; this is what distinguishes them from other instruments devised to reach a certain aim. We can distinguish two "not necessarily separated - elements within an illocutionary act, namely the propositional indicator p and the indicator of illocutionary force F. On the contrary, illocutionary acts show the way a proposition is used or what illocutionary force the sentence belongs to. Therefore, illocutionary force has no semantic meaning whatsoever and so it does not form part, for example, of the conceptual amount of a norm sentence. Finally, the illocutionary dimension has a perlocutionary element attached. According to Levinson , p. The main difference between a perlocutionary act and an illocutionary act stands on the fact that the former has a conventional nature, as it can be represented in explicit form using the performative formula; this conventional nature does not apply to perlocutionary act. In the following, we will see the importance of perlocutionary acts within the emotive theories of ethics, which represent a kind of non-cognitivist theory.

Difference between language and metalanguage Another fundamental notion to understand is considering the difference between cognitivism and non-cognitivism concerns a linguistic difference between language and meta-language. This distinction makes clear another problematic feature intrinsic to the ordinary use of natural languages such as the ambiguity of normative sentences and prescriptions. Often non-cognitivist positions are confused with relativistic positions because of the shift from the object language into the meta-language. There is no room for relativism here: Ambiguity of normative sentences Notice that normative sentences are ambiguous; they can be uttered both in descriptive and in normative ways at the level of common language. In other words, the same normative sentence can be used either to perform prescriptions as well as to describe that a particular norm exists. Jeremy Bentham , p. In fact, this semantical shift is due to a peculiar capacity of natural languages to mix up the language level with meta-language level to the extent in which we cannot appreciate any difference between them when using ordinary language. It is not the expression of an act of will exercised at the time: The most influential analysis on the nature of normative sentences especially in the field of philosophy of law was carried out by Hans Kelsen especially in Kelsen, Definitions of ethical non-cognitivism Ethical non-cognitivism claims that prescriptions have a different nature than descriptive sentences; they have no truth-values, they are not describing anything, and they have a different illocutionary role. That is to say, they do not express factual claims or beliefs and therefore are neither true nor false they are not truth-apt ; they belong to a different illocutionary force, the prescriptive mood. These theories, as opposed to cognitivist theories, are not holding that ethical sentences are objectively and consistently true or false, neither even presupposing new entities platonic-like in the way naturalistic theories do , and therefore they do not need to explain the way in which we can epistemically access these theories see Blackburn, , p. In other words, non-cognitivism claims that the principal feature of normative sentences their lacking of truth

values is a consequence of the illocutionary role of such sentences. In fact, these sentences are not bearing any cognitive meaning such as assertions or descriptions, but they are just used to utter prescriptions. Therefore, cognitivist theories reject three traditional theses: We can find two main theories within noncognitivism: These two theories, often confused, need to be carefully distinguished. For prescriptivists a normative sentence is used for uttering overriding universalizable prescriptions such as: Another difference between those two theories is about the possibility of a genuine logic of norms. Emotivists, at least in classical formulations from Ayer to Stevenson claim a logic of norms is very problematic or even impossible to build: The problem of a logic of norms The main challenge non-cognitivist theories face is about the possibility of a logic of norms. Cognitivist theories are not facing this dilemma as they claim there is no difference between normative and descriptive sentences; therefore the classic logic based on truth-values is sufficient for normative reasoning. What about norms lacking truth-values? The problem of a logic of norms is a vexata quaestio that dates back, in modern times, to *Language, Truth and Logic* by A. Ayer claimed that ethical sentences are pseudo concepts aimed at expressing emotions or commands having no real meaning. The only purpose of ethical sentences is to persuade the listener to act in a certain way. In other words, ethical sentences have only a perlocutionary function. On the other hand, Ayer acknowledged that people do discuss about questions regarding values, but they are not actually ethical dilemmas involving values but factual questions. In fact, people, according to Ayer, reason about empirical facts on which state of affairs to perform and not about agreeing on an ethical belief. The last word in ethics is rather ideological, that is to state the superiority of a moral system over another. In fact, Ayer is not able at least in *Language Truth and Logic* to distinguish in normative sentences between an emotive perlocutionary part and a descriptive meaning part. The distinction is necessary to give ethics its full significance back. Methodologically, Jorgensen was in line with the modern distinction in sentences between illocutionary force and propositional content see i. This derived indicative sentence applies to the rules of classical logic and thereby indirectly applies the rules of logic to the imperative sentences so that entailments of the latter may be made explicit. This solution is very similar to R. In fact, Jorgensen acknowledges a descriptive component within prescriptive sentences and also he thinks that it is possible to apply logic to norms. Jorgensen still thinks logical inference is a concept linked to a classical idea of logic, where an inference is when we get true conclusions starting from true premises. However Jorgensen noticed that in ordinary normative reasoning we perform inferences can be accepted as true; such as: Keep your promises 2. There are two ways to explain this phenomenon: Otherwise it is not possible to apply the notion of logical inference to norms: The essence of the challenge of non-cognitivism is therefore expressed: Stevenson and the role of persuasion C. Stevenson developed another non-cognitivist and subjectivist theory of norms. Therefore, according to Stevenson, ethical terms are instruments used in a cooperative enterprise that leads to a mutual readjustment of human interest. So, when using ethical sentences, we are not using logical inference, but, actually, we are using methods of persuasion. According to Hare, Stevenson treated what were perlocutionary features of moral language as if they were constitutive of its meaning, and as a result became an irrationalist, because perlocutionary acts are not subject to logical rules. Hare and the dictive indifference of logic According to Hare, normative sentences are characterized by three ingredients: According to Hare, moral sentences are prescriptions that are sentences used for guiding an action or to reply at the question: In other words, an indicative or descriptive sentence is used for telling someone that something is the case; an imperative is not about that "it is used for telling someone to make something the case" *ibid.* Emotive theories, according to Hare, judge the success of imperative solely by their effects, that is, by whether the person believes or does what we are trying to get him or her to believe or do. Moreover, the rules that define their logical behavior make them universalizable. Another interpretation of the thesis of Universalizability claims that Universalizability is not about the way moral terms function, but it is a principle axiom which is part of any possible normative system as such see Hare, This thesis has been attacked by several authors such as A. MacIntyre, B. Williams and M. Supervenience is a feature moral sentences share with descriptions too. This issue is discussed also in the philosophy of mind. In moral philosophy, the issue of supervenience concerns the relationship which is said to hold between moral properties and natural or non-moral properties. Alternatively, it is put forward as a claim about a certain feature of moral terms or moral predicates. For Hare

overridingness is a feature, not just of evaluative words, properties, or judgments, but of the wider class of judgments which have to have, at least in some minimal sense, reasons or grounds of explanations Hare, Basically, Hare believes that overridingness and universalizability are similar concepts in that both involve a universal premise such as in the Golden Rule. From a logical-linguistic point of view, Hare distinguishes in a sentence between a phrastic and a neustic: Roughly speaking, a phrastic is that component in the sentence we called the descriptive component above, and a neustic is the illocutionary part in a sentence. According to Hare, logical connectives are part of phrastics; combinations of those connectives are able to create, are valid in the case we deal with normative sentences as well as we deal with descriptive sentences. It is, indeed, the proper function of these connectives to establish relations between sentences; in other words, the validity of a reasoning depends upon the logical links subsisting among phrastics. Therefore no difference will subsist between a logic of imperatives and a logic of assertions: These analyses were made by Simon Blackburn and by Allan Gibbard. We will see in the next section how Blackburn can make room for a logic of norms. It applies to the rationality of actions, and it applied to the rationality of beliefs and feelings *ibid.* For Gibbard, cognitive analyses fail to recognize that judging a behavior as rational means to endorse it; even classical non-cognitivist analyses fails this point as they admit that moral judgment are not feelings, but judgments of what moral feelings it is rational to have. Feelings we think, can be apt or not, moral judgments are judgments of when guilt and resentment are apt. The primary function of norms which Gibbard justifies on evolutionary basis is to facilitate the social cooperation, and while true factual sentences are coupled with world representations, normative ones have the function of making social cooperation stable, and not linked to environmental and social changes. Of course, these will be changing from culture to culture. Finally, Gibbard suggests that normative judgments “because their social function” commit us to adopt higher level norms to encourage social cooperation. For Gibbard, a norm is a significant kind of a psychological state of the mind, which is not fully understandable for us. The problem was posed in P. In particular, Geach used his own test to attack non-cognitivist claims; in fact, if we find a positive solution to the Geach-Frege Problem we are *de facto* giving significance to non-cognitivist moral reasoning.

Chapter 9 : imply vs. infer : Choose Your Words : theinnatdunvilla.com

An axiom or postulate is a statement that is taken to be true, to serve as a premise or starting point for further reasoning and arguments. The word comes from the Greek $\alpha\lambda\lambda\alpha\mu\alpha$ ($\acute{\alpha}\lambda\lambda\alpha\mu\alpha$) 'that which is thought worthy or fit' or 'that which commends itself as evident.'

It is a general assumption as well as a universal reality that physical punishments appear more effective than oral snubbing as well as fines and penalties in order to educate and train the school students and develop their personalities. The above statement indicates towards the same point that in order to protect the students from going astray, corporal punishment should be allowed in schools. Hence, implementation of corporal punishment is an assumption in this statement. If you have time on your hands on Monday, you can go out and vote. Every activity requires free hours for its performance; the same can be found in the above statement, which clearly indicates that voting procedure demands plenty of time, and wastes precious hours of the people. Hence, going out and vote casting is surely dependent of plenty of time in hand. Consequently, this is an assumption that the people having free time and leisure hours go out to cast their votes. The value systems of those with access to power and of those far removed from such access cannot be the same. The viewpoint of the privileged is unlike that of the underprivileged. It is fact beyond suspicion that pecuniary gains and socioeconomic statuses determine the liking, disliking and preferences of the individuals. The above-mentioned statement indicates the same assumption that financial position causes difference of opinion in individuals. A man is only as faithful as his options. It is a universal assumption that man is honest until he gets an opportunity of displaying dishonesty. A pedestal is as much a prison as any small, confined space. Pedestal is a small base or support, which is confined according to the size of statue for which it has been constructed. Like prison house, pedestal also offers limited space for movement, and serves as a symbol of a narrow prison, where the movement of prisoner is really hard. In the environmental movement. It is not confined to environment only; rather, every hurdle brings losses, but one has to make precautionary measures continuously to get rid of problems and worries in life. In the colonial countries, on the contrary, the policeman and the soldier, by their immediate presence and their frequent and direct action maintain contact with the native and advise him by means of rifle butts and napalm not to budge. Rifle and napalm were the symbol of warning and terror during colonial era, and the carrier of such things was supposed to be responsible for regulating the activities of others according to his will. Similarly, policemen and soldiers are sign of maintaining law and order. In the presence of police and army, people understand to abide by law and remain under threat and avoid breaking the statutes of law. My contention is that all kids have tremendous talents and we squander them pretty ruthlessly, so I want to talk about education and I want to talk about creativity. My contention is that creativity now is as important in education as literacy and we should treat it with the same status. The observations prove the very fact that if children are over burdened with the load of study, their creativity is seriously challenged. It is not confined to education and literacy only; on the contrary, the same can be witnessed in every professional and occupational activity, where undue burden of work keeps the individuals far away from learning and memorizing new things.