

A History of Philosophy

29 Francis Bacon

By Dr. Arthur Holmes of Wheaton College

Okay, let's get started, shall we? And let's see, I think I already assigned to you the material for this week, Bacon and Hobbes in the Reading, and an Outlining of Hobbes. This morning, this afternoon, I want us to focus on Bacon, and if we have time, some introductory things regarding Hobbes. But to introduce this, let me start with a reminder of what we were saying last time.

That is to say that the history of modern philosophy can be schematized in terms of the intersection of two lines of thought. On the one hand, in British philosophy, an empiricist tradition, and on the other hand, in continental philosophy, a rationalist tradition. These two traditions represent the extension into all areas of inquiry of the inductive methods of science that were being proposed, and on the other hand, the deductive mathematical type of method, which Descartes is going to propose.

So what we'll be doing is tracing the development of these two strains and starting in the British strain with Francis Bacon and Thomas Hobbes, 17th-century England. Francis Bacon, first of all, provides some orientation to his purpose and method. His overall purpose is very apparent in his writings.

And in much of the secondary literature about Bacon. But it frequently does not come out in the one-chapter treatments that you get in textbooks like Stumpf. It is, however, particularly interesting if we're trying to trace the shift of world views from medieval to modern times.

Inasmuch as Bacon, while every bit as genuinely Christian as the medievals, comes at the whole undertaking in a markedly different way. Bacon's mother was a Puritan of Reformed theological persuasion. And there are echoes of that in Bacon's thinking and in his overall purpose.

He makes repeated reference to the so-called cultural mandate in the opening chapters of Genesis. The mandate given to Adam and Eve to replenish, subdue, exercise dominion, stewardship, so forth. And he complains that the human race, far from fulfilling that mandate, is distracted from it.

It is our responsibility to recover the exercise of that right over nature which belongs to the human race by divine bequest. So he's thinking, as Reformed thinkers often do, of the task of philosophy, science, the intellect, in terms of creation, sin, and redemption. Creation gave us a mandate.

Sin has distracted us from the mandate. Redemption calls us back. Now, that's the theological frame with which he's working.

But the particular kind of sins that he blames and the particular redemptive hope that he has are tied very much to philosophy. That is to say, he regards the scholastics as some of the main perpetrators of the crime of distracting the human race from the cultural mandate. For the reason that the scholastic disputes help us not at all in enriching human life, in transforming society through human knowledge, and so forth.

And on the contrary, what he wants, instead of the sterility of Aristotelian philosophy, as he calls it, the sterility that disgusts him, what he wants is a new approach, a new method, that will help us get back to the task of transforming nature and shaping human society. Put it this way, if you like. The medievals conceived of philosophy as *ancilla theologiae*.

That is to say, as the servant, ancillary to, servant of, theology. Philosophy serving theological tasks. What Bacon does is to see philosophy not as the *ancilla*, the servant of theology, but of society.

Working for the good of the human condition, you see. Trying to change the world in which we live. And he's very explicit that the ideal that he has is a kind of utopian ideal.

Indeed, the late 16th century, the Elizabethan age, was the age of utopias. You see, it was the age of utopias. And Bacon himself wrote about a scientific utopia that he was dreaming of.

A utopia, that is to say, is brought in by applying scientific knowledge, knowledge of nature's processes, to the transformation of conditions. And it is that transformed society for which he sees everyone working, which he speaks of as the kingdom of heaven, the kingdom of God. So, it's sort of a religiously motivated utopian ideal, characteristic of the Renaissance.

But one that sees the hope implemented by modern science. You see, by modern science. Now, let's not jump to the conclusion that he's thinking that human knowledge automatically produces good results.

He makes some ethical comments along the way. And it's very evident that while, as he puts it, knowledge is power, and that's his famous dictum, knowledge is power, he wants that power controlled by an appropriate ethic. And without the natural law ethic rooted in the scholastic tradition, you see, he doesn't have a metaphysical basis for an ethic, and so the ethic has to be one that comes from, in his words, true religion and right reason, which sounds just like William of Ockham.

True religion is the divine commands. Right reason, the prudence that comes out of being aware of consequences. True religion and right reason.

Now, if you have with you the anthology, and I'd like to assume you do, this is the new anthology, beginning with Bacon. Oh, you mean you didn't bring it. Okay, next time.

Okay, some of you, I see, brave souls, have used copies with you, and others have new copies with you. Bring it anyway, we're going to need it, the whole thing. On page 20, oops, I brought the wrong word.

The old one. Let me borrow, may I, Janelle, borrow yours? I spoke in a mirror. All right.

At the very, very end of the Bacon selection, the very end on page 20, this is what he says. It will not be amiss to distinguish three kinds, as it were, grades of ambition in mankind. The first is of those who desire to extend their own power in their native country.

Now, that's the self-interested kind. Which kind is vulgar and degenerate? So he's no ethical egoist. The second is of those who labor to extend the power of their country and its dominion among men.

Now, this certainly has more dignity, though no less covetousness. It's corporate egoism. Interesting for a writer in the age of Elizabeth, if you know English history, you see.

But if a man endeavored to establish and extend the power and dominion of the human race itself over the universe, his ambition, if ambition it may be called, is without doubt both a more wholesome thing and a more noble than the other two. And that power of the human race over the universe, that's the dominion over the creation, you see. So that is Bacon's motive.

And you may well have come across literature or heard it said that this Baconian emphasis really gave license to modern science to exploit nature, to dominate resources and the environment for our own pleasure and good, so that sometimes the environmental problems of our day are blamed on Francis Bacon, you see. Now, frankly, I think that's accusing Bacon without looking at the context from which he's thinking. Because it's very apparent as you read Bacon at length that he's not thinking of it as domination, but as stewardship in a way appropriate to the kingdom of God.

So it's a very significantly different thing. That's not to say that the Baconian influence didn't give people license, but it wasn't Bacon. It was the way Bacon was read out of context.

Now, what sort of method does he have in mind? What sort of knowledge can give power over nature's processes? And the answer obviously has to be a knowledge of nature's processes. A knowledge of nature's processes. And the way he puts it might be misleading unless you see the subtle use of words that are involved.

Because on the one hand, he has rejected any metaphysic of forms. That is to say, he's not a realist in the medieval sense of real universals. He rejects any metaphysical forms.

If there are final causes, that is to say, purposes involved in nature, well, we'll have to leave that to the theologians. It's not accessible by rational means, by empirical means. So instead of metaphysical forms, he's turning to an empirical science, an empirical science that aims to discover forms.

And if you're not careful, you might read the second sense of forms as the same as the first sense of forms, which it is not. The second sense of form is just the uniform way in which natural processes proceed. That is to say, when A is routinely followed by B, you're getting that form of behavior in the natural processes, and he wants a method that can get at this kind of form.

The form has to do with processes that are entirely due to the operation of physical forces in the material world, physical forces in the material world. And the philosopher whom he cites most appreciatively in this regard is, as you might expect with the rise of mechanistic science, Democritus, the Greek atomist, everything understood in terms of matter and motion, though in his own time the most significant scientist undoubtedly was, of course, Galileo, who thought in similar Democritan kinds of terms. So this is his purpose.

His method, an empirical science of forms, is what we will see gives him concern to develop appropriate inductive methods, inductive logic, rather than deductive. Let me add this footnote that, in criticizing deductive reasoning, he has little appreciation for what syllogisms can establish. The problem is not with the process of inference involved in syllogisms.

The problem is not with the laws of logic. He's too wise for that. The problem is finding premises.

Now that was precisely the problem which Aristotle put his fingers on, you remember, in that long opening section of the posterior analytics. Where do we get the first principles for demonstration? Plato had said by dialectic. Aristotle poses the

problem of an infinite regress of first principles or of a circular argument about first principles, and finally comes down to the notion that we are able intuitively to abstract the first principle, the form of the species, from the experience that we have cumulatively of a whole species.

Now it's that process of intuitive abstraction which Bacon does not like. He talks in one place of improperly and hastily abstracted concepts that render syllogistic reasoning useless. Aristotle's abstraction of forms from species.

He has little respect for it. Yet the interesting thing is that while Aristotle called that process induction, by induction we know the forms, Bacon also calls the process induction. By induction, we know the forms.

But since induction of forms in the first sense, Aristotle's sense, induction through intuitive abstraction, is inaccurate, insufficient, and imprecise, he obviously wants another kind of inductive method in dealing with forms in the second sense. So watch the vocabulary. I think it's part of his literary craft, and he is really a Renaissance literary figure.

But it's part of his literary craft, you see, that he speaks of forms, induction as the method of knowing the forms, which is Aristotelian language, but it's not Aristotelian concepts. He's changing, changing the objects of knowledge and changing the methods of knowing. It's known by the new method of this new object of knowledge that is going to give power.

Knowledge by the old kind of method of the old objects of knowledge does not, he thinks, give power over nature. So what he wants then is an empirical science dealing with forces in the material world. Knowledge, then, is of instrumental value.

He's not after truth for its own sake, understanding for its own sake. He doesn't see the road to truth as the ladder to the contemplation of God, as the medievals did. He does not see the road to truth as the way to the contemplation of God, contemplating the forms, rising to the contemplation of the form of all forms, the good, you see.

No, that's not his hierarchy of being. It's not his worldview. He sees God as creator, but our responsibility in nature is this creation mandate to dominion for the sake of the kingdom of God.

Now, if you can hold that line of thought in mind, let me add one other piece of historical context that looks further forward. There are really just two or three key themes associated with Bacon that we need to get a hold of. One certainly is his conception of induction.

The second is that knowledge is power in relation to power over nature, the creation mandate. But the third is the assumption that this kind of scientific knowledge can be entirely objective. The idea that scientific knowledge can be entirely objective.

The idea that science tells us about reality, not realism about universals, but realism about scientific knowledge. And this emphasis is what he transmits to the Enlightenment that comes out most forcibly, most influentially in the Scottish realism of the next century, the 18th century, in which connection reference is constantly made, both in people like Thomas Reid, the Scottish realist, we'll meet him later on, and in recent writings about Scottish realism, because that's been going through a revival of interest over the last ten years. Among the people who've revived interest in it is Mark Noll, through his research and writing on American intellectual history.

But the constant reference in connection with Scottish realism is to the Baconian view of science. Baconian science. Meaning, science that's completely objective, science which is purely empirical, science which has no presuppositions, you see.

Science, which is the same for anybody, Christian, Jew, Muslim, Hindu, complete naturalist, you see. Objective, empirical science tells us, as it tells anybody, about the realities of nature. Now, the result in that Scottish realist tradition was that it came to be believed that modern science gave us a firm foundation of common knowledge on the basis of which a culture can develop its own superstructure, on the basis of which there can be developed philosophical theology, apologetics, and so on and so forth.

And for some of you interested in theology, apologetics, the influence of it came particularly to this country at Princeton through Witherspoon when he came to be president of Princeton College. So that Princeton College and Princeton Seminary, the two, became the conduit into American thought of Scottish realism. The classic Presbyterian theologian of the 1860s, Charles Hodge, really approaches his whole theology on a Baconian basis, taking it that science tells us the realities, and on that basis we can argue the existence of God, you see, and human freedom and responsibility, et cetera, et cetera.

And that influenced very widely, here at Wheaton included. Let's see, J. Oliver Buswell, who was the third president, was a very definite Scottish realist. He was a philosopher and theologian who wrote extensively on Scottish realism and had quite an influence in that regard. When I was an undergraduate here, I was introduced to philosophy in terms of Scottish realism.

Not because I studied under the third president, though I studied under a man who had studied under the third president when he taught elsewhere after me. So that Baconian influence in Scottish realism has influenced the American evangelical thought. Now I think it is much less influential, distinctively, among evangelicals,

unless you go to Asbury College and Seminary, where it is the dominating philosophical mood.

The revival of Scottish realism is more in contemporary American epistemology, interestingly. Much more widespread than it used to be. Okay, so three things then about Bacon to keep in mind.

Okay. One is an inductive method, seeking to know the forms. The second is the objectivity of science and its influence on the Scottish realist tradition.

And the third is the fact that scientific knowledge has instrumental value only, rather than being part of the search for truth and the contemplation of God. Okay. Now, with that, to catch the overall spirit, purpose, and context of his thinking, what we need to do is to zero in more specifically.

And two things that I draw your attention to, the negative side, the negative, the critical side of what he does, and the more positive, constructive side. The criticism is addressed at the idols, as he called them. Interesting religious metaphor again.

These are the things that people take uncritically, like they're gods. They are non-scientific influences in human thought, non-scientific influences that have to be exorcised, cast out. And he identifies four kinds of idols: the idols of the tribe, the idols of the cave, the idols of the marketplace, and the idols of the theater.

The idols of the tribe have to do with the influence, unconscious influences, perhaps, of the human mind, especially regarding what we take to be first principles, but which are inadequately secured. Here is the notion that there is some knowledge that is rooted in the uniformities of human nature, innate, native, like natural law, and these idols of the tribe he rejects. There is no innate knowledge.

There is no inference to first principles from what we know of human nature. The idols of the tribe he rejects, and the selections which you are reading will put flesh on these bones. The idols of the cave have to do with individual temperament, that is to say, the personal atmosphere that you breathe in your own cave, which influences the direction of your thinking.

This is something he wants to get rid of completely. He would be quite surprised, I think, at the sort of thing that William James or Friedrich Nietzsche would say around 1900, James, who talks of the difference that it makes philosophically whether you are tender-minded or tough-minded, because your psychological disposition affects the kind of philosophy you have. The tender-minded person is more likely to be philosophically with an optimistic view of nature.

The tough-minded person with a more deterministic, pessimistic view. Or Friedrich Nietzsche, who talked about the way in which the will to power, the strong will that is against the weak will, affects people's philosophical views. So, on that basis, what Nietzsche will do is to essentially bring to bear a racist psychology.

The Volkpsychology, a psychology of the race, psychology of the people. And will try to characterize the philosophical outlook of the French, the Germans, the British, etc., in terms of the mentality, the temperament of the people. So, the idols of the cave have to do with individual or group temperament.

Now, I saw somebody over here. Who was it? Kristen. I was wondering where the name tribe came from.

And I was wondering if the cave was like... An echo of Plato? Yeah, sure is. Very much so. We're shut in our own cave, you see.

And inasmuch as emotional temperament seems in part to be physically produced, then the cave produces its own emotional temperament. Tribe, I suppose he's referring there to the whole human race. Its identity.

So forth. Yeah. So you're right in suspecting that.

The idols of the marketplace. Well, of course, in the 17th-century town, village, that's where everybody met on market day. That's where all the gossip went on.

That's where the language took shape. The language that conveys all sorts of ideas, whether or not intended and whether or not known. And in that regard, what he's doing is saying that the idiom of the language has a way of instilling philosophical beliefs that may be totally erroneous.

If we take it, for instance, that a noun stands for a thing, an entity, a substance, then we're going to give substantive reality to everything that is denoted by a noun. And think of where that sort of thing led people like Plato in their metaphysics. Nothing.

So the idols of the marketplace. The idols of the theater, yeah, that's where our games of make-believe take on a reality and a life of their own. So that's where our imaginative thinking is taken to be real.

And so the theater has to do with, yes, philosophy, science, and so forth. And he distinguishes three kinds of philosophy: the sophistical, the so-called empirical, and the superstitious. And the way he's using the terms, not just two, but all three of them, is to be regretted.

The sophisticated philosophy, his example there is Aristotle. And it's there he makes those uncomplimentary remarks about Aristotle's kind of induction. Where hastily abstracted principles destroy the possibility of assured conclusions from syllogistic reasoning.

Empirical philosophy refers to some of the science of the day, where there is too little careful observation, too little close examination, too little empirical work going on. And he has in mind there the work of Gilbert, who did some primitive sorts of work having to do with magnetism, the lodestone, and so forth. Superstitious philosophy is philosophy mixed with religion.

Philosophy mixed with religion. And there he has in mind people like Pythagoras and Plato, who give a religious aura to what they're doing so that their philosophy leads to some kind of mystical religion. And he much prefers Democritus.

Now, you see, when you look at that array of criticism, you can see how thorough his repudiation of the past is. I mentioned on Friday the resurgence of skepticism in the Renaissance. Skepticism about past philosophy, skepticism due to a variety of factors, the rediscovery of Sextus Empiricus, the breakdown of the medieval synthesis, the epistemological vacuum left with the Protestant Reformation, and so forth.

Well, here is Bacon, you see, reenacting that skepticism with regard to past philosophy, wanting to make a fresh start, just as the Reformers went back to scriptura sola, scripture alone. So Bacon wants to go back to the empirical facts alone, you see. But notice that he doesn't see any active relationship between philosophy and religion, the way the medievals did.

There was a synthesis of the philosophical with the religious quest, a philosophy with theology. Not so Bacon. It certainly isn't an integration of science and religion.

The only tendency of religion to science is in telling you why to do science. Why? Well, it has a lot of instrumental value. It helps you to go about that cultural mandate, to restore in part the human condition to what it might have been, and so forth.

So it's not the content of science that is related to religion. It's simply the purpose of science, you see. Now, why is that? Well, I mentioned Galileo.

You see, Galileo suffered from those who wanted to integrate the content of science with religion. That's what got him into trouble, you see. And in the England of Bacon's day, in Elizabethan England, there had been a history of religious persecution.

Are you familiar with that religious history at all? The Protestant Reformation hit at the time of Henry VIII, who was something of a Luther scholar himself. When he died, his daughter Mary became queen, an ardent Catholic. And the Catholic-Protestant struggle was on.

Well, there was a gap in between when his son Edward, a young guy, was king. Didn't last very long. Then Mary.

Then Elizabeth, the Protestant. And the tables are turned, you see. And after Elizabeth came the Stuarts, James I of Scotland, a Catholic.

Divine right of kings, you see. Then Charles I, who lost his head over that. So these were days of religious struggle, religious persecution.

And it seems that what Bacon was very anxious to do, or at least happy to do, was to separate religion sufficiently from philosophy and science to provide some insulation from those who would persecute scientists or philosophers for religious reasons. He didn't want to be another Socrates, drinking the hemlock. Well, they didn't do it with hemlock in those days.

They did it with an axe, and there were those. Ever been to the Tower of London, by the way? I remember when we visited the Tower when our kids were respectively six or eight, crew-cut kids. And as we were going in across the drawbridge into the Tower, I remember the beef-eater in his garb put his hand on the crew-cut head of one of our kids, said, watch that head, they're leaving them all over the place in there.

And such was Sud's welcome to the Tower of London. Yeah, that's the way they disposed of the opposition. So I think there is that further incentive in Bacon to separate religion from science, religion from philosophy, hence subjective science, presuppositional science.

And the only connection of religion to science is in the purpose it gives to science. All right, now that leads us to something about his inductive method, the positive side of it. And what he does here is to offer what he calls certain tables, ways of tabulating your findings, tabulating your observations.

And you'll find that Stumpf talks about this, I think it's page 224. He talks of the table of presence, the table of absence, and the table of degrees. And if you're familiar with the inductive methods of John Stuart Mill in the 19th century, you'll realize that they correlate with these.

John Stuart Mill called this the table of agreement, the table of difference, and the table of the method of concomitant variations, and fundamentally the same. And

what they amount to really is very simple experimental methods. If you are trying to find out what is the cause of a phenomenon X, and you find that ABC precedes factors X, Y, Z, and that something like it occurs again and again, then you soon begin to suspect, by virtue of the agreement, that there is some causal relationship between C and X. Fair enough? And if you find, on the other hand, that while ABC is the antecedent of X, Y, Z, that where C is absent, then X is absent, then from the difference, you again begin to suspect that there is a causal connection.

And if you find that in increasing the amount of C, you proportionately increase the amount of X degrees, then, once again, confirmation that there is a causal connection. So this is a simple empirical method. How do we get the coefficient of linear expansion of a metal? You see that by applying heat, we can determine the relative coefficient of linear expansion compared to other metals.

So that's a simple kind of thing. But notice how what you discover that A is causally related to X enables you to exercise power over A in producing X. You see. And, consequently, the power over nature.

Very, very simple. Very limited in terms of the modern scientific method. There's no notion of the role of a hypothesis.

The role of a hypothesis in suggesting experimentation. No notion of a conceptual model. Paradigms and paradigm shifts, as we talk of it nowadays.

Nothing of that. Experimental methods, very simple, very uncomplicated. But it's the beginning of modern empirical scientific methods, Francis Bacon.

Let's see. Yeah, any questions, comments? Bacon's a fascinating figure. He was very much involved in British politics.

He was Chancellor of England, I'm told, under Elizabeth? Under James I. Yes, he tried and connived to get high political office under Elizabeth. Only got lesser offices, but under James I he had more fortune. So, a very interesting figure, very fascinating.

Now you say philosophically. Doesn't seem to be doing much philosophy. He's interested in science.

Yeah. And I think two comments about that. One is that in those days, people didn't think of them as being any different.

That is to say the sciences have achieved independent status only relatively recently. Which is why people in any discipline are apt to work for Doctor of Philosophy degrees. Way through the 19th century, science was known as natural philosophy.

In British universities, American universities, and here at Wheaton, if you look at old catalogues. Natural philosophy. So you don't get the distinction between disciplines nearly as clearly.

Until the 19th century, some cases later. On the other hand, Bacon's work is of real philosophical significance in two ways. One in terms of the beginnings of modern philosophy of science.

That is to say, philosophical thinking about the nature of science. Okay. And second in terms of the shift of world views that's taking place.

Where he clearly marks a transition, as Ockham was the end of the old, Bacon is the beginning of the new. Comes through very clearly. What was his view? Quite favourable.

I've tried to trace, in reading I've done, I've tried to trace any explicit references to Ockham. I don't think of any that I've found in his writings. But then he doesn't go around quoting a lot of people.

Ockham's ideas, yes. A British historian of science by the name of Crombie has tried to show that these tables, these methods of Bacon, were anticipated in very similar form by William of Ockham. And remember, I just pointed out that his appeal in matters of ethics was essentially the same appeal as Ockham's.

Now, the thing I'm not clear about with Bacon is whether he is an Ockhamist regarding universals. That is to say, is he a terminist, nominalist? Or is he a conceptualist? Certainly, he does not deal with any abstract ideas. But he doesn't seem to want to deny theologians the privilege of dealing with abstract ideas.

Now, if he were a nominalist, he would deny it was possible even for theologians to deal with abstract ideas. So I'm inclined to think that he's more the conceptualist, but he's still very much influenced by Ockham. When he was at Cambridge, let's see, I think I'm right in saying this, when he was at Cambridge, Ockham was very much in vogue.

In fact, and I may have a date on that, let's see, let's try, yeah, when he went to Cambridge in 1577 as a student, Ockham was very much in favor. Scholastic methods were still studied but were in disfavor. 25 years before, at Oxford, the writings of Duns Scotus had been burned in public in repudiation of scholastic methods and scholastic disputes.

That's what they did when there was a theoretical shift taking place. They just burned it all. Why clutter your library? Now they just sell the books to students.

So yeah, the answer is yes, Ockham's influence is very much there. Yes, yeah. Okay, you remember I was playing here with induction as the method and the object of knowledge as forms.

Now Aristotle has one kind of induction in trying to gain knowledge of forms in his sense of the term. Bacon has another sense of induction. Nice that it comes out as A and B, isn't it? In trying to gain knowledge of forms in his sense of the term.

So the way of knowing the method is correlated with the object of knowledge. Which is what we'd expect. That's the way it was in Plato.

If forms are in some transcendent realm, then you have the knowledge to get a handle on the transcendent. And it won't help you to study empirical cases. So you engage in dialectic to detach from the particular and wrestle with the abstract.

If forms are imminent within particulars, then you try to get them out. And so Aristotle's method of abstractive induction. If there are no real forms and you're just studying particulars well, simple empirical methods will do it.

Bacon. It's tempting to say that. And I confess, when I first read Bacon, that's what I used to say.

But the more I've read Bacon, the less I think so. Perhaps because I'm too aware of pragmatism at the other end of the spectrum. If you're talking of Dewey's pragmatism, for instance, you'll find that when we get talking about Dewey's second semester, you'll be reading Dewey's book *Reconstruction in Philosophy*.

And I think it's the first or second chapter he talks about Bacon. And he claims Bacon's dictum, knowledge is power, as his own. And so it's very tempting to identify the two.

But the worldviews involved are totally different. You see? Bacon is a Christian theist. Thinking of a divine mandate for knowledge that can serve certain purposes in relation to God's kingdom.

Dewey is a thoroughgoing evolutionary naturalist who sees experimental thinking as the way to resolve problem situations that threaten survival. You see? Two very different kinds of orientation. Dewey extends his experimental thinking to ethics.

Bacon? Well, hardly. Hardly. He talks of right reason.

But it seems to be a prudence that's very much influenced by classical conceptions. The Renaissance influence is still there. And he apparently was quite influenced in some of that by the resurgence of Platonism, anyway.

David? Yeah. Oh, yes. Yeah, because what his methods here provide you with is empirical generalizations about the causal relation between A and B. Between C and X, the way it was in my example.

Yeah. Very definitely. Dan? Did Bacon feel at all obligated to answer the doubts that Plato and some of the other philosophers had had about the reality of the game, the changeability of it, and the ways, as they said, sense has deceived them? He feels obligated to answer concerning the relativity of sense perception.

And his response there is that his methods are geared to minimizing that relativity. By multiplying the instances on the basis of which our general knowledge is achieved. If you're not sure if this one is illusory or relative, then you take another look in another case.

The repeatability of scientific observations is crucial. So on the relativity thing, he thinks he has some checks on that. I don't know that he ever argues for the reality of physical bodies.

Unless it be in relation to what he calls superstitious philosophy. Where the sort of otherworldly contemplation of some of the Neoplatonists, you see, would be the thing in question. But his criticism of that is essentially the same as his criticism of Aristotle, that it's a disgustingly effete kind of thing when you have a mandate to do something about this world.

So he doesn't engage in, what shall I say, dialectical argument in refutation of Plato. His point of reference is always the creation mandate. And from that point of reference, he discards rather than refutes.

Do you follow? David? I'm sorry. Then what was his view on the fall? Well, I suspect it was rather like yours. Let's just say it was a bad thing.

He regards the story of the fall as historical. He regards human sinfulness in much the way that any reformed thinker would, as total in the sense that it extends into all areas of human activity. Total depravity doesn't mean that everything we do is bad or wrong all the time.

I'm talking about, like, did he think of the fall somehow, laws of nature, and how we get empirical science. He doesn't discuss that possibility. What he does do is talk about the way in which human disengagement has left things run wild.

So he focuses on the effects on humankind and through humankind on nature. Yeah.