

The Limits of Explanation

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7:30 p.m.

The Philoctetes Center

Eyres: I think that perhaps I should just say a little bit about why this topic—as it's my baby as Ed said. I have to admit some responsibility for this idea, which came to me a while ago. I've thought since, why on earth did I have that idea rather than a slightly more straightforward idea? But I think what I was thinking about is that we live in a culture that's rather obsessed with explanation. I'm not going to try to define explanation in any simple way because I just feel it's a word we use a lot in different ways. I suppose this has a lot to do with the power and prestige of natural science, but I have the feeling that in the culture generally there's a sense that there are explanations waiting out there for everything and soon—not quite yet, we haven't quite got there yet—we'll have explained all these mysteries. We've managed to explain a lot of things and soon we'll have explained everything, including the nature of consciousness and origins of the universe, which have been occupying people for a long time. To give a more concrete example of this, I was in the Metropolitan Museum of Art this afternoon in an amazing small collection full of masterpieces that you might never even see in that huge museum. And I came to a room with a large El Greco and there was a guy on the sofa in front of it with his wife and he was saying in German—which I don't speak very well but I knew what he was saying because I've heard people say this whenever I've been to any kind of El Greco exhibition—he was saying, with this air of having explained something, “And you know, El Greco had this eye condition,” which meant that he painted everything in this elongated way. It seems to be the case that people often think with El Greco that that's the explanation, that's why the figures are like that. And it made me think, “Yes, maybe but so what?” Does that mean that all his paintings are simply evidence of the fact that he had an eye condition and is that more interesting than the paintings? It seemed to be the case for this guy; he seemed to be very proud of the fact that he had an explanation for this, the fact that El Greco painted elongated figures. It's rather like somebody coming up with an explanation for music. I think people are probably working in this field and no doubt feel that any minute now they'll come up with an explanation for music. But would that be more interesting than music? I suspect not. In fact, I suspect it would be a lot less interesting than music, that music itself is much more interesting than any explanation of music. But what I'm getting at is that we may have been slightly carried away by the success of natural science in explaining a lot of things into thinking that explanation is a sort of higher order thing than experience or other things, even enjoyment. So that was my initial idea for this and I thought that it might be good to start with a phenomenologist because phenomenology—as far as I know—is a movement in philosophy which puts explanations in brackets and by doing that it maybe unlocks a lot of things or it allows a lot of richness to emerge, which explanation might not allow.

Casey: Well, it's interesting that phenomenology in its post-Hegelian form, the kind of phenomenology that became influential and still is in Europe and parts of America, was after all born at the end of the 19th century at a time that's significantly parallel and similar to our time a century later insofar as it was a reaction to remarkable successes in psychophysics and physicalistic physiology, neurology. And it was a very exciting time scientifically as we know.

And both Freud and Husserl, the founder of phenomenology, were in their own ways dealing with that success. They were both moving away from it in their distinctively different ways and each of them, curiously enough, as I'm sure many of you know, were students of Franz Brentano at the University of Vienna in the 1870s and early 1880s. And it was really Brentano, whose name is not as well known as Husserl or Heidegger or any of the successors and more recent figures of phenomenology, who in fact set the stage for a serious critique of explanatory natural science in his book *Psychology From an Empirical Point of View* in 1874. And both Freud and Husserl read that book and took it seriously. You could even argue that Brentano's single most important discovery, which is intentionality, which he defined cryptically as directedness toward a mental content in that book, became the rallying cry for Husserl and Freud respectively. For Freud of course more in terms of meaningfulness of phenomena, whose ultimate causation lies in unconscious forces, drives and so forth. Husserl took it significantly differently—wholly into the realm of what he called pure consciousness. No interest in the unconscious on Husserl's part. But it was as if the two former students of Brentano each took a certain way of interpreting that discovery of Brentano and they're strangely complementary. It would be interesting if it were a long evening to pursue that difference.

It's clear that Husserl felt that there was a lot of good work lying ahead just in understanding what it is to be a conscious being at all and for that reason he devised a method which he called a descriptive method. And he may have been the first, I don't know this as a fact but I think he was among the first in the 19th century who actually identified a philosophical movement with a descriptive enterprise. By description Husserl meant what you do after you bracket or you suspend or you switch off—these are terms that he used—current natural scientific paradigms and methods, not to deny them, not to lose interest in them, to keep them in fact of great interest, but not to allow their scientific validity to overwhelm other investigations which Husserl considered descriptive in character and investigations which were not looking for ultimate causal explanatory factors in some other region of the mind or some other region of society than that which human beings experience directly in first person or together with others in a shared first person context. So it was a curious enterprise. It was both a critique or more precisely it was a limitation of the accomplishments of natural science, setting it aside for the moment—these are all phrases that you find in Husserl's early work—so as to concentrate upon what Husserl called pure consciousness. Well, pure consciousness turned out to be a very complex region itself and in subsequent generations you can say that the history of phenomenology consisted in finding different regions of consciousness, some of them not by any means completely transparent or lucid. Some of them were, as Merleau-Ponty would call it, prereflective, marginal latent or implicit, tacit dimensions of consciousness itself. But each of the primary figures from Husserl through Heidegger through Merleau-Ponty and Sartre—these are really the four main figures—each would agree that the task is to extend description only as far as consciousness itself can reach and no further. Once you get further, once you attempt to find a factor that could be said to underlie with some explanatory power, that region of mind or consciousness—and the two words were exactly equivalent for these figures, unlike Freud who, as you know better than I, insisted that they're not equivalent, as he says quite explicitly in *Ego and the Id*: “We cannot equate consciousness and mind.” Freud of course had Descartes in mind when he made that remark. But in fact phenomenologists were not Cartesian either. They wanted to embark upon a new descriptive enterprise with a new sense of consciousness, far less metaphysical, far less

epistemological, far more experiential in character. And for that the method was said to be descriptive.

Clearly each of these great figures did it with a distinctive style and did it differently but nevertheless each was faithful to the notion that somehow it was really the realm or the field, as it's often called, the field of consciousness—that's the title of a book written in the central years of the movement by Aaron Gurwitsch here in New York City, *The Field of Consciousness*. And Gurwitsch, a student of Husserl who ended up teaching at the New School, really did a brilliant job of bringing together all the zones or subfields of consciousness and the way that descriptive method has to alter as it explores those different subfields or regions of conscious mind. So it's not as if there's one method. It's not as if there's just description, but description, whatever it is, is for all of these related figures, non-explanatory. That's the one ribbon that goes throughout. What explanation really means, well, at least for this movement, it meant causal explanation and it meant finding a set of necessary and sufficient causes that could illuminate the etiology or genealogy of a given phenomenon but from a position outside what I'm calling the field of consciousness, the history, the physiology, the deep paleontology, let's say, of the subject. And so the thought was not that those explanatory models which were inherited both from early modern science and antiquity under various guises, not that they were invalid, they're perfectly important, in fact, necessary. And Husserl, who was a mathematician and a great student of natural science, insisted on this throughout his career. So this is not a rejection of explanatory models or of natural science. But it is an effort to supplement it with a distinctively different enterprise that for some reason at the turn of that century seems still to resonate at the turn of this new century.

Cho: I thought it might be interesting to give an illustration of how phenomenology has been applied in the area of religious studies, which is my area, and it's based on Husserl's system but it's distinct. The phenomenology of religion, which is the school in which I was trained at the University of Chicago, very much has as its agenda a description of the religious tradition, the religious experiences of non-Western, non-Christian, non-Judaic religions, and this is often described as an appreciation of what might be called the religious culture—the religious experiences of Buddhists for example. But it's interesting that in the past couple of decades—and I'm sure this controversy has arisen before—there's been an attack on the phenomenological tradition as itself being religious. And I think this gets back to the whole theme of this conversation, that we're mad for explanation. There are scholars of religion who attack the phenomenological tradition as being too sympathetic to religion, as really having the ulterior motivation of proving the reality of God, Nirvana, Brahman, what have you. And what we really need in order to have a true explanation of religion is a scientific, reductive explanation that looks at, for example, the political, ideological, rhetorical moves within religious doctrines and within religious institutions or even neurophysiological explanations of religious experience, but that this is what constitutes a truly scientific, academic study of religion. It has to redescribe the native informant's own description—if a Hindu says this is what it feels like to me to experience Brahman, you can't take that native description, that's verboten. In a true explanation you have to redescribe that in terms of caste structure and how that creates this priest caste that's more interested in perpetuating its own authority and power through its religious dogma—this constitutes a true explanation. And this conflict within the study of religion I think is very much driven by the modern Western conflict between religion and science and the whole idea behind

that we are going to find out, we're going to determine what true knowledge is. That's what explanation is about, determining what true knowledge is and, relative to religion, the experiencer does not have that true knowledge. It's only the scientist who has the true knowledge and it's necessarily reductive.

Casey: Just a brief comment, so here you see we do have, it seems to me, an archetypal conflict between Husserl's emphasis on trusting your experience, within its own limits. Actually, Husserl has an interesting—it's called the principle of principles in phenomenology, which is: Trust your intuition into an area of investigation, so long as you respect the limits of that area. So it's not as if Husserl would just say you could walk into another culture and take verbatim exactly what people said and regard it as the ultimate word. It would be within the limits of that cultural setting that Husserl would want to respect it. However, he would not want to take the next step, which would be moving to a natural scientific explanation of, let's say, verbal utterances made within that caste or that particular setting. So I think here there would be an effort to reassert the validity of description of personal and interpersonal experience, so long as you recognize that there is a very important set of cultural and other social and political institutional limits within which those utterances of course must be situated. I think it's a little less naïve than it sounds at first when you hear about Husserl's idea—just trust your intuition and just go with that. It isn't that naïve. On the other hand, it still refuses to take that next step into what we would call explanatory science.

Eyres: I had a thought from what you were saying, Francisca, about knowledge itself in relation to the traditions that you particularly study, and the limits of knowledge which perhaps are not limited to Buddhist tradition but also in Christian mystic traditions. There's a famous work called *The Cloud of Unknowing*, and there's a whole tradition that puts knowledge itself in brackets, not just explanation. I was wondering if that's true perhaps in Manhae or in other Buddhists that knowledge itself isn't the goal of all goals.

Cho: Yes, I think this desire for explanation, at least in my field, has a lot to do with the suspicion of religion, and we mean primarily Christianity in this context. And what's interesting for me as a scholar of Buddhism is when you look at Buddhist philosophy and doctrine it has its entirely alternative take on the notion of explanation, which kind of pulls the rug out from under the whole debate that's going on in the contemporary West about the nature of knowledge. And the Buddhist understanding is that all explanations, all categorizations, classifications, conceptual categories, are artistic conventions and that you couldn't possibly have anything besides that. So you make that concession from the beginning, you give up that pursuit of knowledge in any ultimate sense, and it's a form of skepticism that says basically, we only work with our linguistic cultural structures. And once you make that admission up front, the whole debate about what constitutes a valid explanation goes away. Instead the litmus test becomes what constitutes an effective explanation.

Norell: But how do you talk about it as effective? I mean, as an empirical scientist I would say that this thing has been out there for a long time, this whole epistemology/ontology kind of thing, the real and the really real. But I think that we try to extend it to the real, the really real and the really, really real. And the really, really real is something that we're never going to get at. And the real is kind of the way that everybody goes about their everyday life and interprets the world.

The really real is what as a scientist I'm trying to get at. And it only works when there are rules to the game and within empirical science we have those rules because we can say that we can have the hypothetical reductive method. We have mathematical rules that we can play with and even when people try to go outside of that a little bit it kind of gets messed up. Probably one of the biggest influences in my own life, particularly as a scientist, was this guy Paul Feyerabend, who was a philosopher of science who I knew pretty well. He wrote this great book called *Against Method* in which he said that method basically impedes people in scientific progress and everything. But finally by the end of his life he'd come around and said, "Well, we've got to have a few methods otherwise people can just say all kinds of wacky stuff—we have to keep it channeled." And there's this game that you play within a construct of rules to be able to explain the world and certainly there's a lot of stuff we should just give up on because we don't have the technology or the mathematical firepower to be able to do it. But at the same time it's within that construct of rules, and when you go outside of those rules things become unexplainable.

Michels: I'm in a state of serious confusion. All my assumptions are turning out to be wrong.

Norell: That's why they're called assumptions.

Michels: I would have thought that I was biased scientifically and I learned that I'm really a Buddhist underneath, which I didn't know.

Cho: A lot of scientists discover that.

Michels: And I didn't think of there being a conflict between experience and explanation, but I hear a suggestion that somehow there's a tension between them, where my view always was that explanation, good explanation, enhances experience, enriches it rather than competes with it. And the notion of a true explanation or a final explanation to me is a religious concept. Scientific explanations are always the best we can do at 8:10 to be modified with more data or a better explanation at 9:10, where final explanations imply a kind of belief that's to me not science. I want to go back through to the El Greco. It seems to me if I were there looking at the El Greco and I had a powerful experience and someone came up to me and said, "You know, he had astigmatism, that's why it looks that way," I think I would find that interesting if I didn't know it and I think I would look for an extra minute knowing that and probably see things that I might have missed the first time around. And I'd leave feeling a) that was an incredible painting and b) that was interesting and I'll remember that about it and I'll think about it the next time I see an El Greco and I'm glad I know it, though it would never have occurred to me that it would replace the experience of seeing the El Greco. And I think that's all generalizable, that explanations would be—if you want a definition—interesting statements that aren't obvious from pure experience and that have the potential to enrich the experience.

Norell: But is that an experiential thing? There's a difference between something you experience and something you can explain using very cleverly crafted hypotheses and certain either mathematical or analytical tools to be able to test it.

Michels: But usually what you mean by an explanation is that it gives you a perspective on the experience or suggests an approach to it that you didn't have before that opens up new

experiences. You have a question and let's say you do a piece of superb science and you answer the question. If it's really a good answer, it generates two new questions.

Norell: Sure, but I would say you never answer it. You just reject the alternatives.

Michels: Right, but more than reject it, I don't think that's enough. You certainly test the alternatives and you may reject alternatives, but if it's a really good answer it also opens up a new way of asking a new question that you never would have thought have before.

Casey: I completely agree with your observation, which is certainly right, that good explanations can be plowed back into experiences and enrich them. But that still doesn't mean that there isn't an initial and deep difference between the aims of description and explanation.

Michels: But not in conflict or incompatible.

Casey: Well, I like your own word—tension is really better. No they're not incompatible, but they're in tension and I think their tension needs to be respected. It's not as if they're simply the same enterprise even though done slightly differently. It's more deep going than that and it seems to me that it makes a real difference in any given investigation, whether you're really looking for the explanation that's appropriate to that phenomenon or—

Eyres: Could I just bring Christopher in here because I just wonder whether he—

Peacocke: Yes, I do have views on this. I'm not sure there are any limits in principle on explanation. There are lots of things we don't know how to explain, but I'm not sure there are limits. But it's very interesting that several of the panelists have mentioned phenomena that essentially have to do with experience. Experience of music you mentioned, visual experience, religious experience, experience of understanding poetry. And it seems to me in this area one of the most important things to get right is what kind of explanation would succeed in explaining the sorts of features of phenomenology you were both talking about and is relevant in music. It's no good having, for example, just a neurophysiological explanation of a sequence of brain states that end up with a perception of, let's say, some late Beethoven string quartet. You've got to give, first of all, a very clear statement of what it is that's got to get explained and that's a huge part of the challenge. All of us now have an experience of the room around us, people, we experience the other objects in the room as conscious, we experience the direction of the light, and so on. It's a very complex thing. In the case of music, it's even more interesting. The very first step is trying to explain what the experience is and people have not really done very well on that. Music has a syntax, it has a structure you can give something that's an analog of a grammar for it. But it obviously does have an emotional content, has some kind of significance that's not exhausted by syntax. If you take, for example, just the difference between hearing a major chord and a minor chord, you just play a C major triad at the piano and then play a C minor triad, it's right to say that the C minor triad sounds sad. The right description of that experience, presumably, is that you hear the minor triad as a subdued version of the major. There's a comparative element that you're hearing one thing as another, just as you can perceive one thing as another, think of one thing as another. So there's a very rich content that needs to be

explained. What I don't see is that there's any obstacle to giving the right kind of explanation of that once you've got the conception for what it is that's to be explained.

Norell: But what is to be explained?

Peacocke: What is to be explained is the occurrence of a conscious state with a very, very rich content that represents the world as being a certain way. It's got a certain emotional content in the musical case. Now in the case of visual experience, that's what computational psychologists of vision do and I think it's wrong to say that computational psychology of vision doesn't explain why the experience has the character it does. So if you take a very simple explanation of the perception of depth, which is just disparity in the two retinal images, there's a computation by the brain, not at any conscious level, of the depth that would make these images match in the right way. That's an explanation of why it is that someone can see something at depth. I don't think Husserl should be in the business of denying that. What Husserl wanted was an accurate description of experience. Very good. That then gives you a task, an explanatory task: you've got to explain that rather than something else. But that just means you've got to give the right kind of explanation, not that no explanation is possible. So there isn't really incompatibility between giving explanations and respecting the really rich nature of the phenomenon. You have to respect the rich nature of the phenomenon. If you don't have that as part of the initial explanatory task then there's no hope of getting the right explanations—you're not aiming at the right thing. But I don't think that means explanation is impossible.

Casey: I like what you say very much, I don't disagree with it at all. But still you would admit that the computational model does move us to a different level, as it were, of clarity and understanding than were we to stay with the visual experience itself. Yes it may enrich it, yes it may illuminate it, but it does seem to me we have to acknowledge that there's a shifting of gears here that is not trivial. It's very, very important. Something has changed. Something is importantly different if I get a computational analysis of a visual experience I had. I think phenomenology is probably underlining or emphasizing more than you wish to in your statement. What about the different level, or layer? These explanations strike me in that they're not operating on the same layer of consciousness or experience, clearly not.

Peacocke: I like to talk about levels very much, but I don't think it undermines the claim of explanation. That's the crucial point. When somebody says, "Look, you perceive this thing as this distance rather than that distance because that's the distance at which these images will match in the right way to give you stereo vision," that's an explanation. It's an explanation that's not purely at the neurophysiological level at all. It's a computational explanation. And so it is an explanation at a different level. It supports different kinds of counterfactuals. And it isn't given just by a complete neurophysiological description by the brain; you need to use the notion of the content, what's getting computed. So it is a different level. But the point I'm insisting on is it's still an explanation.

Eyres: Could I just say something, first ask Bob about this, as a psychiatrist and psychoanalyst when you're confronting, facing with a person—

Michels: You don't face a person when you're a psychoanalyst.

Eyres: The person's on the couch, okay, but listening to a person. Surely one might come up against ethical limits of explanation. When we're dealing with other people, to what extent are we actually entitled to try to explain them? Don't you think there is a problem there in the diagnostic terms? For example, if you look at the *Diagnostic and Statistical Manual*, this would actually, as far as I know, categorize many forms of religious experience as basically stark raving bonkers. And there are tensions in the area we're talking about aren't there?

Michels: That would be true I think if one thought that an explanation could replace the thing you're explaining, or totally comprehend all perspectives and all aspects of it. I'm not sure I know what it means when someone says a true explanation or a whole explanation. Most things that you explain remain the potential. All things maybe have other potential explanations. Take the concrete obvious example of depth perception that we used a minute ago. In fact, it isn't only explained by the difference on two retinal images, because somebody with one eye has depth perception. So we need another kind of way of looking at it. And there are multiple ways of explaining it and it has other perspectives that can be brought to bear on it and certainly, in something as simple as the depth perception phenomenon, that's true. When you get to the kind of phenomena that a psychoanalyst is interested in, you're dealing with a huge number—I think that'd be a very interesting question whether it's huge or infinite—but a huge number of potential explanations, none of which would fully encompass what it is you're dealing with. And that would certainly be true if you're talking not about a dream or a fantasy but a person. When you get to things like *DSM*, you're using the crudest of categories to describe something so complicated as a person, and if you say someone has neurosis or the flu, you're certainly not saying everything interesting that can be said about that person.

Peacocke: What's explained is always a particular property of an event or a particular relation in which the event stands, so the question is, is there a complete explanation of the events having that particular property or that particular iteration. That's the first thing. The second one is about depth perception. The experience of stereopsis is quite different from the kind of depth perception you get with just one eye. Both represent depth, I completely agree, but it's a different kind of experience. And indeed, the people who've only ever had monocular vision, they're stunned by the idea there can be such a thing as the kind of perception of depth you get with stereopsis. It's phenomenologically different. Husserl would say they're different things. So it is true that there's a quite distinctive property. There are different ways of perceiving depth, but if what's to be explained is one particular way, then the retinal disparity is the explanation of that particular way. There are other explanations of other ways of perceiving depth. There are many ways of perceiving depth, I agree. There's never a total explanation of one particular event. An event has got a billion properties, it stands in all these different relations to other things in the universe, and itself has a lot of intrinsic characteristics. But you've got to fix on a particular property of an event. Can you explain why the person experienced this particular kind of emotion in relation to that particular object at this particular intensity? And then maybe there is such a thing as a complete explanation. We may be interested in different aspects of it, but I'm tempted to hang on to the idea that there's a full explanation of a particular property or relation of the event.

Cho: Whenever we talk about explaining a particular event or having the right explanation of a particular event, it seems to me that you're presupposing something that can be questioned, which is that there is such a thing as a particular event. I think that's what you began with and that's what I would like to question. And this goes back to Mark's question of how do you know when you have an effective explanation. It seems to me that you can't take context out of any definition of an event. So I'm not sure there is such a thing as a particular event. That given event is going to be different according to context and according to the need that's driving the explanation in the first place. I'm questioning the idea of the event. Now you said a given event of course has many characteristics and many properties, but I would go further and say I don't know what you mean by a given event. It's going to be differently defined according to concrete circumstances and that is what will determine what an effective explanation is.

I think a problem at least I see within the debate and the study of religion is this assumption that you have to choose between explanations, and I think that's where the fallacy lies that you have to choose between the better explanation and the lesser explanation, but you can't determine what that is unless you have a concrete context which will never be replicated again, even if you have the same actors and the same descriptive situation.

Michels: Well, the word effective was used. I have an even weaker word that I would use in assessing an explanation—is it interesting? And my test would be am I glad that I spent the time to listen to it and did it enrich something for me? And I can't imagine why an explanation would take anything away from me unless it comes with requirements I can't think of quickly. And the notion, not in a philosophic dialogue but in the "real world," it seems to me that the test of an explanation isn't whether it's final or definitive or the complete or ultimate but simply does it add something. Do I know more with it than I knew without it?

Norell: To me it's like a better explanation, it's better than the last one.

Michels: It's more interesting.

Norell: It's sort of like when Einstein basically improved on Newtonian mechanics. Newtonian mechanics was fine but the special theory of relativity explained more.

Michels: It's more elegant.

Norell: It allows you to be able to look at the world in a new and a very, very different way.

Michels: It's interesting that ophthalmology makes El Greco more interesting.

Eyres: I wonder whether it does actually.

Michels: Well I like that example because it seems to me that it can be misunderstood. There's a serious problem in what happened. But it wasn't that your German tourist said El Greco had astigmatism. It's that after saying it he turned around and walked away. If he had stayed there saying El Greco had astigmatism, let's see what that does, that would have been a nice experience for him, for you.

Eyres: What actually happened was that he said to me, “My wife thinks I look rather like that person in the El Greco portrait, what do you think?” And I said, “You need to grow your beard a bit.” But I was thinking in relation to Mark’s area of paleontology, at one time some very ingenious bishop came up with the idea when fossils began to be discovered that actually God had planted these fossils to try to keep that old idea that creation happened in 4000 BC.

Norell: Well certainly getting back to the idea of postmodernism and stuff, it’s really interesting to look at the way in which fossils were interpreted in different cultures around the world and continue to be interpreted in different cultures around the world, because there are ideas that run the gamut, but I think within that context of empiricism that they’re interpreted the same way. And I think there is a way of looking at the world, which I have to say isn’t always the most satisfying or most illuminating way to look at the world, by just reducing it down to numbers.

Casey: It seems to be that there is a really important difference emerging between Bob Michels’ position and Christopher Peacocke’s, because Bob is not only a Buddhist, he’s an aesthete. He’s an aesthetic Buddhist because he’s invoking the criteria of interest or being interesting, which I find interesting. I like it. I think however it won’t cover all the cases because the very case of the bishop who proposed that God planted the fossils is interesting, especially in a religious culture that would like to believe it. So then how can we really hold on to that much longer if we take the more sober view introduced by Christopher where the criterion, I would call it, is appropriate. Because Christopher is arguing, no, we’re not trying to explain an entire event; we’ll concede that. We’ll concede that this is far too complex to ever unravel, but a certain feature or attribute or point could be appropriately explained and the more narrow the subphenomenon, the more appropriate the explanation can be. Now that doesn’t strike me as being anything that would be either pragmatic or aesthetic. It seems to me this is distinctively different. I’m not sure Christopher’s going to accept this—this is how I’m hearing him. He’s saying that the explanation really fits down to the last iota the specific feature of, in this case, depth perception better than any other, whether it’s interesting or not, whether it’s effective or not in the subsequent history. Nevertheless, it’s an advance in explanatory power to be able to say, well, depth perception is a kind of computation that’s going on spontaneously, not consciously, and it works, it really works for that very particular phenomenon, not for sight in general, not even for depth in general, admittedly. So then I really see a chasm of difference opening up between the two of you on these matters.

Michels: I want to go to the bishop’s explanation. I would say it’s a first class explanation except for one detail, which is that I can’t imagine any act it would lead to that would either confirm it or disconfirm it. So it is a category of explanation that falls outside the realm of science. It happens to have the nice characteristic of explaining absolutely all known phenomenon related to paleontology and fossils, every one of them, and not only all current known ones but all future known ones. However, that leads to—

Norell: I think you also have to look at it when the Bishop Ussher did that, you have to look within the cultural context of the times because certainly it was about the same time that Darwinism was coming around and everything else, times were really in flux and this was mostly just to preserve the English Victorian status quo. It wasn’t just that his explanation for these

things was outside of all scientific explanation. It was part of a major cultural context. Certainly that explanation was used to preserve the church and to preserve other things.

Peacocke: I'd like to say something about the aesthetic and the role in explanation. I don't think you can just say something's a good explanation if it's interesting. There are lots of good explanations in a physics lecture; maybe it's a boring lecture, but they may be correct explanations. They may not be interesting to someone. But the aesthetic is, when people say that the theory of special relativity is beautiful, they are onto something. But I think when one looks in detail, unfolds that, what's beautiful about it is that the laws of nature are the same in all frames of reference. And if that weren't the case, something would be unexplained. Why should they be different in this frame of reference from that one? So I think there is such a thing as the aesthetic sense here, but I think that it's answerable to facts about explanation. Our aesthetic sense latches onto something explained that would otherwise be unexplained, so I don't think aesthetic quality is a kind of autonomous criterion for the acceptability of an explanation. The aesthetic desideratum is really explicable in terms of something else.

Norell: When Watson and Cricke came up with the central dogma and stuff long before there was any real evidence for RNA replication and things like that, that was a great piece of work; it was wonderful. And then years later, it's obvious because we have empirical evidence for it. I mean there is a huge bit of aesthetics in all that.

Peacocke: In some sense it's beautiful, but it's beautiful because it is simple, a good explanation.

Audience: Kant discusses that there's a uniform relationship between experience and its explanation, but really isn't it the category—aren't there very different relationships depending on the category of the experience? It's one thing to talk about an explanation relative to science. Suppose you're talking about an experience of oneness with the universe. That has to be a very different relationship or explanation.

Casey: So you're talking about the scope or breadth of the phenomenon that, once it surpasses the kind of criterion or limit that Christopher is talking about, which is a particular feature of a given experience or event, once it's beyond that delimited model then you're saying that somehow the explanation must have a commensurate expansiveness that would match. How would you know what is beyond explanation, because it seems to me I don't think you could know that in advance, in principle, what cannot be explained?

Audience: In a lot of common sense ways we tend to think of explanation as a non-temporal reduction, if you like, of something that happens at a moment that seems to have changed, and that the explanations show something that doesn't change, that in effect underlies it. So that the limit of explanation in that case would be the momentary sense or feeling that we have, insofar as it's momentary. That would be the limit, because the explanation would be something that's non-temporal. I think that's the way that science usually works.

Norell: But if you're talking about just explanations for one-time occurrences, there are many explanations for a one-time occurrence, like what caused World War I.

Audience: But those explanations always invoke some sort of thing that is a relative concept, like the ways that the interests of a state or something like that bring a lot of non-temporal things to bear to explain that event. The thing that is always not explained is what is different in that moment.

Norell: Yes, it certainly is. And speaking from my profession, if you could bring it into some testable framework by saying, does this happen in a repeatable kind of way that we can predict? And with temporal things, one of the things that's frustrating as a paleontologist is that we can't really say that much because life only evolved one time, and then Steve Gould used to say that if they ran the tape back again it probably would have come out differently. I mean, it is a single historical kind of thing; it's very difficult to make generalities.

Audience: But the thing that makes it, in fact, is Darwin's hypothesis, which makes a kind of timeless rules that underlines what's changed.

Norell: But that's only the big thing of descent with modification. I mean, after that if you want to talk about particular things, about the evolution of certain groups of animals and things like that, that's just a general covering theory for all of it. It doesn't speak to how birds evolved or how or why amphibians exist the way they do today.

Casey: I think there's a serious question because there was a philosopher who actually took this very seriously and thought along the line that you have now outlined so clearly. That's Bergson, who argued that temporal events, particularly those that have what he called duration, are so radically different from anything that ever happens, and not just in space but in symbolic systems, that the twain will never meet. Bergson, at least in his early work—and it is very interesting that this occurred in the same period, the 1880s, that we started talking about—was also reacting to psychophysics, to the presumption that the human mind could become a kind of psychomechanics, could all be predicted and explained on spatially schematized models. So Bergson, even before phenomenology, interestingly enough, really thought this through and he came to this very radical position that still has some merit, and that is that there's something about the temporality of events. It's not just the event, but the temporal dimension itself will forever refuse to be fully explained, down to its actual happening, which always remains a unique occurrence. Now, this is a very strong metaphysical position. And I think it has to be taken seriously. Most of us don't let ourselves go there because it's a little threatening to think that any given occurrence is beyond explanatory models of any kind, however clever, however ingenious, etcetera, etcetera.

Michels: You're not saying it's beyond explanatory. You're saying it's beyond complete explanation.

Audience: Freud did not write the *Explanation of Dreams*, he wrote the *Interpretation of Dreams*, which is a completely different, much more Bob Michels' kind of way. What you were saying about depth perception—if you have a patient with 20/20 vision who doesn't have depth perception, you need to find an interpretation because the experience doesn't jibe with the

numbers. And that is the kind of thing that people in the room see, and you need an interpretation, not an explanation.

Audience: Within the field of psychology there's a limit on what we try to explain and what we try to explain is something like what Chris is saying, and that is that we try to explain things that are replicable. So there was a time in psychology and in phenomenology when introspectionists held sway, and that went under. And it went under because one person would say something different than another person. And so the labs didn't agree around the world about what the phenomenon was that was to be explained. But in modern psychology the first thing you have to do is get the description right. And what that means is that you have to have a phenomenon that will replicate. So it doesn't outlaw the phenomenon. But psychology as a science never tries to explain, or very rarely tries to explain, the moment-by-moment contextualized event. That's kind of beyond explanation. They try only to explain a subset of events that are those things like depth perception that everybody's going to see. With some exceptions, and the exceptions would be with patients.

Eyres: Quite a big exception.

Audience: So if the patient didn't have depth perception, presumably you're explanation is going to be good enough that you can say, well, it's because they've got some problem in a particular nuclei in the brain where depth perception happens, and you look for that as a way to test the model and the theory of the explanation that you've come up with, and thereby modify it. But phenomenology is used. Everyone wants the description, but the description is limited.

Audience: In terms of experience and description, it's been true that you can only really get closer to it through abstract thought. You cannot see what you think you're seeing unless you can think it through, just like a biologist needs a microscope and just like what you can think abstractly today as it was said—at 9:30 you're thinking one thing, at 8:30 you're thinking one thing. But there's a limit on what anyone can think and there always will be. They only strive towards relative truth, shall we say. But experience itself, you'll never get the truth. You'll get closer to it, but you have to think it through or you can't even approach it.

Audience: This particular point you made, Professor Casey, in your critique of Professor Peacocke, you talked about the substratum, that there are elements that you can find in subcategory. You're taking sort of an atomic view of this, there were things of perhaps lesser significance that could be explicable, but is there a place, if we narrow this down into some very simple events, where there's a cross or where two lines meet, let's say the creation of ice from water. And just for the sake of argument, if you take an incredibly simple event, do experience and explanation, do they cross?

Casey: Well, they must meet because we are, of course, human beings with both capacities and so I agree with this gentleman's remark, and of course reflective power will illuminate experience. The question is how to trust and how to get to that other level of reflection from the descriptive level of experience, and how to know that this is a reliable way. Some categories seem clearly extraordinary or preposterous for illuminating our current experience, at least across

a certain subculture. It would be very difficult to maintain God's intervention in each and every case of fossil discovery. So we can discard those.

Audience: I want to ask about your opinion of types of models or types of explanations. But just to summarize what this gentleman was saying about being out of time, what I'm seeing there is a generalization that's applicable to more than a particular instance, not in the explanation category but in even describing the phenomena that have to be looked at. They have to be generalized to some extent. What I see there is that you have a phenomenon and then the explanation is going to invoke and use objects or processes and relationships that are not in the initial phenomenon being looked at. So when you're saying it is a different level, now you've stepped into a reductive explanation, you're stepping down to a finer level of detail and you're looking at the dynamics; you're saying there are parts. And those parts are relating to each other in some kind of dynamical explanatory system. Now let's say we go to the evolution of human beings, you have to look at primates in trees, so the parts that you're using to do the explanation are not always inside the system, they can be outside the system as well. So you're moving levels. But basically there are going to be new parts, the explanation is going to have different parts than in the initial phenomenon you are trying to explain. I'd be interested in your opinion of verbal explanations versus mathematical explanations, because language posits systems of parts related through the way we describe, and mathematics with mathematical objects and their functional relations also has these parts and relations. So I would be very interested in any opinions or truths that you may have about the difference of mathematical versus verbal, or whether they are similar in having parts in dynamical relations that can be used to explain systems and various scales.

Peacocke: That's quite a question and obviously there are huge differences, seems to me, between the mathematical and verbal.

Norell: I would say there's no difference at all.

Norell: A Popperian view of the world requires a falsifiable hypothesis, and whether you falsify it using the analytical tools of mathematics or other types of data doesn't really matter. They're just descriptors of the same thing.

Peacocke: Well, I'm not going to counteract that directly. I was thinking that all this goes back to Plato, in a way, and one of the other questions seemed to me to be in some ways, it seemed to me, was impatient with words and would like to have been able to establish everything in mathematical terms. So it's a very old question. But I'd say one of the big differences is that surely the mathematical rules are much purer than words. They go across languages and they are every language. The world has thousands and thousands of languages and they're all different and there's a reason why they're all different. So obviously the mathematical and the verbal can't be the same.

Norell: But there's different kinds of mathematical rules. There's elegant proofs of things, but then there's also the kind of stuff that I do, because I'm a lousy mathematician—the sloppy kind of stuff that you just run analyses millions of times and then sample on that distribution, which is much more of a narrative kind of thing than actually doing a proof.

Michels: Much of what we're saying is about how explanation involves some kind of abstraction or reference to a universal that is relevant to the particular that we're interested in. Another way of saying it is a mathematical formula versus a specific event. But implicit in any formulation of a question is the use of some language to describe the experience of the question. The translation to a language already is a proto-explanation. The language of mathematics is widely viewed as somehow being closer to the experience than verbal languages because in verbal languages we're much more conscious of their cultural construction. But in fact there are many mathematics, there isn't just one. And there are many ways of describing relationships, quantitative relationships mathematically, and the selection of the mathematical description already is a step towards a kind of explanation.

Eyres: I'm quite surprised to hear you say that mathematical explanations are closer to experience. That sounds counterintuitive to me.

Michels: There's less cultural intervention between the experience and its immediacy and the generalization, so that when we say Newtonian systems explain the movements of the planets we can easily conceal from ourselves that that's a cultural language that's applied to data in order to generate a generalization that we feel is explanatory.

Audience: First, concerning the idea that the limit of explanation is anything concrete—an abstraction is what explanation amounts to, whether it is abstraction in terms of a law that underlies seeming change or whether it is abstraction of parts. Mathematics is what science progresses by, and eventually reaches mathematics at its extreme form of abstraction, and that's what explanation is. Now the question I wanted to ask Bob is that he was speaking about, as a criterion, things as being interesting, but then a few minutes later we heard him speak about science as something separate. That's kind of like there are certain criteria or disciplines, which qualify something as a scientific—it's a distinction I've heard. I've seen him in his kind of tolerant mode where if something is interesting and enriches experience, that's really all you're asking of it. And then I've seen him in a very different mode, which none of us ever want to be subjected to, claiming scientific evidence for something that he will hold us to a whole list of criteria that goes well beyond any kind of interestingness.

Michel: I think I'm being asked a theological question, which is amongst the very explanatory systems that we use in our society. One of them is labeled science. It's been a very popular religion in the last few hundred years and has had many converts to it. And like all religions it has certain rules for what it considers an explanation. Its rules include that it generates possible tests that might invalidate or support various hypotheses, and if a statement or explanation doesn't generate any such tests we say it doesn't belong in this particular theology. That's made it very popular with people, probably because they have deficits in their capacity for pure faith and need something else to support it. And in our faithless era it's been an extraordinarily successful religion. That would be my primitive answer to your question. Many of my best friends are members of that religion.

Cho: Well, I guess I was looking for an opportunity to jump in and talk about Manhae, and it seems like most of the comments have provided that opening, so I'll just do it. It would feel good if I left here plugging my book.

Eyres: But don't give an explanation, just do it.

Cho: Right, good point. The poetry of this Buddhist monk that Harry mentioned is considered to be love poetry, but there's been an interesting controversy about what it means and the attempt to interpret it. And the usual reading is that he's not talking about a human lover but his beloved country, that is Korea that was under Japanese colonial rule during the time of writing, which was in the '20s. There's also been the contention that he was really talking about, allegorically, the goal of Buddhist enlightenment, so his lover was spiritual enlightenment as opposed to this political goal of regaining the sovereignty of his country. And then some people contend that he actually had a nun on the side that he was quite enamored of. And the reason why is that if you look at the poetry itself, it is quite sensual. I mean there's very many tenors to the poem, but a lot of it is quite erotic, and it seems on the basis of the words, the literature alone, that he is talking about someone very concrete, someone very physical. But, see, I think he was playing a joke on everybody in the tradition of the Zen master, because the point is it can be any of these things, because when you're in the realm of using poetry, literature, language, words and explanations themselves have no inherent content. So the point is, you can read it as a lament for his lost country or you can read it as longing for a very human lover. But the point is, you don't have to choose and you don't have to say which is the universal, which transcends the temporal dimension of Manhae himself, given his political and personal context. So going back to Plato, as Harry mentioned, it seems to me there's a basic cultural division here where in the Western philosophical tradition, if I can generalize, there is a fear of the temporal and of the many and a desire for the one. Right?

Eyres: Plato said that?

Casey: It's really Parmenides.

Cho: Yes, it's Parmenides, exactly, this distrust of the everyday level of experience because it offers up nothing consistent, nothing that you can hold onto atemporally. I teach a class called Religion Aesthetics and I start with Plato's theory of art, where he wants to banish the poets from his ideal republic because they stir up the emotions, cloud the intellect and reason, and reason is the instrument that gets you to that timeless truth.

Eyres: By the way, we should say that it's Socrates who says this, in a possibly very ironic way, in *The Republic*.

Cho: But the point is you can take another cultural approach, and it has been taken, where you see the explanations in the constant changing temporal elements, so that the challenge of an explanation is not its consistent reliability, but that you're able to come up with a new explanation that's appropriate to that particular context. Which means you're going to always have a different explanation, and that's the whole ideal of the Zen masters—there's always a

different explanation. So it seems somewhat neurotic to always be in pursuit of that consistent explanation.

Audience: There is an equally strong tradition that is just the opposite.

Cho: Yes. Comparisons are always quite tricky. It depends on the scale that you're operating at, but your point is well taken.

Casey: But there is a difficulty in the alternative that you present—let's call it, to be neutral, the polysemantic view—that every phenomenon has several equally persuasive explanations. And then you have another way of thinking—let's call it the monosemantic view, or for this particular strain in philosophy, let's call it the Parmenidian strain—that should prevail. Now, how are we going to adjudicate between these? You are posing an important alternative, it seems to me, and it seems just right to move to another culture. It's not as if, I agree, the Milesians were very close to this, certainly Heraclites. But still they didn't put it quite that way. And to talk about sheer and deep flux is still not to move to your model, which I think is really that of alternative semantic dimensions, each of which is quite valid, attractive, interesting. The trouble is, then, what if you really would like to know which is most for that phenomenon? How are you going to choose?

Cho: Yeah, well, that's where you have to meditate a lot.

Audience: Appropriate to what, appropriate to the reader or the cause? And that's what gets confused when you raise that question of appropriateness, you're talking about causality or the way it's interpreted by the reader. The most frequently lost word tonight, I believe, is multiple determination, which you brought back into discussion—that most of the events that we encounter in psychoanalysis have more than one determinant. And mostly the things that you're talking about or trying to isolate have single determinants, or at least in depth perception as a process. You brought back the question of multiple determination and ambiguity and we lost track of it.

Audience: I'd like to ask a question. I'm very interested in Manhae's writing. Your description of the explanation of the interpretation of his writing is quite similar to King Solomon's *Shir Hashirim*, *Song of Songs*, where it's also explained similarly, almost verbatim, that he's either writing about a country, he's writing about a lover, or something that's completely different than what we know. But there seems to be a pattern in there, as this emotional character you describe really takes the object of his love and desire and will and explains it in a love poem.

Cho: There are many traditions of allegorical religious literature, and *Song of Songs* is a good example of that. But I think we tend to, whenever we use the term allegory, always think in terms of the metaphor versus the truth, or what is actually being spoken of by other means, so that one is not implicated in some way relative to what the person actually wants to talk about. And what's interesting about Manhae and the instruction that he gives in the preface to his volume of poetry is that to me he's explicitly saying that allegory doesn't work because allegory assumes a hierarchy of explanation, where one is again only figurative, whereas the other is

literal. And the point is to give up that hierarchy altogether and say that you only have figurative readings. So that would be the one difference I would point out.

Michels: We're talking about works of art, but I would say one of our probable definitions of an important work of art is that there are multiple explanations—that they feel complete, that they are distinct, and that we can at some level experience more than one of them. And often to sense that one or the other is unconscious while we're conscious of the other. And if a work of art on deep reflection has only one meaning, we usually discard it.

Audience: Ambiguity in art is very important in the sense that when there's one meaning, it becomes boring and rejected very quickly

Eyres: I agree with that, but I want to bring back something Ed said at the beginning, to actually put it in question in a way we haven't been doing recently. I'm not sure works of art need explanations as much as we've said. I notice that no one has gone back to the etymology of explanation, which actually has to do with flattening: to ex-plain, from Latin, to make plane or flat. That does seem to be something that we should think about and I'm not sure—I don't want to put a spanner in the works—if we're almost agreeing too much.

Audience: You talked about the multiple interpretations of a work of art, and that the more of them there are, in some sense, the more interesting the art becomes. The question then arises that speaks to most of what we're talking about tonight: are there any limits to interpretations? Is there any sense of a validity as a criteria for interpretation? Are some interpretations unacceptable? Are some connections to a phenomenon unacceptable? I was really struck by that when you described what we mean by the limits of a phenomenon, and it seems very Buddhist to begin with, the sense of a phenomenon expanding out. Are there any limits to them?

Cho: Sure, you can invoke validity, but the point is you can't do it beforehand. I think that's the problem, trying to determine beforehand what is going to be a valid explanation or not. You can never know.

Norell: Within the context of what? Art, you mean? Certainly as a scientist you have limits of things you would call valid. Like a 5% level.

Cho: But haven't attempts to determine what is valid in scientific explanation fallen?

Michels: Certainly you can say what's invalid. A scientist is much more comfortable saying there's a bad explanation rather than a correct explanation.

Audience: So that in one context there is a definition of an explanation.

Cho: Yes, but if it has fallen short, as Larry Laudan points out, creationist theory is falsifiable according to the Popperian. It's falsifiable, it makes predictions, it may not be conclusive. I mean, if you talk about flood theology—

Audience: It makes predictions.

Audience: It falsifies.

Cho: Don't get me wrong, I'm quoting a philosopher of science who is taking other philosophers of science to task for using falsification as the demarcation criteria of the difference between science and non-science.

Norell: Sure, I think that creationism is a branch of science that's been falsified.

Peacocke: The criteria are wrong the other way around, too. I agree, if you look at all of string theory at the moment, it is a huge argument because people don't know—

Audience: The thing is that proponents of string theory do not deny that ultimately it is based upon the fact that it has not yet been disproven.

Peacocke: But they don't know how to, that's the point. If you ask them what would be evidence, they hope that one day they will be able to say what would be evidence, but they can't actually say.

Audience: But they just don't have the physical means of proving it.

Peacocke: That's not true. The physical means people can think of don't distinguish between the various forms of string theory that people dispute about. This is not a matter of getting more power into the accelerator in Geneva or SLAC or somewhere, because that wouldn't be enough to distinguish between the different forms of string theory. What they have got is a conception that if the little strings were like this they would explain the observed phenomena. But there are rival theories of the observed phenomena and they don't know how in principle to design experiments to distinguish which would be the correct one.

Audience: If you bring every one of the components of the various different aspects of string theory, they still rely on the fact that their theory will rise or prevail, or not, based upon the ultimate ability that it can be disproven, and coming up with a fact disproves it.

Peacocke: They hope to find evidence for it. That's a hope. It's not true at the moment that it's meaningful only because they know what would be a falsification of it. They don't know what would be.

Casey: A theme that's been rising in the last eight minutes, which is I think very interesting, is that the term evidence has now come in. And it seems to me that is very helpful, very important. So it's better than experience, with which I started, because I was presenting just the classical view of phenomenology. But I actually prefer evidence because it goes beyond testability, it goes beyond falsifiability, it does involve an experiential factor because it does mean that someone has to be in the presence of the evidence to vouch for it, describe it, and indeed to quantify it. So there is something about evidence that actually may help to bridge the gap that we have started to form between description and explanation. It may be the variable that somehow holds them together. I don't know, it is just suddenly occurring to me that there's

something here. No limited sense of legal evidence—I'm not talking about material evidence—I'm talking about a rich and polyform notion of evidence itself that would be pertinent, important in the disambiguation of virtually any human circumstance, including theological circumstances, in what counts as evidence. So there we have a dimension we haven't really confronted this evening, although it arose spontaneously in this last phase of the discussion, that would be crucial to explore. We've seen the danger of relying on personal experience—the cultural limitations of that, the psychoanalytic limitations of that are well known. But it does seem to me there's something crucial about evidence here that needs to be considered if we're going to try to avoid a chasm between description and explanation, which is tempting to endorse when we put different camps of philosophy and science against each other. But here we need to rethink what would count as evidence across the fields and differences. It seems to me this would be very crucial to figure out.

Eyres: I think that's important but I'm thinking that this is quite an important area because anecdotal evidence has generally been considered weak, hasn't it? In fact, if we include things like poetry in anecdotal evidence, and I feel that's a very important issue, that the notion of evidence should be expanded between things like poetry, but we have to accept in the world we live in that poetry is not considered to be evidence of anything.

Audience: A kind of evidence in art which kind of relates to the evidence you're talking about is something called the golden mean, which may be interpreted as being able to engender a highest common denominator of response, which is a kind of evidence.

Eyres: I know the idea of the golden mean is a kind of proportion.

Audience: It's a kind of proportion, and what I'm saying is recognition of what we might call greatness, something that's above not knowing if something is good. A Leonardo portrait and the Golden Gate Bridge, great engineering, string theory, whatever, it is worth consideration because there's a highest common denominator that maybe is very hard to define, but the golden mean is actually a measurement that artists have used to explain what looks right, what feels right.

Eyres: Right, but are we saying that that gives it any—

Audience: Yes.

Eyres: You think that gives it validity, more validity than—

Audience: It means that in our experience as a culture, we've pinpointed certain high spots in man's achievement as being something that we all can understand.

Michels: I want to try two definitions. Evidence is some statement about a generalization that is an interesting addendum to our experience of a particular. Evidence is viewing a particular in terms of whether it enhances our confidence in some generalization.

Casey: And is accessible to others, right? We'd have to add that.

Michels: That's a scientific issue about evidence.

Casey: Well okay.

Michels: I think the non-scientists, or even a psychoanalyst, might not require that.

Audience: Well, first I want to say that like Bob I've discovered that I'm a Buddhist, and more important, that one can be a Buddhist and a psychoanalyst. I thought that of particular relevance to analysis is the fact that perhaps explanation in analysis could be misused to flatten experience, and I wanted Bob's particular comments about that. There actually is a controversy or a tension going on in analysis between schools that, let's say, are advocates of pure experience and schools that rigidly adhere to explanation. But sometimes one would hear a caricature of understanding used precisely to flatten the experience. This that I feel from my patient is not really about me, it is about the mommy or the daddy and therefore the patient is saying—that is grotesquely deformed in that way. That's one comment. The other comment is, I was thinking—I don't know how many of you have seen *The Science of Sleep*—I thought that movie is a coda to this panel. Everybody should see it.

Eyres: Well, if there's talk about coda would anyone like to add a word or two?

Audience: I was just wondering if Christopher would elaborate on what he said at the beginning, that anything can be explained now. In light of what's been said about these different levels of explanation—a poem versus an explanation of dinosaur extinction—I wonder if you can elaborate on this point, if you unpack that a bit for us?

Peacocke: Yes, one of the things I said earlier on is it's extremely important to have a sufficiently rich conception of what the philosopher of science would call the explanandum, what it is that's to be explained. So your excellent example, this poem that's got at least these three general types of reading that can be sustained, and perhaps more. I completely agree in the case of truly great art—completely open-ended interpretability that needs explanation as well. A relational structure in language has got this open-ended interpretability that needs to be explained. We need to characterize exactly what the phenomenon is and then how it is that human beings are capable of mentally representing such a thing. I don't see that the prospects are blocked for explaining causally how it is that we're able to do that, or what structures underlie our capacities. But I think it really would be a flattening if we don't characterize a phenomenon properly in the first place. That makes for a much greater challenge if what's got to be explained is much richer and the explanatory resources that need to be brought in have to respect the richness of what's got to be explained. That doesn't mean that explanation is impossible, it means you've got to rise to the level of phenomenon that's to be explained.

Michels: I think the psychoanalytic situation faces a special problem, which is that at least one of the participants is desirous of avoiding a certain explanation. That's not usually the way we think of the world of people seeking experience and enriching it. And all explanations abstract something. If you're desirous of avoiding something, the best way of avoiding it is by finding an explanation that excludes the other explanations you want to avoid. So there's always the danger

that an explanation will be used not to enrich but to narrow the focus. If one is motivated to do that, it is always potential. We do it often enough not being motivated to do it. But in the analytic situation, really the technique, the methodology of the analyst is to be observant and ready to intervene, to prevent explanations being used to shuttle off alternative explanations.

Peacocke: Those are spurious explanations, of course.

Michels: Not spurious, they're alternative.

Peacocke: But not correct—

Michels: It's not that they're not correct, but they exclude something.

Nersessian: It's like the explanation of the poem—the psychoanalyst would say it is all about the nun and the patient would say, no, it's about Korea.

Michels: Important explanations.

Eyres: Perhaps that's a good place to end. Thank you very much.