

**The Origin of Norms:
The Place of Value in a World of Nature
April 28, 2007
10:30 a.m.
The Philoctetes Center**

Nersessian: Edward Nersessian
Levy: Francis Levy
Bilgrami: Akeel Bilgrami, Moderator
Friedman: Lawrence Friedman
Snyder: Joel Snyder
Edelman: Gerald Edelman
Daston: Lorraine Daston
Harrington: Anne Harrington
Forrester: John Forrester

Nersessian: I am going to make these introductions very brief. The panel we have here is obviously extremely accomplished and you could spend the whole two hours just talking about their various activities. Akeel Bilgrami is going to moderate the roundtable. He is Johnsonian Professor of Philosophy at Columbia University and head of the Heyman Center. Lorraine Daston is Director of the Max Planck Institute for the History of Science in Berlin. Gerald Edelman is the founder and Director of The Neurosciences Institute, in La Hoya, San Diego. John Forrester is Professor of History and Philosophy of the Sciences at the University of Cambridge. Lawrence Friedman, M.D., is Clinical Professor of Psychiatry at the Weill Cornell Medical College. Anne Harrington is Professor of the History of Science at Harvard University. And Joel Snyder is Professor of Art History at the University of Chicago. Many of their books, which are listed on our announcement, are available in the front as you go out of this room and are available for you to buy if you wish. So with that I'll ask Akeel to start the roundtable.

Bilgrami: Thank you all for coming these last two days and provoking and stimulating us with your lectures. Joel Snyder and Larry Friedman are joining in as panelists. What I thought I'd do is just speak for just a few minutes right at the start to say roughly what I had in mind with Lois when we proposed this event and say just a little bit about what we've heard over the last couple of days. Then I think I will ask Joel and Larry to start us off.

The question that was vexing me that prompted me to plot this event was the question of whether there are normative elements in the world that are external to the human subject, which might entail that natural science or even social science does not have full coverage of the world. That is, are there elements, normative elements, in the world that would have the effect of saying that natural science doesn't have full coverage of the world, of nature and the world external to the human subject? And it's been my view—a view that I've been arguing for in recent writing—that if that is so it must be because of human agency. Let me just put out in a couple of minutes what struck me as in our time a way that we might argue for something like this conclusion. Here is an extremely rudimentary form of argument for this view. Spinoza said, famously, that one cannot intend to do something and predict that one will do it at the same time. And if that is right that suggests that a perspective we have on ourselves as agents crowds out a perspective that we

have on ourselves as objects of study. That is when I predict what I will do, I step outside of myself and my agency and observe myself as somebody else might, from a detached third person point of view, and make a prediction. So my conception of myself is not a subject, but is an object in a way. On the other hand, one could have a perspective on one's self which is that of an agent, asking what should I do, what ought I to do. And then one isn't stepping outside of one's self. One is, as it were, being one's self. One is being a subject.

This basic distinction is a profound one. It's a distinction that we have as different perspectives on ourselves, the perspective of ourselves as agent. And the question, it seems to me, that arises from this is, could we have an *exactly* similar distinction on our perspectives on the world? That is, one perspective on the world is to see one's self as studying it in a detached way. That's what science does. When one is a scientist one is an agent, but one's perspective on the world is the world of study and detached study. But there might be a perspective on the world exactly echoing the two perspectives on one's self, which is that one sees the world as prompting our agency. Not in the form of detached study, but in the sense of practical agency—what Kant called the deliverances of practical reason. If that is so, it must be responding to normative elements in the world, which move us to act upon it. So one way to think of normative elements in the world would be via notions of agency. So our agency and the normative elements in the world were, as it were, of a piece. Made for each other, in a sense. Of course that's a design talk. That's teleological talk. I mean that metaphorically, but they come together in a way. That's just a very rudimentary, general way of thinking of how we might think of the world as normative. Of course this does square, in some way, with ways of thinking of the world, which we described in the past in sacralized terms. That is, if the world was shot through with divinity in some sense, then that too might prompt our agency. I put it in purely secular terms, in terms of agency, but there were in different vocabularies with different commitments, religious commitments, similar ideas which were undermined, beginning a process, sometime in the 17th century, a process that was known as disenchantment, et cetera. And so my way of putting it was were there non-sacralized ways of talking of enchantment of the world, despite the disenchantment over many centuries? So if something like this is right, what it will show is that there are elements in the world which wouldn't necessarily be elements that so much as interest science. Why is that? Because it's not the business of science—I mean if as I defined science, it is a detached understanding of the world. This is an engagement with the world of a quite different kind than scientific study of it.

Now, of course, there are attitudes that some scientists have which are more ambitious. They want full coverage of the world. But the idea that there's nothing in the world that isn't countenance by natural science is not an idea within science. It's not a scientific claim. So to deny it is not to be unscientific. Science doesn't say science has full coverage of the world. That can't be a claim within science. Some scientists say it, but then they're playing at being philosophers. And as Wittgenstein said, almost everything implausible that's been said is not by scientists but by philosophers. But I'm not being dismissive of the idea. It's been a long-standing idea for 250 years. And it's not easy to argue against it. What I've given is an extremely crude and rudimentary argument, which needs a great deal of sophistication. But Gerald Edelman talked with great modesty and really quite illuminatingly about how it is that we might think of the relevance of science, in particular neuroscience, to notions of value and norm, intentionality, consciousness. And it was remarkable to note how modest his claims for neuroscience were. He

disavowed reductionism, and the word he used to describe what he called the relations between consciousness, intentionality, the brain and the central nervous system was “compatibility.” And he wasn’t seeking anything more reductive than that. So if that is right, nothing that I’ve said speaks against anything he said, because basically what I’m arguing is that the compatibility of freedom with a commitment to the comprehensive sway of causality is the same compatibility as the compatibility between normative elements and natural elements as natural science studies it. That is, to the extent that my argument turns in agency, the compatibility of agency with some version of causal determinism is not a different compatibility than the compatibility between the two we’re talking about: between intentionality and the brain. So, what I’ve been arguing for is really to reduce two compatibilities to one and to reduce the problem of two incompatibilities, as it was conceived, to the same incompatibility.

Ranie Daston asked a different question about the normative. She was relatively neutral about whether there are normative elements in nature or not, but she observed that we have a deep theoretical urge to seek analogies, and even perhaps conceptual sources, for our normative commitments in nature. She wanted to diagnose why we did so and she argued that these analogies were completely neutral when it came to specific normative or moral claims we had. They could go in either direction: for or against slavery and for or against conservative and progressive views. But she thought—I think making an important distinction—that if you don’t look at specific normative claims and the analogies we seek in nature to support them, as has been done in the history of thought, but look for generally a grounding of normativity per se, and not specific norms, one might find it in notions of order, to give an account of it.

I’ve questions for both Gerald and Ranie, but I’m going to hold off and ask Gerald and Larry to come first. Anne Harrington, in a sort of Feierabendian vein, proposed that we ought to be looking seriously at non-standard sites of training and discipline in meditation to understand issues of the mind, and even the brain. And her goal was to try and see if some of these studies that she was telling us about could be seen as ways of enchanting science. So her project wasn’t “Is there a way of enchanting the world?” but, “Is there a way of enchanting science itself in some way?” And that was a different, interesting set of claims from anything I had in mind. And I’m curious and keen to know what others think of it.

And John Forrester, who reported Ranie as saying that he was describing an extremely pessimistic post-Freudian scenario, showed just how deep Freud’s commitment to scientific naturalism was, sort of stamping out not merely religion but moral norms as having a self-standing status.

Very broadly speaking, these were the four directions in which our question was pushed by our four distinguished speakers. Now I’m going to ask our two distinguished additions this morning to raise some discussion. Joel, will you go first?

Snyder: I first need some truth in advertising. I am completely out of my area here. Ranie will certainly testify to that. I work in art history, and I work in questions of instrumentation and representation. So bear that in mind. I also come as an editor of a journal, and my job there is to—I’m called “Radar” at the table. If I can’t track the essay then the essay somehow has fallen off my radar scope. So I’m a professional skeptic. Bear that in mind as well.

The first question that came to mind in listening to these papers has to do with the question of priority. We're looking at the question of values and where they come from, and possible relationship between nature or studied nature and value. In order to establish that something is known scientifically today, and for quite some time, what we need to have is a community of people who do repeatable experiments. And before they study, they are expected to, they ought to, they should tell the truth. We are not going to get to the basis of any given order of nature until we have a general agreement on telling the truth. So it seems to me that there's at least a small argument to be made about the priority of the norm before the study—that if we don't get to nature, we don't get to an understanding of nature. I want to stress that this is in a relatively contemporary setting. And of course, when people violate these norms—don't tell the truth, fudge—we're shocked and horrified. And perhaps we're more shocked and more horrified about that than just about anything else in terms of scientific pursuit. It seems to me that here truth has a debt to freedom. And that debt has, I think, been passed over. And so, again, the relation, I suspect, is going to be reciprocal, but I do think we have to insist on the habits of scientists when they come to their studies, and the character of the knowledge that they produce being dependent upon a whole set of norms. Now, can you derive those norms from science? Well, I don't see why we would have to even ask that question. That's number one.

Number two is the notion of illusion and enchantment and disillusion and disenchantment. I would really like to hear people talk about this. There are Frankfurters, people of the Frankfurt school, who are constantly talking about the loss of significance from experience. The world no longer makes sense. Disillusion and industrialization have gone hand in hand, and now we look out, we see nothing and it's all horrible. And I'm just a happy-go-lucky guy from Brooklyn, I guess. I have never, ever, ever seen the world that way. And it seems to me itself to be an expression of a psychic problem. I genuinely believe this. I am curious about the world. I want to get engaged with it and so on. It seems to me that the question of enchantment or disenchantment just doesn't come up. The issue—at least as I understand it—of the history surrounding the placement of the people in Frankfurt has everything to do with the collision between social forces, which, in fact, threaten chaos, and fascism and communism, or however you want to play this. So the experience of any individual within this social setting might turn out to answer to this: "I look out and I see nothing; I'm scared to death and I don't know why." But right now and here, I have to admit I have felt this way from time to time given the current administration in Washington, where I think reason has been lost and we've lost our way. But I don't propose that as an answer to the Frankfurt problem. I don't know where they derived this notion from. It's just that I hear it echoed in the talks, and it seems to me that about the best thing in the world that we could do would be to get ourselves disillusioned. I don't propose that it is a happy thing to do in all cases, but to be able to see past illusion, to see where we were wrong, to see that we were hanging our coats where we shouldn't have been hanging them—it seems to me on the whole a wonderful thing. This does not mean that we get rid of morality. It does not mean that we get rid of values. It means that we get rid of a bunch of incorrect preconceptions.

This is all very homely stuff. There is an undercurrent, I thought—a fear of relativism—and I'd like to hear more about this. I'm not fearful of relativism. I don't think that if we become modified or modest relativists we will go out and then eat each other. Or it doesn't seem to me to be a necessary consequence of adopting a kind of Humian soft relativism. But we can get to that.

Finally, I have questions for Ranie directly, and I think we'll put those off until Ranie is prepared to defend herself.

Daston: En garde.

Bilgrami: So, Larry?

Friedman: Well, we're making disclaimers and I'll match your disclaimer. I'm somewhat intimidated—somewhat is an understatement—by the specialty power around me. I'm a psychoanalytic psychotherapist, and in some ways, since there's hardly any definition even of psychoanalysis, our knowledge is really a practical knowledge. But we're also kind of dabblers in almost everything and master of none. I mean we're all amateur philosophers and we're all amateur psychologists, because most of us haven't had psychology training, you may be surprised to hear, especially if you came through medical school—not a bit of it, not an hour of it. And anything that we pick up in literature or the arts is as a civilian, not as any kind of expert, and yet we are constantly jabbering about all of those things. And I'm going to be doing that, taking my life in my hands, so to speak, because experts are around. But that's our fate because of the funny nature of dealing with people in an analytic mode.

For example, as an amateur dabbler in philosophy, I would say I am impressed that it does seem that Emmanuel Kant had the last word. What I hear over and over again in this conference are echoes of Kant with a realm of freedom and a realm of causality, and the idea that mankind always brings anything that they're looking at under an abstract concept in order to think about it. So if it's a cause, it's a cause; but if it's freedom, it's an imperative. I hear echoes of it all over. I'm really impressed that that man really got the universe by its kishkas.

I don't want to take too much time, because I have, like all amateurs, reactions to everything, and obviously my reactions to the picture of Freud will be the most acute, because that's what I'm dealing with. But I want to point out my own view. I want to emphasize that psychoanalytic approaches really have a particular entrée to the problem that Professor Bilgrami presents and that our conference presents, in that it is designed. I think Freud designed a system. His model, in the way I look at it, is the way Paul Ricoeur looked at it. He designed a system that combined a model of mind that both had force—biological force—and meaning—a semantics of meaning, “a semantics of desire,” actually, he said. So there's force in it. There isn't just meaning; there's biological force, conation, aspiration, wanting. And there's significance and meaning. As Ricoeur pointed out, these things are incompatible in a way—in the same way that freedom or decision or agency is sort of heterogeneous with cause and being caused. But in the analytic view it's put together in a model of Freudian psychoanalysis, and Ricoeur said it doesn't quite work but it's the best that could be done. It's what you're going to do if you're going to deal with it, and you do it that way in order to capture this peculiar nature of mankind, which is that he is driven and that he is driven by force—biological force. He's a creature of biology, but he makes decisions and things have meaning. He has wants.

This becomes very, very acute. This is a theoretical matter—it's a very interesting one. It's one of the entrées into this problem. And one of the reasons why it's so interesting is because it comes into the frontlines, in a way, between an analyst and a patient. And it very specifically

comes in. I was thinking of this with your picture of the scientist acting and the scientist as an observer and the scientist as a decider to observe, and so on. Because that split or fracture is exactly what the analytic situation is designed to produce. The analytic situation is designed to produce desire and action, literal action, and unthinking action, so that it is not observed in the transference that will be observed. And that dislocation—and it is a dislocation—comes about by being non-social, or unsociable, so that you're kind of left hanging. When you envision your analyst, or when you're talking basically to try to get that person to have a certain attitude toward you and you don't even realize it and you're communicating and they let you—they don't respond to that. They don't give you what you want. You didn't realize you were even asking that, and then you begin to ask and you look at it. So you're supposed to look at yourself as a scientific object. So that discrepancy is the whole point of analytic treatment. There are other kinds of treatment, but that is my view of it, and I'll defend it to the death.

I think the interesting thing for me in the current scene of psychoanalysis, really, is that there has been a controversy specifically about whether the transference is ever resolved. The ideal image that Freud had was that the charisma of the analyst attracts the patient in a way that's gradually analyzed—that actually is involved in the treatment. At the end of the treatment it's disenchanted. This is literally a question—that the patient is supposed to be enchanted and the treatment is to disenchant them while keeping them enchanted. You don't start out by saying, "You're a machine, you have an ego, superego and id." Forget it. There were people, and there are still people—analysts—who didn't get that. Alexander, when the superego first came out of Freud's library, he thought that the treatment was designed to dissolve the superego. He learned quickly that that wouldn't work. So the patient is supposed to be enchanted. If they weren't enchanted—there would be no treatment, period. And that can happen. They're supposed to be enchanted, they're supposed to become disenchanted. The disenchantment is the process. So theoretically the idea was that at the end of the system, the patient would be completely disenchanted and have no feeling about the analyst at all. He was just a functionary, he was just a technologist. "All the stuff that I used to think about him is just superstition; it was a temporary religion and it's gone and now I'm free and I can be my own." And the image of what a person's left with is not, I think, a disenchanted one. It was never supposed to be that. Never. Not in Freud.

But people nowadays have a much more realistic view. I mean the transference is never dissolved. How could it be? If you have a long contact with somebody, they can never be nobody to you. They have to be a certain somebody. So that's not really such an issue anymore. Where the issue does come up is in what's known as the countertransference. Because, again, the ideal image, and a lot of what goes on in analysis, is that the analyst will be disenchanted—that he will not dramatize the patient in his mind. Well, he's going to have to do it to some extent. His unconscious is going to have to respond. He's going to have to humanly respond to the human person, but he's going to have to keep some kind of causal sort of impersonal understanding of what's going on so he won't be sucked into confirming the patient's general idea. Now, as long as that was going on, analysts could feel okay about it. But in the modern day—from about the '50s and on—people realized that analysts were not and would never be detached in that fashion, because human beings are not—they were fooling themselves. And they are constantly themselves being enchanted in ways that are now talked about as "enactment," which is the big,

fashionable word now. I see that I'm carrying on a little bit. But that's where I come from. I'll leave it at that. Could I say one more thing? Just one.

Bilgrami: Yeah, sure.

Friedman: In answer, specifically, to your question—it seems to me the more I think, the more that this other level that you're talking about has to do with time. It has to do with the experience of time. After I shut up for a long while maybe I'll have a chance to come back—if I'm not savaged by my partners. I think Roy Schaeffer is right. People can only cognize time in dramatic terms. There's an aspiration. There's a literary or poetic shape to it in everything and anything we do. And that is the only way that we can understand time. So the realm of time, I think, as a human experience, is the realm of agency. That's the separate one, I think.

Bilgrami: Gerald, did you want to step in? You can savage him if you like. He's inviting it.

Edelman: I don't think I'll do that. I try to think of my colleagues and what they would say when I'm in this distinguished milieu, and I can only think of what happened—it was a report about Boswell and Johnson—Samuel Johnson's friend said, "I thought to go into philosophy but cheerfulness kept breaking in." But I'm going to take the risk, and the first thing I would like to say, in a general mode, is that I believe that science is imagination in the service of a verifiable truth. Not all the truth—and you've called that modest, but whatever it is, you might say it's an opinion. But I think it puts an emphasis on the generative aspect of science and the fact that you don't start with the perfection and with the quantum mechanics. You begin with a very powerful aspect of language, which is ambiguity, because ambiguity guarantees associativity. And so it is in your brain. The fact is that underlying this, we now begin to see this extraordinary complexity, a complexity that's hyper-astronomical in terms of the connectivity and all the different things happening in synapses. And the notion that, in fact, it's not an instructive system—that the world does not plant an instruction the way you do when you do AI—artificial intelligence—but in fact you select from a set of dynamic repertoires of extraordinary individuality and complexity at the same time.

So I'd like to direct my question first to Professor Harrington, because I want to tell her I was enchanted by her lecture, and I look forward to being re-enchanted the next time I hear her. So I want to point out one thing that crossed my mind as you were speaking, and that is the role of Darwin. It seems to me that if you are very crude about your evolutionary perspective, without getting into refinements of evolutionary ecology, one thing you can see about higher organisms—I mean vertebrates, even some of them possibly with consciousness—is "eat, procreate, run." And that is a constraint on value. When we look at those value systems—I've called them that without an implication of morality—they are essential to survival. Now, not everybody survives. The world is a cruel place, et cetera, and it's only on the average that the fitter survive. But it seems to me that what we've learned about the brain and what we've learned from Darwin puts a kind of constraint on the possible emergence of value systems of the kind that Professor Daston talked about.

I think the next question that comes to me—and forgive me, I don't know whether the word Wittgenstein is heretical in this quarter—but the fact is that I would like to pose a question to

you. Wittgenstein talked about language games, and we have to be very clear about what we mean when we say nature, as if it's an entity per se, or what we mean by the mind as if it's an entity per se. So the question is, do you think that you could have this meditation if you didn't have language? Do you think you could have morality without language? So the reason I ask the question is against the background of the distinction that I think is very useful, which is that I believe dogs, for example—I believe, but cannot prove in the way I think I might be able to do much better with human beings—have primary consciousness. They have the ability to construct scenes, which are qualia, which, in my opinion—outside of the first-person/third-person distinction—are discriminations.

I don't believe any scientific theory can engender what's called the "solution" to the hard problem, which I think needs a cure rather than a solution—namely, that we can never have a theory that says to a Martian, "This is what green is." But I can tell you what green is not. And all of those discriminations are very amply satisfied by the neurology when you look into it. So the question becomes, is it not the case that when we talk about norms, and indeed truth—well I personally believe truth is normative, but we could argue that, because when we search for the truth, it's not all the truth. As scientists we go after the verifiable truth. That's not mathematical or logical truth. There's a great variety and heterogeneity of truths. My real point here is that it seems to me that there is nothing—nihil obstat—that prevents the creation, through language and society and culture, in a creature like us that has an actual definite language—the only of any species that has true language with syntax, which is endless. You can create an endless number of possible fantasies, et cetera, and some of them can be normative. I see no contradiction whatsoever in the Darwinian picture and that kind of view.

Now, we actually do see, in neuropsychology—not psychoanalysis—very great examples of what you said, having to do with agency and having to do with how the brain makes closure. So I want to say something briefly about that. I don't think I mentioned it in my lecture, but age being what it is, I'm not sure I remember. It's about Bisiach in Milan, who is a real expert in neuropsychology. And I don't know if you know that if you have a stroke in your right parietal cortex, you have hemi-neglect: you cannot pay attention to the left side of the world. You shave your right face, you see from 12:00 to 6:00, but you don't see 6:00 to 12:00, or you don't report that you do. Well, there was a patient, and let's call him Mr. Bertolucci. He had a disease called anosognosia, a syndrome which occurs when you have a more extensive stroke—and I want to make a point here about closure and the brain—and you deny that you're hemi-paretic, that you have a left side that's paralyzed. So Bisiach came up with two identical cubes, put one in the patient's left hand, took one in his and said, "Now, Bertolucci, do what I do." And he did agency, okay? The patient said, "There, I did." And he said, "No, you didn't." He said, "Sure I did." So he took his arm and put it into his right visual field and he said, "Whose hand is this?" And he said, "Yours, doc." So he says, "I can't have three hands." And the patient very patiently said, "Doc, it stands to reason, if you've got three arms, you have to have three hands."

It's extremely important, I believe, to our argument that this search for closure that happens in the way our brain works, with the apparatus that it has, has to be put in the perspective of—it's not just the brain, it's the brain, the body and the embedding in the world. And that world never presents the same signal set twice to anybody, even coelenterates. So in some cases that matters.

I've found that it has, sometimes to my grief. But the fact is I wanted to direct it to Professor Harrington.

Harrington: There's a lot in what you just said.

Edelman: Too much.

Harrington: We had a sort of truncated version of this conversation last night—or part of this conversation—over dinner, and particularly this claim: the suggestion that meditation produces a kind of primary consciousness, potentially similar to a dog.

Edelman: No, no. I didn't say that. I said in my personal and somewhat quixotic opinion, that a mystic was a man trying to be a dog.

Harrington: That's what you said.

Edelman: What he's trying to do is get rid of higher order consciousness and become one with the world, because he's in the remembered present.

Harrington: And what I said is this is really a Garden of Eden story, isn't it? This is a vision that once we were whole and connected in the world and then we got language and rationality—

Edelman: Tree of knowledge.

Harrington: We tasted of the tree of knowledge and we were thrust out into a world where we anguish and we're disconnected from nature, we're disconnected from God. And I do want to just partly clarify the intent of my talk yesterday. It wasn't so much about the science, per science, although I will address the question. It was about the ways in which certain projects in science serve broader cultural functions and the interest of that. I do think that those who practice Buddhist meditation believe that they're engaged in a process of disillusioning, perhaps with some interesting tensions and analogies, also, with the psychoanalytic process of disillusion. But the view is that you meditate on experience as given, without developing a whole set of stories and judgments, with the goal of coming to see what is in fact. And this, then, leads to a process of unburdening yourself of the illusion. So if the question is, do dogs not suffer from illusions—forget the dog. But if the idea in some sense is that we try to get to a prelinguistic place—

Edelman: It's hard. Let me try it this way and say that if you kick a dog, the next time he sees you he may bite you or run away, but he doesn't sit around in the interim plotting to remove your tenure.

Harrington: Well, again, there are dogs and dogs.

Edelman: I told you last night that Ernst Meyer, who is one of the greatest evolutionists, tried to persuade me that his dog had Jewish guilt.

Harrington: Yeah, so I think there's been a sufficient co-evolution between people in Brooklyn and their dogs over a sufficient number of centuries. But before you got to the point about meditation, you had a Darwinian claim, or you were talking about the way in which the Darwinian story itself suggests that—I'm paraphrasing, so this might not be quite right—there are kind of built in fundamental constraints which one might call values. We're not just out in the world. We are out in the world with certain kinds of predispositions to procreate, to eat, or else we wouldn't be here. This, I think you were saying, should give us some reason to feel—I don't know if this was an argument against disenchantment—that we have a kind of agency and instructions that then have a fair degree of freedom.

Edelman: But not to experience an interpretation of evolutionary psychology, which I think is too reductive entirely. It's only a constraint.

Harrington: Well there we go, because in some sense I think, to the extent that there are people out there who feel the angst and malaise of modernity, it's Darwin and Darwinism that tends to be the primary focus for people's lamentation.

Edelman: They can't stand it.

Harrington: Right. And certainly the writings of people like Richard Dawkins probably don't help the atmosphere.

Edelman: They don't. A little too arbitrary and deterministic.

Harrington: But it's at least worth pointing out an interesting tension between your sense that this should actually help us to move into a place where value and nature begin to feel more integrated, and the widespread feeling in the broader culture that, actually, Darwinism is a big part of the problem. And maybe, since I have the floor, I'll speak to this question about, "I don't get it. Who's disenchanted here?" I was thinking as you were talking, there's a Woody Allen film—they're all the same, I don't remember which one. They aren't all the same, but it was one of a certain genre—it may have been *Annie Hall*. There's a scene in this Woody Allen film that I'm remembering where there's this little boy—I think he's in Queens or Brooklyn. No, he must be in Coney Island, because the trains keep going over his head.

Edelman: It's the Cyclone.

Harrington: It is *Annie Hall*. And it's breakfast and he's supposed to go to school and he's deeply depressed and he won't eat and he won't go to school. "What's wrong with you? What's wrong with you?" And he says, "You know, the sun is going to blow up in 2.3 billion years. What's the use?" So Woody Allen feels a kind of cosmic disenchantment. I would hazard that there is a problem of disenchantment that some people out there feel, whether they're all neurotic—and this is kind of a second order question—but where people, I think, feel most disenchanted or most anxious is around the prospect of human nature as opposed to cosmic nature being disenchanted. And that's why I suggested, or why I might suggest, that there are certain areas where this kind of energy is most intense: around the brain sciences, around Darwinism, around those things that seem to speak to just those questions that you raised

about—can we still speak in any coherent way about agency? Do our human lives, our local human lives, have any meaning or are the sciences claiming it's all a fool's errand? It's all illusion—a disillusion—and at the end, once we're disillusioned, we will see that nothing we experience actually makes sense or is true.

Edelman: I don't want to monopolize this, but let me say, I once got in touch with Woody Allen to get permission for a statement I was putting in a book as an epigraph, which said, "If I had to live over again I'd live over a delicatessen." And he gave me permission. And then I found out it wasn't his at all.

I want to say one other thing: in 1869 Wallace, who is the co-discoverer, and who was a rather sweet fellow, became a spiritualist. And he wrote to Darwin and he said, "I'm going to put a paper in the quarterly to show that the mind and brain of man could not have arisen by natural selection." Darwin was horrified, and he wrote back and said, "I hope you have not too seriously murdered your child and my own." And what Wallace's argument was was truly bizarre. He said that the brains of natives are just as large as those of Englishmen, but they don't have math and abstract thought, therefore it can't have happened. Now he pointed—Darwin—that there is correlative variation: that when you select for one thing, you bring in a lot of things that don't have any meaning whatsoever. And I just want to say one final thing as a molecular biologist. The more we look into the way the body is constructed and the way the molecular tissues are put together, the more we see of this kind of extraordinary degeneracy, in which no two people are alike, the number of pathways are incredibly diverse—hair on the barber's floor. And out of that, with that degeneracy, comes this sneak path of survival: namely, if you do this, you can go around and get that. And something that looks meaningless today, several generations hence, may be just the critical issue.

Daston: I think it makes a great difference in this discussion about disenchantment and the surrounding anxieties, as to what exactly we fear might be taken away from us. I thought there was an extremely interesting collection of disenchantments and disillusionments in the comments heretofore. I think disenchantment in the sense that Joel's talking about—and I'm on your side here—is basically a bunch of Germans between 1880 and 1950 having a very hard time of it, for good reason. But that's not apropos here. It seems that there is an enormous amount of re-enchantment going on, often by the means of the sciences. Not in spite of the sciences, but because of the sciences. I mean here not simply wondrous effects of the "ooh-ah" science museum sort, but whole new metaphysics are being created, which dazzle people. So one would have to, I think, be a great deal more sharp-focused about exactly what illusion, what form of enchantment, we're going to be robbed of. I think it also behooves us to think what would happen if we performed Akeel's thought experiment and imagined nature possessing something like that Spinozan antinomy that we possess, and what would be lost. And what would be lost would be something which is capable of completely surprising us, because we cannot think our way into it, because there is no form of intentionality which will allow us, in the way that we routinely inhabit dogs, for example, to anthropomorphize it. That, I think, would be a genuine disenchantment.

Forrester: Just a couple of comments. I agree with the impulse to say it's only specific socio-cultural formations that give rise to the disenchantment effect. But I remember the disassociation of sensibility arguments, which were in England in the 1920s. T.S. Elliot—

Harrington: Primary, secondary—

Forrester: That's right. And so it's not just a German disease in the early 20th century. And then there's this French guy in the 17th century, "*L'espace infini me fait peur*," no?

Daston: *C'est autre chose. C'est autre chose.*

Forrester: We can argue the historical case, but the moments of disenchantment from the closed world to the infinite universe, that argument—

Daston: It's Koyré studying with Husserl at Göttingen.

Forrester: But Pascal didn't study with Husserl, did he? And Pascal is the inventor of that outrageous, blasphemous bet on the existence of God—this is a moment of disenchantment: if religion has come to the Pascalian bet. That was Voltaire's view. So I want to be sympathetic to such a cultural view, but say that there is much more disenchantment than those Germans of that particular era. I also want to pick a bone with Gerald on the quasi-Kantian argument that you have to have truth telling before you can have science. I'm a naturalist. I want to go the naturalist way and say—Dean Atchison, I think it was, who said, "There's a lot of hard lying in the world, especially amongst people whose characters are above suspicion." And the plain fact is that there's a lot of transgression of norms, and life is like that. You know, there are gangsters and liars and so forth.

Snyder: In science there are gangsters?

Forrester: Yes, in science.

Snyder: Gangsters?

Forrester: And one of the arguments for subverting the possibility of what I regard as the pious, high-minded approach to truth telling is the Popperian one. And Popper is basically saying, "You don't need truth telling in order to do science. You need good criticism to do science." In fact—

Edelman: Nonsense.

Bilgrami: John, I don't think that truth telling is a double bind, because I thought Gerald's point was truth and the value of truth is very different from the value of truth telling. That is, a liar disvalues truth telling, but he values truth. That's why he conceals it or amends it.

Forrester: I understood Gerald's argument to be that, in order to have the institution we call science, we have to have practices which are reliable in some sense, and where the project is truth.

Bilgrami: Right. But the project of truth is not the project of truth telling. This is simple. A liar disvalues truth telling but values truth. That's why he conceals it or invents it. So they're just different values, truth and truth telling. And you were talking about a much more abstracted concept of truth, and not truth telling.

Edelman: Yes. As someone who's done experiments for 50 years, can I just enter this and say that scientists are humans? The generative aspect of science is not the performative one, and the problem is something like this. Of course we're human. You can look at it. You'd have to be a psychopath to try to cheat. That's like doing it in Macy's window at high noon, in science. By the very nature of the broadcast of what you say, you do it so that other people can check under various circumstances. But if you look in the bibliographies, you find a considerable amount of slanting. Now it might be innocent corruption, not lying or a deviation from the truth. But no one is saying that scientists are somehow above judgment in that domain. It's simply that you'd have to be nuts to do a cheat. It's as simple as that. Of course there are people who are nuts. They do cheat. But I was trying not to mouth pieties. I object to the way you put that—high-minded pious. I wasn't even suggesting that kind of argument.

Forrester: This is why I think the arguments for saying that there are, as it were, social regularities is observable. And that's how you get at something that's more reliable amongst human beings, say in a scientific community. You don't look at the norms and imperatives on what it means to be a good scientist, or the preconditions, or the conditions of possibility of there being a scientific community. You just say, as it were in a Popperian mode, "Go out there, criticize all you can. Go for them." Because they're bound to be, as Darwin said, and as Gerald just said, distorted by their own interests in fact gathering. Darwin said, "I'm always looking for the facts against me because I know they're the ones I don't want to see." And the "I don't want to see"—

Edelman: That seems to me assumed by what I said.

Forrester: Right.

Edelman: You have to have some truth goal in order to shave off incorrect—that's where science has gotten where it has. I think you're right that most people are astonished. Most laymen certainly, and I think some scientists too—but I speak as a laymen—are absolutely astonished with what modern science has done, either on the large or the small, the brain or in the cosmos. But there is a kind of awe that is sort of unmistakable. And we've gotten there because of a drive for truth. But that doesn't say that that's given—we wanted to find out whether it was true, whether we wanted it or not, as a whole. That's not human beings' normal state. I think people want to find out what they want to find out, not what's true. But there has been some kind of vector that's brought us to where we are, and that is to find out what's actually true. But that doesn't say that that's a product of nature, obviously. We're a product of nature. But I don't know that that says we ought to do it. I can think of a lot of arguments that we shouldn't. A lot of people have said technology will bring us to disaster and so on. It still doesn't bridge the gap from "is" to "ought," and I don't know that there's anybody here who thinks that we can. I don't know.

Snyder: Professor Forrester, may I just say that I was relieved for you to describe yourself today as a naturalist, because I wanted to point out to you that the search in science for generality and predictiveness—and sometimes weirdness—is not an imperial search. I got last night, from what you were talking about with Freud, that there was a kind of scientific imperialism maybe put upon by German influence—by Helmholtz, I don't know. But that's certainly not the intent, I think, of most scientists I know. There is an occasional physicist, but there we are.

Harrington: I wanted to slightly put a new theme on the table, but one that I hope will maybe pull John and Lawrence and a comment or observation I've made into a fruitful conversation. I want to talk about Freud and I want to talk about disillusion. And it seems to me that there's more than one kind of disillusion project on the table that people are talking about, and I don't think John and Lawrence are actually talking about the same kind of disillusion. And I think you're talking, John, about the naturalistic project and its disillusioning effects. This is a metaphysical kind of argument I believe you're making, about Freud being the inheritor of a very hegemonic understanding of naturalism. Is that right pretty much?

Forrester: That's one of them. I mean there are a number of projects going on.

Harrington: Right, but in terms of what you were talking about last night.

Forrester: Yeah.

Harrington: Now you were talking, Lawrence, about a disillusion in the context of interpersonal relationships, whereby the transference is dissolved and the kind of magic that you projected onto the therapist is seen to be nothing more than a projection—it is understood to be a projection. I think it was a slightly different kind of argument, but interestingly juxtaposed to John's.

Let me just put one more thing on the table and then maybe people can talk. One of the things that has struck me as I've listened to the thrust from those who are interested in Freud about its fundamentally disillusioning, disenchanting effects has been the way in which I talk about these people from the humanities that I have chats with about all the terrible things that the brain sciences are doing to us, and one of the things that they tend to do is they look back to a golden age of Freud when we had rich inner subjective worlds and life and there was a sense of meaningfulness and introspection. Our lives were richer, more magical. Our agency felt more solid under our skins than it does now that we're simply bags of biochemistry and the sum of our brain scans. And they talk about the ways in which, in a post-Freudian world, our subjectivity has been flattened. Nicholas Rose goes on and on about the flattening of our subjectivity as we've moved out of the age of Freud. There's actually been, within the brain sciences—this is another kind of re-enchantment project I've been tracking—efforts to reintroduce a certain kind of Freudian sensibility into the brain sciences. For example, there's a lot of interest in certain sectors of the brain sciences broadly construed in the inner world of brain disorder. Oliver Sacks, a neurologist, is very much writing in a narrative style reminiscent of the Freudian style, and he's doing it to humanizing ends. So I think about a whole different way of thinking about Freud that is: he humanizes us, he makes space for the fullness of our subjective reality of our experience.

He makes space for the inner world that you were saying juxtaposes to this kind of disenchanting sort of outer world or detached approach.

Bilgrami: Then, I think, John, you have something directly to say against this, don't you, given what you said yesterday?

Forrester: The first thing I'd say is that I think Anne makes a distinction between what Larry was saying and what I was saying yesterday, which are actually complimentary rather than distinct. I mean I understood what Larry said about enchantment and disenchantment and the transference as being precisely what Freud was doing on the individual level, which he was also diagnosing and talking about on the social level as part of the project against religion and so forth.

Harrington: But most patients perhaps don't go out thinking, the cosmos is meaningless. They go out thinking, my therapist was just an ordinary person after all, and therefore the cosmos is meaningless.

Forrester: Patients notoriously change their lives while in analysis, and they can change their lives. They can change their religions, they can change their families, they can change their jobs, they can change their sexual orientation. So these are quite substantial things, and the fact that you can change your religion or give up the religion, which is one of the references, one of the things he points to in 1959 New York or American culture—people are giving up their religion in tandem with psychoanalysis. So it's not just the kind of the small change of the private life. One shouldn't make a distinction between large cultural changes and the private in that sense. That's the danger I've warned against.

Friedman: I actually didn't mean to separate those two realms. I spoke about the transference and the work on that because that's where the action is, so to speak, and that's where the analyst confronts the problems that we're talking about on a more abstract level. But it is perfectly true, and I agree with you, that the Freudian system and the Freudian analysis doesn't just deal with the analyst-patient relationship, but with all the patient's beliefs and their loyalties and their private religion, so to speak, as well as their public religion. And Freud himself dealt with a whole history of mankind, sociology and the pre-history of man and everything like that. Technically speaking, the idea wasn't that a person will be freed from what you would call enchantment. After all, Freud's kind of gist really was—even at his harshest, in his early papers—that a person will be as much as they are capable, and people vary in their quality, because he was a very judgmental guy. They're going to direct their primitive urges that would otherwise come out in antisocial and perverse ways, into sublimations. And that was what he personally felt, perhaps a little deceptively as we know now, that he had done with himself. And so he was looking to channel into higher order enchantments things that would otherwise be useless or fruitless or self-destructive. That was sort of the ideal thing. Things changed; there's many ways to describe it. But it wasn't as though a person was going to just look on the world as a collection of physical entities. That was not the idea. And it isn't consistent with a theory, which is really a picture of man as a meaning making machine. He was going to describe how meaning is made from relatively meaningless drive into more and more refined meanings in the shape of memories, particular persons, connections, introjections, use of another person, and the

universe, art (which he was very interested in) and music (which he wasn't—well maybe he was). All these things. So it wasn't designed to do away with meaning. It was designed to refine meaning, which is a theme that the very great analyst and theorist Hans Loewald developed into a much more precise way, in which he drew out that aspect of Freudianism, which was to take raw drive's essence and refine it in such a way, with language being the main thing, that it can be articulated and returned to, be a continual fount. This is where the idea of imagination and inspiration comes. The person would be able to use the things that are most meaningful to them, which in infancy might have been just the togetherness with a mother. They would be able to look back on that or parse it out and feel it in great detail, in a Wordsworthian sense to some extent, and use the drive and make more meaning out of it. Specifically with regard to religion that may be true. A lot of older analysts have been known to say that if a patient leaves an analysis still believing in a religion the analysis has failed, but that's some particular analyst. I've heard analysts say, in the American Psychoanalytic, in private, "I couldn't analyze a Republican." Seriously. The person would have to become not a Republican. So those are not necessarily representative of the schema of psychoanalysis.

Harrington: That goes with the question the detachment thing it seems to me.

Forrester: Well, how about a new definition of neurosis—somebody who voted for George W. Bush.

Daston: Could I ask flatfooted question, which is what is the sense of menace that hangs over our discussion? There is a sense of crisis, that, if not already, the neurosciences, evolutionary psychology, perhaps even psychoanalysis, are about to snatch away from us some cherished value which will be irreplaceable, and which may, by a kind of chain reaction, lead to a moral cataclysm. I frankly do not see this menace. I cannot imagine what discovery of the neurosciences, or of evolutionary psychology, would have that effect.

Snyder: I might speak to that point by stating something that I might be not qualified to say, but it's my impression that a large of number, at least of the bourgeoisie, think that science is about technology. It is not about technology. It's about understanding, and technology is a byproduct, but the technology is so damn good and so remarkable and so useful to human intent—for example in medical cases to take just one, never mind warfare—that people make that identification, and unfortunately there's manipulation there, and there is threat.

Daston: But that, as you say, is a problem of displacement.

Snyder: That's right.

Daston: It's about the use and abuse of technology rather than the actual content of a scientific discovery.

Snyder: By the way, the funding mechanisms of science in America, which are approaching the scandalous, have this in mind. If you put in an NIH grant that doesn't have a disease, but instead has an idea, you are doomed. That's a fact. Now that is reflective of some human use. Science is

enormously valuable in certain corridors. But I agree with you entirely that—I'm not sure one has to look at it in a sort of—

Daston: Gloomy doomy terms.

Harrington: But is it just simply that we fear that strange creatures will escape from the laboratory? I think maybe for some people there are metaphysical implications deriving from certain technological choices. Or there are clashes of values—stem cell research or—

Snyder: Here we go, yeah.

Harrington: So it isn't quite a displacement straightforwardly, although I think perhaps the focus is these things have real implications for our real lives. Our way of life is being threatened.

Snyder: It involves manipulation.

Daston: That's a very different matter than to say that a discovery about the kind of entities we are, about human nature, or about the very nature of norms—

Harrington: Lead inevitably to a decision: if that's what we are, we can then do this, because it's no problem.

Friedman: Can I address your question with a very narrow example? I don't think that it's generalizable to a threat that people commonly feel, but it might have some bearing on it. I find I'm probably in disagreement with a lot of my colleagues. I know I am. I find, for example, it used to be that with bipolar illness Freudian analysts had a very clear certainty about what was going on. And it was a matter of ideation and passion, like everything else. I won't hide it, but I know when I was being trained as a resident, we knew we were sophisticated and knew that other people who were hard scientists were just too dumb to recognize it, because it required some sophistication. And we might even tell patients this. When we were sitting with them and talking with them we were thinking of them as people who had particular intentions that were having certain effects on their mind, and certain fantasies that were taking over. Now we know, although there are some of my colleagues I think who would be shocked for me even to say it, that this is just not true. There is nobody, no person who doesn't have feelings and meanings attached to whatever is going on with them, including chicken pox or anything else. But we know that that's not what's producing the bipolar swing. We just know it. That's a fact now. When I sit with a patient now who has a bipolar illness, as well as being a person with a personality and so on, and I see shifts going on or I see ideas developing or something, I'm dislocated myself. I don't know how to be with them exactly. The requirement to think of them always as a person doing something inside themselves, wanting something as personal agents, to use your term, which is Schaeffer's way of looking at any patient. Everything is an action. It's the Klinean way, too. It just doesn't fit with the fact that I know there's something major happening with them, which basically doesn't have a meaning, and I can't orient myself. My colleagues say, oh, it's very simple, Larry, you just connect the neurotransmitters with mirror neurons and this that and the other thing.

Daston: I appreciate that dilemma, but it does seem to me that you have re-described in a very profound way the disease from which your patient is suffering. But you have not ceased to think of the patient in other realms as having intentions, as having desires and having motives. It would be truly dramatic—catastrophic—if someone had lost ipso facto his or her personhood, but that has not happened.

Friedman: Well what if the science that shows it—you want to talk about horrors or terrors—is that if somebody's going through and they're training, this progression—I knew it was this, this is how we looked at it as purpose. It turns out we were being jerks. And not only that, but in some conditions actually injuring patients, in matters of OCD, for example, where their OCD was interpreted and their automatic thinking was driven further by their interpretation, really literally driving them crazy. We know that's happening in these situations. With those certainties that we had, we think about the advances of science, of neuroscience now, and the minute way that it's studying things down to the molecular level. We have this concern that we don't know where it will stop, that we can't be sure anymore. It's not a practical problem because basically people treat other people as people. It takes a lot not to. But if we were focusing on them in this other fashion, I at least can see that it might be dislocating to my relationship. It would be hard to drive out a normal person relationship, but that might be threatened. I'm just giving you that as an example.

Bilgrami: I don't know if anybody mentioned that there's a crisis or a menace. But it would be complacent to think that if we really deny that value and norm is something in the world that we respond to—that we somehow make it all up, that it all comes from us and it's not responding to evaluative or normative elements in the world—that might be a deeply wrong picture of the world. It may not be menacing to people, but it certainly isn't neurotic to think that that is deeply wrong. Whether you find it a menace or not it may be that there are philosophical, metaphysical issues here, which it's important to get right. It's a question, and it would be complacent again not to deny that it is a question worth exploring, whether changes in attitude towards nature, which saw nature's natural resources and gave rise to a predatory attitude towards nature, when it occurred. You say it occurred—those anxieties developed at a certain time, if there can be echoes prior to it.

Harrington: Foreshadowings.

Bilgrami: Foreshadowings, which are absolutely explicit in debates in earlier periods. Maybe it didn't take until the later period for them to be seen as menaces and anxieties and so on, but these are issues. How much they come from science is another question. Science, as you say, is a matter of inquiry and understanding. It's not a matter of technology. But there may be a sense in which a certain metaphysical outlook that came out of science, which needn't have come out of it—people need not have had an outlook in which nature seemed to become inevitably transformed into just natural resources—but to the extent that it might have come out of science through a distortion of metaphysics and philosophy is worth studying. That it should amount to a crisis is something that some people might feel; other people might not and they'd have to argue for it. But it does seem to me a form of rarified intellectual complacency to say, well, these are not deep and vexing issues. Whether they are menacing or not is another question.

Friedman: I wonder if anybody here has a feeling that the matter of facing death is affected by what we're talking about?

Snyder: Of course. It always has puzzled me that Freud said that he, Darwin and Copernicus had de-centered man. Do you remember that? Darwin, who is an incredibly modest person, when he was faced with the manuscript from Wallace, said, "I am forestalled—my future." He spoke to Hooker and Lyell, and that's how they went and did that little thing; they couldn't call the other guy back from Malaysia, so they just overrode it. But Freud, who certainly gave no indication he believed in God or in mortality—both of them worried like hell about their legacy, didn't they? Maybe we should turn that over to people to interpret what that means?

Daston: If I may be allowed to reply to Akeel's rejoinder very briefly. First, what would it matter if it turned out that we had just made up the values? It would make them no less real. To say that something is real does not ipso facto mean that it has to come from nature. Technology is real, art is real, but we make it up. The second is concerning inculcating science. I think there is a very interesting case for this, and I would not dismiss it out of hand that a particular instrumental way of looking at the world has led to a particular quandary in our use of the world. But ultimately that's a question not about extracting values from nature per se, but the way in which we treat nature, our value of nature. I think it's an open question. I don't think the stakes are as high as you think they are.

Bilgrami: Well stakes don't get lowered just because they are cognitive stakes. I mean they may or may not. It's a matter worth investigating, but unless you think that all value is utilitarian value there's no reason to think that they're not cognitive values. I mean if you are pluralist about values there are all sorts of values, and cognitive values are one among them. And then the stakes are high.

Daston: We agree on that.

Bilgrami: What I'm saying is it's a question as to how much, and it's not a matter of being real or not. It's perfectly possible that things which are artifice are real and things which are in nature are real. It's not a matter of their reality. But it's a matter of getting right what it is, where it is that value resides. And it's worth getting it right. Whether getting it right makes a difference to our practical lives or not is something that is certainly worth exploring. Now it's true that the Frankfurt school thought this and that people thought this for centuries, but critiques of industrial civilization of course could be made quite independently of whether it mattered that you changed your view about nature such that nature began to be seen just in a predatory way as natural resources. I think that's an open question. All I'm saying is you can't deny that it's a question. It's a real question about the links between our ideas and about our material culture. The idea that it's a matter of our material culture and ideas don't make a difference to it could be seen by some as a new way of being a vulgar materialist.

Daston: That's not my argument at all. It's an open question. The question is what hinges on it.

Bilgrami: Well what hinges on it is that ideas about nature might have made a difference to how we react to nature. If it did make a difference, it's worth studying and it's an important thing to

study. And that's what I meant by saying that ideas make a difference to our material lives. Maybe they don't; maybe you're right. But it isn't something that you can just plunk down.

Daston: It's not our material, it's our moral lives, which are an issue.

Bilgrami: Social, cultural and moral lives, yes.

Daston: I mean my sense, perhaps misdiagnosed, was that we're assembled to diagnose a moral crisis, not a material crisis.

Bilgrami: But a moral crisis is within a world in which matter, nature and our attitudes towards it are very deeply involved.

Harrington: If I could maybe pick up on this and try to bring it down to a slightly more concrete level, because I think these things can matter, and I think when they matter they tend to matter in very local, specific ways. Part of what makes this seem a silly thing is that in the great cosmos scheme of things it's hard to see why we should get all riled up. What Lawrence just told us is there's a certain kind of disillusion and crisis over certain certainties he had about the psychoanalytic world view that have been now destabilized by developments in the brain sciences. We now know bipolar is just a biochemistry thing, and he can't relate to that person the same way. And I was thinking about Peter Kramer's *Listening to Prozac* book, which a lot of you will know, and he tells a story and he does a lot of case studies. But one that I was thinking of is a case study of a woman named Lucy who, we're told, when she was a little girl living, I think, in India, her mother was brutally, violently murdered by a servant living in the house, and then she grew up with a detached, grieving father who wasn't close to her and she then had relationship trouble. You could immediately sort of make up a story about why she would have trouble. She went into therapy. She still had trouble, attachment problems, insecurity. He put her on Prozac and that was it. And he talks about, why isn't this a good thing? Why isn't it the Dalai Lama? An electrode. You were the one, in fact, who said we just want the outcome. And why shouldn't we, if it takes being in analysis for 10 years, get rid of it all if you can get there with a pill or the electrode. And yet you might find that troubling, too. Why? Because I think psychoanalysis actually is a value system. I know that the argument here is that it's all about relieving us, but the value is the truth sets us free. The hard work of introspection is a moral journey. And if we short-circuit it, just like my colleagues felt—if you don't meditate, there's the moral virtue that gets you to the outcome. It's a cheat, it's a moment of disillusion. So I do think that on these local levels people have these experiences of a certain kind of disenchantment, and to the extent that these are real and these are real human experiences and it's worth sort of seeing what the relationship is between these local moments of disenchantment and larger developments in the sciences.

Bilgrami: Yes.

Forrester: I want to respond to Ranie's question and to what Anne has just said. I mean last night I said Marx, Darwin, Freud—the great Holy Trinity—were regarded as endangering something important. And there are discourses of feeling that values and morals are under attack. Now one of the ones that Anne may be alluding to with the Peter Kramer story is the idea of a certain kind

of relationship between human beings as what we value—a relationship of conversation, of therapeutic rationality, it might even be thought of, as opposed to just get the right pill.

Harrington: Yes.

Forrester: I was imagining, partly through watching people in the street on their mobile phones and their conversations and the way everyone now multitasks all the time: they're plugged in to lots and lots of different things and you can listen to music and talk to your friends while making love with someone else. I'm imagining a plurality of worlds, which are, as it were, technologically facilitated, and that we're all going to participate in. And each of these becomes a kind of lurch against some ideal of what human relationships might have to be. And then that makes us think, well, the therapeutic relationship, the Freudian invention, was this extraordinary one-on-one relationship of complete containment. And what was that originally modeled on? Well Freudians have said actually it's the mother-baby relationship in disguise always. I wonder if it's not the bourgeois marriage in disguise as well, at the same time—a kind of contractual relationship of partners. What I'm trying to get is there can be a sense of malaise about ideals being subverted somewhere. We're not sure what the source of that malaise is. It might be the cyberification—I'm trying to make up a new word—of our every day lives.

Harrington: So do you agree that Freudianism is actually a value system? You almost just said that. And in that case that's a bit different from Freudianism as the thing that is all about removing value or about disillusioning.

Forrester: Yeah.

Bilgrami: Can we just draw the audience in for a bit and then I'll come back to both of you.

Audience: I'm Joe Whitebook. I'm a philosopher and an analyst from Columbia, and I practice in the city here. I'd like to make two comments. The first one I'm sort of reluctant to make, but as probably the only card carrying Frankfurter in the room, I feel compelled to make it. Freud said that just because an idea is psychologically determined, it doesn't mean it's true. So to make these sorts of arguments of dismissing the whole discourse of disenchantment about the trauma of a group—the century-long trauma of a group of German intellectuals—I mean it's dirty pool in a way, and it doesn't go very far. There's no doubt that Adorno and crew were highly traumatized. But perhaps that gave them insight into certain things. I mean the tables could be turned and one could say, Anglo-American analytic philosophy in its heyday, during the post-war era, was nothing but a reflection of the cold war, the end of ideology and so on and so forth, and their complacency about politics and the complacency about morality was a result of that. Maybe this is because I'm a trained philosopher, but there are very specific things that disenchantment of the world has meant in the first instance. It wasn't just a group of Frankfurters. It was Pascal, it was John Locke, it was Galileo. The main idea that meaning, purposefulness, value, telos, entelechies, whatever you want to call them, did not dwell in the world was the major change, which took place with the rise of the modern scientific point of view. The reason that's a problem is because all or most value systems, normative systems, have always presupposed something like value in the world, as Akeel puts it. So there there are real

high stakes, I think, and maybe this is only a problem for philosophers, in the way you conceptualize this.

Although I'm a Frankfurter, now I'm going to make a point that might seem a little bit mushy. Despite the fact that his recent book about the Indians is a little bit crazy, Jonathan Lear wrote an excellent book years ago about love and its place in nature. And he makes an argument, which to me seems to provide a way of bridging the "is/ought" and the problem of normativity. He does say that psychoanalysis is a normative system, which I would say, and that the values it basically adheres to are autonomy, individuation, relatedness and so on. His argument is this: that somewhere in the course of evolution, according to strictly Darwinian principles, a situation arose where the human infant needed a certain sort of environment and love to turn into an individual that was sufficiently autonomous, individuated, related and so on. Recent research in psychoanalysis, especially in infant research and now attachment theory, has taught us a lot more about what those basic requirements are. This is Lear's point and I agree with it. He doesn't say that human consciousness, individuation, autonomy are the telos of nature. He doesn't make it the old-fashioned philosophy of nature argument. He does say, however, if we want to promote those values, then we have to create environments with the proper kind of love and attention to the child. So love seems to me some sort of concept, which is naturalistic, which also points to a world of values.

Bilgrami: Okay. Thanks, Joe. Apart from commentary, if you had specific questions to put to the speakers—

Audience: Hi, my name is Garrett Deckel. I'm a PGY-3 psychiatrist at Mt. Sinai, and a former philosopher, occasionally still a philosopher. My question is for Dr. Edelman—and also sort of for Akeel, because at the beginning he said that he thought that most of what you said was compatible with the view he was putting forth today, that there might be these two realms, one of normativity, meaning an agency, and one of scientific causality and so on. You used a word the other night that you said that some philosophers might bristle at, namely epiphenomenalism, and I understood you to actually endorse that view. I'm not sure if I was correct.

Edelman: Not quite.

Deckel: Okay. The thing you went on to say, which I thought was the endorsement, was that it seems that if I make a decision to raise my right arm and then I do it that there's a connection there. And I thought that it was your view that that connection is not a causal connection, in fact that causal states don't have—

Edelman: No. Good question. So let me start—this is late in the game to get into this thicket.

Deckel: Yes, I know.

Edelman: It has to do with free will, has to do with causality. From the physics point of view the causal order is closed. Only matter energy can be causal. If that weren't the case and, for example, consciousness itself, which is a process, were causal, you'd break the second law of thermodynamics, which is an enormously extensive generality in all of modern science. But that

doesn't leave us completely high and dry, because in fact I believe that the thalamocortical reentrance system, which we call the dynamic core, is one of the key elements for giving rise and entailing these qualia, these discriminations, that that is the cause—that it is the jittering of my neurons that is doing this right now. But it's quite faithful, and it's universal. I'll open that up. It's faithful in the sense that those degenerate combinations in this incredible selected mess—that those particular ones that correspond to, say, sadness and another set that correspond to green—do not exchange with each other. So that if it is a fact that it's causal that I'm raising my arm—the jittering of the neurons are the cause—that doesn't mean I can't talk as if my arm raising is, in terms of my personality, the entity I'm dealing with. You see what I'm saying?

The second point about it is I believe the same elements of consciousness are taking care of both the fight with my wife and the solution of the Diophantine equation. There's no separate places all over, except perhaps in schizophrenics, where you might have two cores, or even three in multiple personalities, et cetera. So I see no contradiction except this: that of course if you just stood there you'd say, well, that's epiphenomenalism. Consciousness doesn't matter at all. By the way, I don't know if any of you are familiar with the work of Professor Libet, who could measure by recording from the brain of a neurosurgical patient while that patient proceeded to do this by will—and guess what? There's a readiness potential that occurs absent his knowledge, 300 milliseconds before he reports that he is conscious. This is the business of time again. And so there's no contradiction. Let me put it this way, although some colleagues of mine disagree with me. It is this: that although it's the jittering of the neurons and everything, it is faithful and the fact is it is informative without being causal. It is telling what we call you, your body and all of that, that you're in touch with that whole process. All right? So it's not quite epiphenomenalism. Let's say it's alleviated epiphenomenalism. If you did anything else you're going to run up against the whole body of physics.

I'll just say two other things, because I must leave for an airplane and I don't want to be rude. The first thing is this: I think that it would be a deep mistake to hypostatize or deal in metonymy when you talk about the nervous system, and about neuroscience, because I don't think neuroscience will reduce all psychology. Certainly it will never discourage philosophers. That being the case, if you look on the brain as this incredible set of repertoires, hyperastronomical in number, and the world is presenting you always with new signals, there's a matching going on with an amplification of those particular ones in your history that match this thing. If this is true, and I think it does bear on the issue—causality is of a major point underneath all our discussions—the second one is this: that every perception is to some degree an act of creation. And every memory is to some degree an act of imagination. Memory is not a coded store. It's a dynamic state of the entire brain/body interaction as they imbed, and that's why your notion of agency is so important. And, of course, there are philosophers who believe in that and who have pushed forth—certain French phenomenologists. So I think it's terribly important to realize that we're going to get terrific insights from neuroscience, and you are going to have to realize that someday we may talk about the consequent of some minute molecular transition in your patient. But it would be absolutely foolish in those lights to say, well, what we want to do to replace you is to have a million electrodes in that guy's head while he's thinking of Vienna. And you say I see he's thinking of Vienna. No way, Jose.

Audience: My name is Scott Selbo. I'm a computer programmer, so I'm very much a lay person here. My question is primarily for Professor Harrington, but anyone can feel free to answer. Sort of as an extension of Gould's book: Darwin said there is grandeur in this view of life, and my question is if we understand all of the processes of nature that went into producing us—the biology, the physics, and even understand things about the sort of firmware modules in our brains that do things like processing morals—in what way does that disenchant us and in what way does it make it any less wonderful that our brains can still comprehend our amazing universe from the size of the plank length up to 13.7 billion light years and even down to the molecular processes in our brains?

Harrington: Well this is kind of Ranie's point, isn't it? The sciences could just as readily function as a source for thrilling kinds of encounters with experience. And there's a book that I haven't really read, but when I was thinking about the themes of this conference I came upon, and it's a book called *Darwin Loves You*. And it's subtitled *Natural Selection and the Re-Enchantment of the World*. It's actually very much a kind of version of the argument I think you were sort of opening up, which is that, on the contrary, there is a way in which engaging with the grand evolutionary story is not a disenchanting closing-in one, but an enlarging one. And from what I understand of this book, this person used Darwin himself as an exemplar of someone who experienced a sense of meaningfulness through his engagement with the natural. Who can quarrel with that? And yet people have quarreled with that. And then you need to understand how come everyone doesn't seem to feel it's enough to feel the grandeur of the world? And why was Darwin sick so much? Why was he anguished so much? If it was really so simple—

Edelman: What nerve.

Daston: His father.

Bilgrami: Well, if there's one thing: the loss of his daughter.

Harrington: Well, we can psychologize, but an argument is why did he have these private notebooks where he confessed the darker face of the vision that he didn't dare publish? Yes, there's grandeur, and there may still be something that also troubled him and perhaps troubles others about this naturalistic world view. So I think we have to sort of live with a little bit of complexity and lack of resolution for a while.

Edelman: He was complex. If you read in one notebook, it says more metaphysics in a baboon than in Lock.

Harrington: That's right. And the baboon is the devil—the source of evil, all these things, and he kept those secret.

Daston: Until his father died.

Bilgrami: There's just one thing that we've learned from this. There probably should be a moratorium on the term enchantment and disenchantment. It means too many different things,

and looked at one way—I mean unless we disambiguate, you're never going to figure out why some people are against it, why some people think it's perfectly okay.

Forrester: Well, Ranie will remind me of the exact phrase that Kant uses, but it's about the stars.

Daston: Two things never fail to fill me with awe: the starry heavens above and the moral law within.

Forrester: The moral law within, right. Now what would happen if it turned out that Kant was wrong, that the moral law within can be re-described adequately using the proper language of the description of the starry skies? Would that lose us of the grandeur of the vision? I mean Darwin is fine on the beautiful perplexity of the world because we've got the tangled bank.

Harrington: But it's when it comes back to him, the human nature, that it becomes troubling.

Forrester: If the moral law turns out not to be a moral law at all—

Daston: But before we had Kant we had Aristotle. People become brave by doing brave acts. We don't need a law.

Forrester: So we discard Kant and we go back to Aristotle. This is, again, the McIntyrian route. And we just then have the narratives of the virtues, and we can talk about the heroic and the pathetic and the touching and the sorrowful and the wonderful, but we don't need to base that in anything other than our capacity for narrating human life that way. Is that sufficient?

Daston: What a wonderful ending line.

Harrington: We don't need foundations.

Friedman: I think it's possible to be enchanted with disenchantment, and that occurred to me, I think, when I was at the planetarium and they did one of these things where they start out with the San Marco Square with the people in it and pigeons, and then they move up and then they move up and move up, and you're getting smaller and smaller and you disappear. The Milky Way disappears. There's something about that that is really incredibly enchanting if you want to—but I want to say there are points. I think you're right: these come out in local areas, general areas in philosophy, local areas in particular. And one local area where they come out is in the question of criminal responsibility. I heard a lecture by a man that I respect enormously, Jerome Bruner. It was just a wonderful lecture, and he started out by saying laws had to balance, on the one hand, responsibility, on the other hand with circumstance, extenuating circumstance or however you want to understand it. He then made a great plea in effect for understanding on the basis of, not exactly neurological, but on the basis of causal circumstances, which, if carried to their extreme, as we all know—we struggle with this all the time—nobody would be responsible for anything. This touches on the free will, but in practical terms if you used his reasoning, he had a particular segment of poor elements and discriminated elements of the population that get a raw deal. But if you use the general principle, then the question of whether this is all just a function of nature and we should look on it in an objective fashion and there's no personal

responsibility—it makes a difference whether you electrocute somebody or not. You can feel yourself vibrate—I think every jury feels this kind of insolubility. There are two visions that they have. And I don't think they're systematizable. But this is one particular consequence. If you had a complete disenchantment, so to speak, about the foundations of morality or something, you could very well then feel your human—because the other thing is, of course, that we will always react to each other in an enchanted—we are all enchanted with each other. Freud was certainly right about that. That's just the nature, there's not getting away from that. So we will always have that to struggle with. If we try to superimpose this other vision, there will be places and times where it gets very agonizing, and psychotherapy is not the only one where it does that.

Bilgrami: Raine, let me ask you a question about your paper yesterday, and your interesting diagnosis of making connections between notions of order and notions of norms. Do you think this is really our tendency and, if so, how do you diagnose that in turn it appeals to nature, an order in nature as analogies for normativity. Why isn't it mathematics? Why isn't it grammar, say, where there is also order? Why does nature seem more compelling? Is there a diagnosis there, or do you think that in fact historically it's been all of them?

Daston: Sometimes it is mathematics. I can think of *recherché* examples where the order of mathematics has been used to buttress a certain political or a moral order. But I think the reason why it's nature—and nature in a very different vein, as I emphasized from the nature of biochemistry, the nature of neuroscience, the nature even of physics—is that it's nature of the surfaces. It is the nature which is accessible to most of us most of the time. It is the nature which is constantly reinforced, the order which is accessible, and that's why I think that happens to be the orders, as I emphasized, which are most freely at hand.

Bilgrami: I'm actually with you on this, but I'm just trying to smoke you out in saying it more elaborately. Suppose somebody were to say, the thing is that we have a passion for order, and nature is just one among the places we find it. We find it in mathematics, in morals, in everything else. And really the deepest thing is just that we have it, and these are different locations for it. Is that a view that is different from yours, or is the priority being placed somewhere else?

Daston: That view is compatible. It's a more dilute version of the claim that I'm making. The stronger claim that I'm making is there is a deep reason why we have a passion for order that has to do with our having values or norms at all. And whether or not that's one part of the stronger version of the thesis, it's not just an idiosyncrasy that we happen to have, it's in some way a definitive idiosyncrasy, although still the level of philosophical anthropology rather than some Kantian fantasy about all rational needs. The second way in which the thesis is somewhat stronger is the view that indeed, we could look to other orders. But, again, because of a philosophical anthropological view of the kind of creatures we are, we display our orders to ourselves. And the most ubiquitous, dramatic and vivid displays are those that nature provides us.

Friedman: Why do you draw back from the Kantian image of the thesis and the necessity for cognition?

Daston: This could be a very long discussion. But very briefly, the reason I draw back from Kant is for two reasons. One is about his metaphysics and the other about his ethics. The metaphysics: you're absolutely right to say that we still live in the house that Kant built in terms of the realm of freedom and the role of necessity, but it seems to me—especially after listening to lectures like on Thursday evening from Professor Edelman—increasingly inadequate to actually describe the science of our world. That seems to me a metaphysics for the mid-18th century. That's a reason which is in Kant's future. The other reason is in Kant's past. I think an ethics which is based, centered, on the will is an extremely impoverished form of ethics and does not do justice to our experience of ethics, which I think is better captured by Aristotle, by an ethics of habit and of custom, rather than of will. The thing about the will, and why I think it's quite relevant to John's paper about Freud as a moralist, is that it places an enormous emphasis on autonomy and self-sufficiency. It's not an accident that for Kant what is enlightenment is coming of age, giving up our self-imposed tutelage. Aristotle takes into account that we were once children and that we had to be raised in a certain way to be good. That will be the dimension that will be recaptured by a non-Kantian ethics.

Edelman: I wanted to respond to what you said about judgment, for example on criminals. It seems to me that the arguments of the British philosopher Peter Strawson have some point here. He pointed out that if looked at from the scientific point of view determinacy was the order of the day. This causality argument which you asked about is the order of the day. But in treating each other, aside, in the interpersonal realm, we have to act as if there is free will. In fact, we are determined to have it in both meanings of the word. So I have a little anecdote for you, which is probably indecent, about what you call nature, which I find very enveloping, and what we call human nature. It's about the judge before whom this girl of the streets is pulled up. And he says, "I'm sorry, Maggie, you've been soliciting one time too often. I let you off twice, but this time you're going up the river." And she said, "Judge, I swear it was entrapment. This cop got me, and he set me up." He said, "Okay, Maggie, I have a glass eye of which I'm very proud. If you tell me which one it is, I'll let you off." She said, "The left one." He says, "You're off, how did you know?" She said, "I thought I saw a hint of compassion in it."

Bilgrami: I thought that Garret Deckel's point was that—well one way of putting your point is that you want to describe it "as if" talk, right? "As if" talk. All this talk about us making a difference—

Edelman: Right, "as if."

Bilgrami: And so it's a sort of necessary illusion.

Edelman: We have many. One of them, for example, is the illusion of time, which you brought up. The past and the future, in an Einsteinian sense, do not exist. We are in the remembered present now. But past and future are concepts which we have. A philosopher can use it forward and a historian can use it backward. But we think of it as some kind of moving line. Well that's a very useful look, even if it doesn't fit with the way you calculate the brain does it.

Bilgrami: Right.

Edelman: So, an example of the Heraclitian illusion—

Bilgrami: Right. So if I say I decided to go to San Diego tomorrow—

Edelman: I count on it.

Bilgrami: You count on it. Okay. And it's an illusion to think that the causality is at that level of description? Real causality is at some other level of description. So it's a sort of pervasive, comprehensive vocabulary that we have, and if it's such a pervasive, comprehensive illusion, why isn't it just reality?

Edelman: I can't go through this table, but, of course, if I look at that table as a physicist or physical chemist, it's mostly empty space. And I have a theory which seems to hold up very well: there's electromagnetic repulsion. Even though it's mostly empty space and I describe this in terms of how my brain gives me these, how shall I say, discriminations or distinctions. Good enough. We come finally to quantum mechanics, where what you said applies perfectly. As Fineman said, "Use it, don't think about it." If you think about it, you're going to go down the drain.

Bilgrami: That just says what you've already said. What I'm asking is if it's like fool's gold, right? Maybe value and agency of that kind is to what you're describing at the level as fool's gold is to gold.

Edelman: That doesn't demean it.

Bilgrami: Good, exactly. So the point is maybe our normative and agential notions were always fool's gold and fool's agency. That's what it's always been. That's our only interest.

Harrington: But we didn't always know it. That would be—that's about the unmasking that makes it—

Bilgrami: But I'm saying that's the real thing. The point is that's all we care about. We never cared about any other kind of gold. All along it just wasn't fool's gold. We didn't have any other interest.

Edelman: Only, wait a minute, who's the fool?

Bilgrami: We're the fools. Like in King Lear, much more profound.

Friedman: Why is it foolish? I mean what you're saying is—

Bilgrami: I'm just saying what Gerald is saying.

Friedman: I understand, but why would that entail the idea that it's foolish? This would be one of those entailments. Personhood in general would correspond, so we transact our business in life

on the basis of personhood, which has a physical basis, but this is the way we would do it as persons.

Bilgrami: I guess that's what I'm saying, but slightly differently. We should stop now.

Levy: I have one final question. Where does Professor Edelman get all his jokes?

Edelman: The reign of terror at 36,000 feet. How many people in this room have been in an airplane crash? My wife said to me, you know, we're falling. I said you don't know anything about airplanes, relax. And then she said, the wing is on fire. I said no, that's the exhaust. And then all of the sudden I said, holy jeez, we're falling. And we crash landed at Orly Field in Paris. And then I checked my pulse every time after that and it went to what's called sinus tachycardia. I was up over 125, even though I didn't feel anything. There's something interesting. And then after that I decided to relieve myself from the generalities of science. I would look at the particularities of anecdote, which I think is where it all is about anyhow. And so this compulsive need, which is almost neurotic and might require a consultation.

Friedman: That would be a delightful consultation.