The Psycho-Neurology of the Photographic Arts April 24, 2008 7:30 PM The Philoctetes Center

Francis Levy
Edward Nersessian
Christina Alberini
Bevil Conway
David Freedberg
Jeffrey Levy-Hinte
Douglas Nickel
Robert Polidori
Speaker from audience

Levy: I'm Francis Levy, co-director of the Philoctetes Center, and welcome to *The Psycho-Neurology of the Photographic Arts*. The art you see on the walls of the center is the show that is attendant upon this particular roundtable, and it's called *Photographic Visions: The Art of Seeing*. We thank Jeffrey Levy-Hinte and Howard Greenberg for helping to organize this exhibition and offering the works in their respective repertoire and collections.

I am now pleased to introduce Jeffrey Levy-Hinte. Jeffrey Levy-Hinte is President and founder of Antidote International Films. He has produced critically acclaimed and award-winning films for over a decade, including *Roman Polanski: Wanted and Desired, The Last Winter, The Hawk is Dying, Mysterious Skin, Thirteen*, and *Laurel Canyon*. Selected as one of Variety's Producers to Watch in 2003, Jeffrey edited the Academy Award-winning film *When We Were Kings* and serves on the Board of Trustees for The Nation Institute, The Independent Film Project, and the Jeht Foundation. Jeffrey Levy-Hinte will moderate this evening's panel and introduce our other distinguished guests. Thank you.

Levy-Hinte: Thank you. To slightly break with form I actually want each of the participants to introduce themselves and to say something about their interest, their work, and how that might relate to what we're doing tonight, but in a brief sense.

Conway: My name is Bevil Conway and I'm an artist and a neuroscientist. My particular area of specialty is the physiological mechanisms for color and motion perception, and I am a faculty member at Wellesley College.

Nickel: My name is Doug Nickel. I teach modern art and the history of photography at Brown University, and I have absolutely no background in science.

Freedberg: So, I'm David Freedberg. I'm going to be slightly longer than they were, if that's all right, just to get some of the discussion set up. I just want to say that I'm really happy to be back again to see Francis Levy and Ed Nersessian, because I think that the Center does a tremendous job of looking at the relations between psychoanalysis, science, and cultural endeavor, broadly

speaking. It's great to see such a big crowd, it's great to be back. As many of you know, I suppose, I'm an artist, and I wrote a book many years ago called *The Power of Images*, in which I insisted on the importance for scholars of art to consider psychological responses to art. Subsequently I became interested in what the new cognitive neurosciences could tell us about our understanding of responses to art, and so in fact the last time I was here I was with Vittorio Gallese, one of the discoverers of mirror neurons, which we'll come back to later on in the course of tonight's discussion, I'm sure.

Alberini: I'm Christina Alberini. I am an associate professor at Mt. Sinai, here in New York. I am interested in studying the molecular mechanism of memory, how memories are formed and how the brain changes during this mechanism of memory formation and how the brain changes when we retrieve or recall memories.

Polidori: I'm Robert Polidori. I'm a photographer. I started out as a filmmaker, but I went to still images because I was interested in states of being—as you mentioned, psychological states. I was interested in portraying that, and I felt that rooms were metaphors of that, and just rooms look better in photography than they do in movies. I always say you should shoot photos of what doesn't move and make movies of what moves.

Levy-Hinte: And one of his photographs is here on that wall.

So, I was introduced by Francis. The only thing I'd like to add is that I have no professional expertise whatsoever in any of the fields of my colleagues. I guess I'm a serious dilettante, if that's a sensible phrase.

To get things going I wanted to sort of go to the foundation of photography, the founding moments, and to ask Doug to talk about the birth of photography—1839 was the year, you know—and particularly to look at the characterization of photography as this objective recording of nature, something for us to respond to.

Nickel: Yeah, I suppose that's where the problems begin, with the invention of the nineteenth century. If one looks back over the historical record it's astonishing to see how quickly one discovers annunciations of various kinds that try to set photography apart from other kinds of visual representations, to characterize it as unique and essentially different. One could argue easily that there are many ways in which the photograph is like any other kind of picture, and other ways in which the photograph seems different. But these aren't inherent characteristics or characteristics that come necessarily because of the technology. These are stylistic attributes, and photography's arrival into Western culture in the nineteenth century seemed to coincide with a moment in which certain values—the value of objectivity, for instance, fact-gathering—were on the ascendant. So it appears to have fulfilled a number of cultural needs of various kinds. It's the way that the technology was shaped. To make a particular kind of picture look the way it did, to make lenses that conformed to Renaissance perspective, or normal human vision, for instance, all of these are cultural constructs. They're not innate and natural qualities of the photograph. We've all been duped for more than 160 years into a belief that the photograph has essential qualities, when in fact it has nothing but cultural qualities that have been developed for it.

Conway: Except there are some constraints. If you're going to take a picture to give an incident from a given perspective then it will be one eye perspective. I mean you can't just say there are no constraints on photography that are introduced by the technicalities of taking a photograph. There are some constraints.

Nickel: There are, but they're largely beside the point. The difficulties begin because there are two kinds of arguments being made. One is a kind of absolutist argument about what the essence of photography is, how you define what a photograph is when one has actually come into existence, and by what means, versus what we take to be a realist medium that we associate with photography. Photography isn't inherently a realist medium. As a sort of experiment, if you want to think about it this way, one could put a piece of white paper on the wall and take your camera and put it close and focus it properly and expose it properly and process the print properly and the net result will be a piece of white photographic paper. You won't see anything represented on it, but it will be an exact copy of the thing that you photographed. If you showed it to anybody and asked them, "What is this," they wouldn't say, "Well, it's a photograph of a piece of white paper." We've been enculturated to believe that a photograph is going to show us a picture. The pictorial aspects of it aren't necessarily technical aspects of it.

Polidori: I don't agree.

Nickel: Good.

Polidori: First of all, I think that the laws of Western perspective came from the camera obscura. That's how they learned it, by the pinholes. So it comes from physics, number one. You know it was a room, they'd get in it, there was a hole, they put a mirror on the ground glass and they'd trace it. That's how they got the laws of Western perspective. It's not made up by a culture. Physics showed man this.

Nickel: But then you have to ask why China didn't invent Western perspective.

Polidori: Ask them. I don't know. I don't know why the Americans were first to the moon and not the Germans, even though it was a German idea. I don't think that's relevant.

Conway: But there are certain choices-

Polidori: No, but I'm not finished. Two, as far as film is concerned, and your explanation, you take a picture of the white—that's because you're hiding the frame of reference. If you would show the external frame then you would have more indices to say this is some sort of picture of a white piece of paper. If you don't show the frame then you're actually tricking the example.

Nickel: But it is a photograph. We'd all agree that the white piece of paper is a photograph of the thing—it represents the thing from—

Polidori: But to understand the index you must see the frame of reference. It's like properly phrasing a sentence. If I leave out verbs, nouns and adjectives you're not going to get the meaning I'm trying to say.

Nickel: So you can already see the problems here. If one wants to define a photograph as something that has a certain number of indexes in it that make it represent something recognizable—

Polidori: More than represent. It's made from it. It's an indexical sign and iconic. It *looks* like the thing, but it's *made* from it.

Nickel: So your definition is that it has to look like the thing to be a photograph.

Polidori: No, it must be an imprint from it.

Nickel: Well my example is an imprint from it.

Polidori: But you're hiding the frames of reference to trick the person. I used to do this in film class where I used to take sixty seconds of a portrait in film. I would pick the one frame which is an anomaly and I would ask all the students, "What do you think of this person?" Of course they wouldn't come up with the right answer because I tricked them. I picked the anomaly. I said, "You see, you can always pick something out of context and give the wrong attribute."

Nickel: I think we're in essential agreement here. But the distinction I was trying to make is that there are absolute definitions—what constitutes a photograph and what constitutes something that we wouldn't call a photograph—and then there are cultural definitions, or definitions that fall from certain kinds of practices. Putting recognizable subject matter in a photograph is a cultural practice. It's not inherent in the technology. The technology doesn't require it. So it's complicated, I agree. But we're all enculturated the same way and our problems start when we start ascribing our cultural experiences and turning them into definitions of technology, for instance, or essences, in order to say the photograph is inherently different this way or inherently unique this way.

Levy-Hinte: My assumption is we're probably not going to solve this this evening, but I'm glad we're off to a good start. Sort of bringing it back down to let's say what's in this room, one reason why we wanted to put this exhibit together was to give a frame of reference, actually, to sort of define, certainly not the totality of possibilities, but a set of possibilities of photography. I think the closest to the white paper that we have are these photographs on the wall, which I find evocative two-fold One is they're abstract but coming towards representation, and two, they're very sexual, which I thought would be very good for this institute because they seem to be very interested in those types of things as well.

Nersessian: Not in pictures.

Levy-Hinte: Not in pictures, okay.

Conway: Moving things.

Levy-Hinte: Well, that can be arranged as well. I think it's sort of a question for Bevil. Looking at these four photographs as they play this edge between abstraction and representation—one way to characterize them is providing a study of what is minimally necessary in order to convey what this subject is. I wanted to relate that back to how come we're actually able to sort of

perceive and build upon what are very few lines and understand the object in front of us, and how does that relate to our neuro-mechanisms of perception.

Unless you who have no idea what those are.

Conway: I think I can piece some of them together. It's a bit tricky to lump an entire primer on visual processing in fifteen seconds or less, but I'll try. One of the big challenges to appreciate, I think, is that the world that we see around us appears like a photograph in many ways. There is in some sense realism that we witness, and it's so effortless that we take it for granted. But in fact, those of you that have ever seen a dissected brain, the optic nerve is a tiny little tube that squirts out the back of the eye, and everything that we see, everything that we experience visually in the world is just interpretations of the signals that come down that tiny little tube. So to put it in context: in your brain there's probably fifteen or twenty percent that's dedicated to processing those signals. And what is all that brain doing, just listening to the stuff coming down this tiny little pipe? It's inventing stuff. And so the question is what is it inventing? It's inventing things that are behaviorally relevant. It's tapping into a few key features in our environments, one of which is contours and contour boundaries, that are then useful for recognizing objects, and that's essentially what primate visual systems are very good at.

In some sense it's kind of nice to go back to line drawings. I always like to show my students this and say in the real world there are very few lines out there, and yet line drawings are an extremely effective way of communicating a lot of information about the world. You can recognize a banana, or this room, or Lascaux caves with the buffalos and so on, just with the demarcations of the lines.

From my perspective, the reason why they're effective is because they activate the visual system in a way that's very similar to the way in which the real world activates it, and we then extract from those signals something about object form. In very minimal photographs like that they're at this borderline between activating those minimal signals, those minimal cues that you might be able to reconstruct into some kind of object identity, and being left hanging, where maybe they're not. It becomes interesting because in the evidence of that photograph, you can see your own visual system at work, struggling to try and do this, or resolve this puzzle. And that, at least for me, is where the interest in that kind of photography is derived.

Levy-Hinte: Any response to that?

Nickel: And you can make mistakes.

Conway: Yes, absolutely. One of the best examples for that are line drawings of faces. If you take a portrait of a friend of yours—you can try this at home if you have Photoshop—and you put it through a thresholding algorithm so you just get the lines, that portrait becomes unrecognizable. There are things for which lines are ineffective at communicating, and one of them is faces. So you can start to unpack what is important about faces, and there are lots of people doing work on trying to extract exactly those kinds of cues. But it does underscore this problem of what is a photograph.

Levy-Hinte: Maybe it also answers it.

Conway: What is photographic representation? I like to think artists are actually doing things—when we say "realistic" work what we're really identifying is photo-recognizable, because it's got some attributes that are like photographs, but we aren't trying to make a photograph. We're just trying to make something that captures a sense of object-ness that we're familiar with, and photographs do that successfully, but you can do it successfully with icons or with any number of other things.

Levy: Didn't Oliver Sacks make a point about the mind actually seeing things as ghosts?

Conway: If he did, he's wrong.

Levy-Hinte: No, no, but that's a disorder he's referring to.

Conway: Well there are patients who suffer from strokes of one particular part of their brain area, MT, and those patients are no longer able to see motion, but they still have preserved object recognition and face recognition, and to them the world does appear as a set of static frames.

Levy: No, he was saying something else, but we can go on to it later.

Conway: Okay.

Nickel: It was one of the problems with nineteenth century neuro-physiology, actually, that they were very much enamored of the philosophical notion of this idea of your brain as a screen and your eyes as these information-gathering tools that project images into your brain. But there isn't anybody there to look at it. That's the problem. Your eyes don't work like projectors and your brain doesn't work like a screen, and there aren't any pictures in your brain. What happens is more that information, light information, falls on the retinas that are constantly moving around, two of them, and your brain is synthesizing this data, which is more digital data than it is analog data, ultimately, and makes something that we take for experience out of this information. So in most ways photography isn't like the way we see at all.

Freedberg: I wonder whether I can drag the conversation slightly towards one of the current controversies—we've had this insipient controversy here—but I want to drag it into one of the current controversies that mark the distinction, I think, between certain, shall we say scientific approaches to the study of visual representation, and the current versions in the humanities, of which Douglas is an articulate exponent. One of the things that has always interested me is the extent to which the apparent verisimilitude of photographic representation is cultural or not. This is a basic question. People in the humanities now tend to take the view, as most of you know, that vision is culturally constructed, that photographs have the kinds of cultural limitations which you have outlined and which you have resisted.

There's a remarkable example in that other wonderful book by Nelson Goodman called *Languages of Art*, and in a footnote in that *Languages of Art* Nelson Goodman gives an example which many of you will recall because it was bandied about for many years. Somebody goes to a savage society, "savage," with a photograph in the middle of the nineteenth century, and he shows them a picture of two human beings. So the conventionalist view, the relativist view, is that these "primitive peoples"—I hope you all see the quote marks that I am using just for the sake of being politically correct—don't have the same kind of visual conventions that we have Transcript prepared by

and so they can't recognize the photograph. This is the allegation. This is what Nelson Goodman cites approvingly. As proof of this, he says, they can't make head or tail of this representation of a human being because they've never seen a verisimilitudinous representation of it, so they turn it around. They turn it upside down and they turn it around, and they still can't make head or tail of it, until they are told this is a picture of a person.

My response to this is the reason that they turn the photograph around to see what it is, is they are so taken in by the verisimilitude of this thing, even though they've never seen a photograph before. It's that they want to see the other side of the person on the representation. So that, in a nutshell, sort of puts the conventionalist relativist view, that all verisimilitude is conventional, culturally bound, it sets it against the idea that we can recognize what the photograph takes if sufficient clues to the room or the person are provided.

Levy-Hinte: In a way I think what we've come down to is that we've entered into this discussion of the cultural sort of relativism of vision. All of the photography that people endeavor to do—or not all, but almost all—is very much steeped in trying to represent things out in the world. It sidesteps the argument of the photograph of the blank piece of paper, but in fact if you look at the vast history of photography, very rarely do people take photographs of blank pieces of paper. In a way it's a more interesting question what actually people find fascinating and engaging, and what do they go out to engage. I think that's where we can steer the conversation. I think we're actually getting to a somewhat deeper place to say that none of us want to be bounded by our cultural biases, but on the other hand we don't want to let go of what we are perhaps biologically or materially.

Conway: Why don't we want to be bound by our cultural—what did you say?

Levy-Hinte: I said we don't want to be severely limited by them. In other words, I think we all have come to the recognition that we have to accept that much of our knowledge is culturally bound, and that it's not legitimate to say that we can be sort of objective observers and see the world in this sort of epistemological transparent way.

Nickel: Maybe it shouldn't be framed as an either/or though.

Levy-Hinte: Okay.

Nickel: Maybe our brains aren't hardwired for image acquisition, but they are wired for image acquisition. In other words we have mental capacities to learn, to understand how images work in much the same way that we have to learn how languages work. I mean we're predisposed to learn languages.

Levy: Like Chomsky.

Nickel: But we don't know languages when we're born. So why wouldn't image acquisition work the same way? Why wouldn't we become enculturated into it?

Polidori: But isn't it like—I go to foreign countries all the time, okay? My Arabic's really bad. But to communicate—I know like maybe ten words—I draw a picture. They get it right away. To learn a language is a lot of work. To learn to interpret an image, babies get it. Nickel: We've got twenty percent of our brains dedicated to this problem.

Conway: Yeah. And there are different levels of images.

Polidori: No, but vision is natural. Human language is manmade.

A: No.

Polidori: It's manmade.

Conway: Well, it's manmade in the sense that we all have a brain that's equipped to do it.

Polidori: We're all equipped to learn it. But to learn the codes of a language—that specific language is manmade or culturally made. But the codes of perception are biological.

Levy-Hinte: But to challenge what you said, I think you're right that vision is developmental—in other words, as a baby has to experience a visual world around him or herself or vision literally would not develop, there'd be blindness. I guess looking at the study of the blindfolding of the young kitten, which just devastates me, but apparently after six weeks the cat will never see because of certain visual centers that haven't been developed.

Conway: Although-

Levy-Hinte: You better not be blindfolding kittens.

Conway: No, no, no. I'm not blindfolding kittens. Although I think that we should defend animal research, and I would be the first person to say that everybody in this room either directly or indirectly benefits from animal research and it would be good for you to know about that, because especially in this current administration you need to be aware that NIH is cutting funding and that's having massive repercussions. But that's a different topic.

Levy-Hinte: So how do you deal with this issue of-

Conway: I just wanted to bring up one point, which is that a study was just done actually looking at face recognition in neonatal monkeys, which have very good face recognition. They actually showed that monkeys who have never been exposed to a face are perfectly good at three or four months at recognizing faces. So there is a certain degree of hardwiring, which I think endorses your intuition that vision is natural and effortless and our brains are able to do that. I just would say that our brains are also able to do that in language, too.

Levy-Hinte: For me sort of the backdrop for all this actually comes down to memory in the sense that I think often times photographs are characterized as a way in which we can—well, one, memory is characterized as photographic in nature, in other words we're recording images, we keep them with us, we can call upon them over time. I think that Christina's work is so interesting because it sort of puts that on its head and in a way really upsets it, but in a fascinating way. So I just wanted you to talk about that.

Alberini: I would begin by saying there are so many dimensions that we can talk about between memory and photography. To begin with the photographic memories, those are generally very peculiar types of memories. There are very different types of memories to begin with, but the photographic memories usually are considered sort of pathological memories, or memories that are associated with a very strong emotional experience. So I think one dimension is certainly photography and emotion, which there is a lot to say about that. What does a photograph, what kind of emotion does it—

#### Levy-Hinte: Evoke.

Alberini: Evoke, right. To go back to the photographic memories, those are kind of pathological memories in the sense that they are memories that have a lot of vivid details when they are remembered. Usually memories are not like that. Memories are much more simple when they are retrieved. We remember cues or details, but not many of them. Most, in general, we forget more than remember, so memory is obviously a function that is necessary. As you can imagine, without memories we are not a person. We don't have our past. We cannot function. So it is biologically essential. It is, in a way, who we are.

But memories are not as detailed as a photograph in general. A photograph is also a fixed reproduction. Memories continuously change. So that's another dimension of it. But probably we want and we love photography because we need to keep our memories. That's one of the needs probably that is linked to the interest of photography that we have.

Levy-Hinte: We've come to rely and desire the fixedness of it.

Alberini: The fixedness, and to maintain as much of the information as we can. Because our memories are very labile, very fragile, and also they are lost very easily over time. Only the very important memories are kept. We all have those experiences. There are events in our life that even though we have experienced them only once we remember for our entire life. But those are exceptions. Most of the things we do every day, and all the experiences we encounter and all the things we learn, they are kept for a certain amount of time and then they're mostly lost. Again, not completely. Something remains, but only something. It's always an interpretation of what we have learned when we recall memories. Memories are never really the event that happened. It's pieces of the event that happened that are reinterpreted continuously and associated to something new all the time. So there is a lot of parallel with photography, and interest in photography. Personally what to me is very interesting is how photography carries the memory and the emotion.

Nickel: There's a notion that photographs can displace memory as well.

## Alberini: Right.

Nickel: That in fact sometimes people say that they remember childhood incidents when they're really remembering something that they saw in a photograph. They might have been too young to remember the scene itself, but they will swear that they were there and that's what they remember. It leads to very interesting speculation. I know you don't like these kinds of arguments for enculturation, but if we've been enculturated to think of memory as like a

photograph, how did memory work before photographs? Well, it could be more verbal, it could be more linguistic in various ways. It could be more filmic, even. It could be less static. It could be, though, that the invention of this kind of two-dimensional representational object gave us such a potent metaphor for something that we struggled to conceptualize that, even though we don't remember photographically, we believe that we do.

## Alberini: Right. Oh yes.

Nickel: In much the same way that we believe we see photographically when we don't.

Conway: Well the other nice thing about photographs is you can study them, and one thing that's been shown a lot in memory studies is that you're much more likely to remember something if you have a longer exposure to it. If you have a static photograph that isn't moving you can revisit bits of it over and over again so it becomes actually easier to encode than a real event does, which is fleeting.

# Alberini: Right.

Polidori: There's another aspect to a memory, which is temporality, which I think you touched on. When I said I started out in film, for like four years I worked in a film archive, and I would look at six hours of film a night, six nights a week, and it was the same film over twenty-two weeks. I used to try this exercise by memorizing a three or four minute film, because for a longer film it's very hard, and I'd time myself, and I'd try to play back the entire film. Your mind compresses. I'd get it down, you know, a minute, and I thought, man, I thought I really remembered it. Because we are going through time and the photograph is static.

I got into photography by reading a book called *The Art of Memory* by Francis Yeats. I went to university in the late '60s, and people that were making images were involved in process or mechanical things. Art-making was the subject of the making. At the same time, my life was more touched by Bob Dylan, people like that, where there was intrinsic meaning, and the art world was devoid—its meaning was purely mechanical. So I turned to photography as an allegiance to meaning, internal meaning, okay? I can't draw or paint that well. I always knew what I felt should be in an icon, and then—back to *The Art of Memory* book—I realized that the muses, the muse of memory, Mnenosyne, sided with Saturn, which calls it encoding. There was another muse for the law and order. I forgot her name. She sided with Saturn, too. All the others went with Goodtime Charlie Jupiter. I felt that I wanted icons to serve history. Photography doesn't replace memory, but it serves it. It's a utilitarian art.

Freedberg: I want to ask you a question. It is a very interesting remark, because of course Francis Yeats's book *The Art of Memory*, as many of you will remember, is predicated on—I mean, she said that people developed their art of memory by imagining sequences of rooms.

Polidori: Yes. And to remember one thing you must remember two things.

Freedberg: But your photographs, so many of them are of rooms, and I wonder whether your association of rooms with memory—

Polidori: Yes, I followed that system. I read this book when I was twenty years old. I never changed my idea. I use it as a constant. But I do think that rooms are both metaphors and catalysts of states of being, and if you want to get spiritual, it's an insight into the soul. But you don't even need that. You can just purely stay, like, mechanistic.

Freedberg: Let's go on with this melancholic aspect, because-

Polidori: Why is it melancholic? Saturnine.

Freedberg: Saturnine. What I wanted to raise for discussion now was—I was saying to some of you before that I just gave a talk at Yale, which I thought would be relatively uncontroversial, in which I talked about the emotional dimensions of art. Three of the leading art historians at Yale and one neuroscientist got very excited and said the emotions have nothing to do with art. You laugh, but this is a view, which—of course R. H. Collingwood wrote a book in 1937, which was enormously controversial, called *What is Art*, and the principle of this book is that whatever is emotional is not art. This to some extent of course he took off from Kant's famous critique of judgment, who said beauty and art have nothing to do with desire or with interest, the interest of the individual beholder. I think this is a long tradition in the West—the most recent manifestation of course is Arthur Danto—which is that art simply is some kind of philosophical internal discussion about what art is.

But to the rest of us this seems utterly improbable, because we become so emotionally invested in art. Jeff, you sent us some other photographs of Robert Polidori, and most of you know his photographs. You look at these things, and even though there are no bodies in these, they have either a melancholic dimension or a sad dimension to them, or they evoke a set of emotional memories. It seems hard to detach emotionality from art. But I want to ask you—I mean you may want to comment on this, but perhaps you can also comment on the way in which emotional recollection reaffirms and strengthens memory.

Alberini: Yeah, absolutely. Emotion is a big part of memory strengthening. If an event is not emotional at all, it's not going to be remembered. All the memories have some sort of emotion attached. It has to be an event that is advantageous or disadvantageous, but there has to be some sort of emotion attached in order to be remembered.

Polidori: My rule is that if it stands out of the ordinary you will remember it more. The hardest thing to remember is the banal.

Alberini: Absolutely.

Polidori: Or something which occurs over and over and over again. I happen to think, though, that photography is one of the least emotional of the visual arts. For example, you can go to a film and fall in love. You will never fall in love by looking at a photograph.

Alberini: I disagree.

Levy-Hinte: Why won't you fall in love?

Polidori: Well, it's never happened to me then.

Nersessian: Because you keep looking at rooms.

Polidori: Okay, yes, good. That's a good answer.

Levy: But this principle of what creates the aesthetic component there. How do we differentiate photography as an art from people who simply take photographs? There has to be the classic notion of art, the Grecian Urn perception of some idealized form of beauty—there has to be some distinction between the aesthetic photograph and a photograph that's taken quotidian reality. Today especially people take photographs all the time. Isn't there some distinction between what a photographer like Polidori does and what people do who simply use cameras to record reality?

Freedberg: There's no question about that, and by most reckoning, unless you don't like his art, these photographs are works of art. But I don't know whether it's possible to generalize—and here we probably agree—about what the artistic dimensions may be. All I'm trying to suggest is that you cannot separate out your emotional reactions from your aesthetic reactions. This is one photograph which is a very typical photograph of Polidori's. I mean here there are two main considerations: the first is whatever vague emotion of the element of decay there may be in this, but then at the same time what makes it an artistic photograph is also, but not exclusively, the arrangement of colors, even the way in which the ruined chairs are disposed. I think this is a really good example of how you cannot disassociate emotion from aesthetics. I mean, clearly here the whole history—.

One of the things I noticed in looking at this photograph is if you look at a Vermeer, shall we say, the thing that you notice on the walls are the crumbling walls, the crumbling plaster on the walls. And here is this crumbling stucco, and both of them have an extraordinary resonance. This is a book I'd like to see written, which investigates the emotional dimensions of these kinds of decay. What is it that makes you want to repaint these walls? What is the sense of what is lost when you see a bit of crumbling stucco? These are emotional things. It's not just the ability to show plaster peeling off a wall or paint peeling off a wall.

Nickel: There may be an even starker example to illustrate this, too. Roland Barthes writes his last book after the death of his mother, and he's really stuck philosophically on how you describe the ontology of death, how you talk about something that you can't possibly understand or say anything about. All he has is this photograph of his mother, and he's so emotionally engaged with his precious relic that he has—I mean it's pure emotion. He calls it madness, the kind of feelings this evokes. It doesn't seem to have anything at all to do with aesthetics. The important component that hasn't entered the conversation so far is the kinds of projections we make onto photographs, the kinds of expectations we bring to them, the kinds of things that we seem to think are in them but are actually in us as a kind of projection we make onto them. And the art photograph, he is against the art photograph. He agrees with you. It's cold, it's boring, it's just intellectual. He's not interested in art. But this photograph of his mother—we can all think of examples that we have in our own family albums. That actually does seem to do something that's quite different from any other kind of picture.

Polidori: Yeah, I'm surprised. I never thought my photos were that emotional. I try to shoot the end of industrialism. I just picked that as a subject because that's when I'm living. Maybe that

inherently is sad because it's about a kind of death. But when I was in those rooms I never feel anything. I just try to get it. I try to get the frame, have all the contexts right.

Nersessian: Well, it doesn't mean that because you don't feel anything you don't have a lot of feelings while you are doing it, and somewhere comes—

Polidori: Yes, I have feelings before and after, but what I'm saying—I agree with much of what you said. Yes, people, they put the emotion in it.

Levy-Hinte: But don't you give them also something to respond to? I think many people would look at these photographs and have a variety of very powerful responses. Is that something that you're seeking out, or seeking to avoid, or you're indifferent?

Polidori: Well, I think you get a more potent visual stimulus if the subject is charged. I don't want to bore people. So I try to pick something which is historically a convergence of many important forces. Or else I don't think it's worth shooting. Why make an icon out of it? I don't like the banal, so I choose not to shoot banal things. I'm not saying banal can't be good either. I just don't care for it.

Levy-Hinte: I was going to say there's another choice you're making, which is the manner in which you're shooting it, which is to say of these very high resolution, color—

Polidori: Yeah, because I think that, for me, should be photography's role: to have more detail than you even remember. Or else why even shoot? Why spend all that money? Just go look at it then. There's no reason to take the document if you can't go back to it and gain something from it, back to what I feel is the utilitarian function, the saturnine function of photography, which is to serve.

Levy: But this is loaded with emotion. It's like "Tintern Abbey." It's like Wordsworth.

Polidori: Yeah, but I didn't put the emotion there.

Nickel: They're Romantic pictures. I mean aesthetically they partake of the picturesque. That's what you're talking about in terms of the detail, the variety of detail. The Romantics were the ones who theorized this for us, the role of the observer in creating the meaning upon the template of the thing that they're looking at in front of them. In that sense the poem or a play or a picture becomes a catalyst to something. The Romantics liked ruins more than they liked modern buildings, because when you looked at a ruin mentally you conjured up an image of what the building looked like before it was a ruin. So it's this kind of emotional engagement, it partakes of memory. The object is coded to start a mental process. It's not complete in the object. It's something that we do participating with the object if we're taught to have the right expectations of it.

Levy-Hinte: I think also what's interesting, to get back to technique and this notion, which I think is implicit in what you said, is that in some ways you're saying there's more in the photograph than perhaps you would perceive in the room.

Polidori: Yes.

Levy-Hinte: Not to say that it adds something, but the way in which it fixes the finite level of detail and then allows you to come back and to examine it is something that's very unique to photography, and certainly to this type of photography. I think that there is an interesting way to look at this from a sort of biological evolutionary perspective. We didn't evolve with that capacity. We created this capacity, and now we interact with it. I guess for Bevil, because you've been quiet lately, is to somehow take up that torch and say something intelligent.

Conway: Well, listening to this discussion it seems like it's going in nine different directions and each time I think I could—oh no, I'll just listen—oh, that's very interesting. I'm sure many of you are feeling the same way.

So to pick up on the most recent point, what's interesting for me about what Robert just said is that there is this sense in which this is fulfilling documentation. And I wanted to unpack that a little bit and say, well, what is our expectation about what a photograph is doing? Why do we count that as the appropriate documentation, that beautifully crafted, framed, well-positioned one point, one eye, one moment perspective that doesn't have anything to do with, doesn't have any of the fading resolution of our peripheral system? When you look at a given object your peripheral vision has much lower acuity, and that low acuity informs you deeply, as you know, if you watch a shadow creeping on the surrounds that does something profound to the way you respond to an environment. That's absent, because the entire image is developed in a way that matches our fovea, where we're looking at—which is what we're consciously aware of in terms of information extraction. It's interesting that that is then set as the prejudice for what a document needs to encode, whereas it actually misses a lot of what you as an organism would experience were you in the room.

Levy-Hinte: Well it's one sense, to begin with.

Conway: But it's not even one sense. It's one tiny little fragment of one sense. It's an extremely well-crafted fragment that manages to carry with it potently the conviction that this is the document of what it was like to be there, standing in almost by some kind of trick, saying, "This is what it was like to be there." And it's so effective a magic trick that it almost deprives you of acknowledging all the other things that you would experience were you to be there.

Polidori: Well, then what kind of medium would you make?

Conway: I just think that we need to be aware of the kind of choice that we're making when we make a photograph or when we do any kind of art. I mean an oil painting of the scene, an abstract expressionistic visceral goo-ing around of paint done by someone standing in that room would be a kind of document of that emotional response that may actually enable capturing some of the peripheral senses that are also informing us and our emotional responses. But the high information content that's in a photograph that's got such high resolution actually becomes in some ways a potent distraction, or at least a surrogate for all of the other things. It stands in the way of us being aware of all of the other things that we're doing when we're engaged in an environment, witnessing something. Yet we're willing to actually say that this is the case.

It's interesting, because in science there's been a trend that's followed the development of photography, which is that figures in papers and scientific peer-reviewed original research are

now more and more being taken as evidence of primary data, whereas fifty and a hundred years ago they were pedagogical. I did an experiment, I convince myself of something, and here is what I consider to be the summary. The best example of that is Ramon y Cajal's drawings of neurons, where he did these beautiful India ink drawings of neurons, which were actually all memories. He stared through a microscope for days on end identifying neurons that he considered to be the ones that were the representatives of this particular species of neuron, and then late at night, absent everything else, he did a drawing that was this memory of this thing. We now take these as photographic documents, but in fact they're not. They're just reconstructions.

Levy-Hinte: I think this comes back to the initial point, which is another way to phrase it. Perhaps there is this intense need in a culture such as ours to have representations that play into the fantasy of objectivity and sort of the perfect memory.

Conway: That's beautifully put.

Nickel: Yeah, I think it might be helpful, I agree, in regard to what you're discussing, to think of photography as a kind of prosthetic. We're sort of trapped by our metaphors, but we say a photograph is like vision or it's like memory. It's an analogy. But at the same time we know that it's better than vision and it's better than memory. It does things that those physiological capacities can't do as well.

Nersessian: Such as what?

Nickel: Well, for instance, we can talk about all the differences. What we do when we look at a scene is our eyes sort of move around, and because they're hooked up to our brains we're paying attention to things. I'll look at you and I'll take in information about you and the other information around you falls off in turn. There's a hierarchy that's created every time we're using our eyes. There is no hierarchy in the photograph, not this kind of photograph at least. The focus is plain. There's detail across the fields, totally democratic. Everything's treated the same way. It becomes a kind of fantasy about another kind of vision that might be possible that isn't tied to attention, that it can't be distractive, it isn't human, at least in the ways that we might say that human vision is fallible. Likewise, as we were discussing earlier, in terms of memory, the photograph is a better memory than our memory.

Nersessian: I don't know if that's true. I'll tell you why, and I was going to ask Christina about this. If you look at those pictures you think of something, which you alluded to indirectly. Why do you think of that? It doesn't really look like it. But you have to have such richness of memory and so many layers of memory in order to be able to think of that, look at that, and think of something else.

Conway: No you don't.

Nersessian: So I think in a way the memories and the layers of memories are much richer than the photographs.

Nickel: I would agree, because they're key to emotions.

Conway: But you don't need memory in order to recognize something.

Nickel: No, and those could be drawings for the sake of this discussion. It doesn't matter that they're photographs.

Nersessian: How could you not need memory to recognize it? How would you know what it is?

Conway: Well there are non-accidental features in the world that we—I mean it then hinges on how you're defining memory. If you simply are defining memory as any visual experience, then sure, you require light information in order to wire the cortex, but—

Nersessian: No. The second time you have the visual information, the visual experience, in order to recognize it you have to have memory.

Conway: Sure.

Nersessian: Okay, so if you recognize-

Levy-Hinte: Memory or experience? Because you can see things which are novel-

Conway: And recognize them-

Nersessian: Well, only because you have the memory of something before it that allows you to recognize it.

Levy-Hinte: What if you're an amnesiac?

Nersessian: You don't recognize it. People who have severe Alzheimer's don't recognize their family. They don't recognize themselves.

Levy-Hinte: But do they recognize faces?

Conway: Christina, what were you going to say?

Alberini: In terms of layers you're absolutely right because memory goes by associations, so we recall something and that is associated to something, and that something is associated to something else.

Nersessian: All of those memories.

Alberini: In here we've got all of those memories, and here we go, we construct a story or a history, if you wish. A photograph contains much more information in one shot. Our memory is not able to do that in so many details, but all that information can evoke memories. So I think it's different.

Nersessian: Absolutely.

Conway: Or create them.

Alberini: Or create them.

Nersessian: I also have one comment. I don't believe what you say. I don't believe you go into that room and you have emotion before and you have emotion after, and during the time you're taking the picture you have no emotion. To begin with, I don't think it's possible for a human being to at any point be devoid of emotion. You may be having more intense emotions or less intense emotions, but you have emotion when you take those pictures.

Polidori: Maybe I'm not conscious of it.

Nersessian: That's right.

Polidori: I just do it.

Nersessian: I don't think you are, and I think, in fact, in a certain way that less conscious emotion of yours is what makes somebody look at this picture and admire it and react to it. It's your less conscious emotion.

Polidori: Right. Okay. Can I tell you about this picture?

Nersessian: And if I walked into that room I would see something else.

Polidori: When I took that picture, I was supposed to cut that thing apart because—well, for other reasons, but I said, it'll work for this talk. I took this in 1983. Just by chance I knew a guy who was a real estate agent who lived in this building on the Lower East Side, and within a matter of months three people died. And in this time, young kids, especially young boys, would go in there and break stuff. Because for some reason young boys love to break stuff. And this is what's left of a person's life that no one would take.

This real estate guy brought me, he says, "You should see what these rooms are like." I said, "Okay, let's check them out," and I saw it and I said, "This is incredible." When I walked in there I had emotion. Then I went home and I think how am I going to shoot that, and then when I came back I just had to do it. I feel no emotion when I take the picture.

Nersessian: I think your assumption is that the emotions that you had before, when you went back, they were just gone.

Polidori: No, no, no-

Nersessian: But they couldn't be gone. They were just not-

Polidori: No, I use them and I judge from them and I codify from them, but then when I take the picture I merely execute. I'm not saying this is the way it should be done. I'm just saying this is how I do it. Sometimes things are things. I spent time after the war in Beirut. You better not be having emotions. You don't have time to do that. You've got to get in and out.

Nickel: But it's a two-part process, as you know.

Polidori: Right.

Nickel: You're going to go back and look at your contact sheet or whatever people use now, and you're going to be looking at your photograph as a viewer, not as the maker. You're in a different subject position.

Polidori: Yes, and when I pre-visualize it I look at it that way. I've heard people say, "I do my stuff for me." I don't do that. I make my stuff for other people.

Nickel: In some ways you're actually handicapped being the maker of the picture, because you have that memory and the experience of being there, and it makes it that much harder to be the viewer of it. But once you're in the role of the editor deciding whether to print this or to do something with it—

Polidori: No, no, I know why.

Nickel: You're having emotions the same way that a viewer would have emotions about the picture.

Polidori: When I look at it, yes, I do, even though it's once removed.

Levy-Hinte: But also you have a task to complete. It's very technically demanding and very engaging, so perhaps in a way what's consciously in your mind is the act.

Polidori: But, like you were saying, the way that our real vision is sort of an oval, foggy thing, and that's not how cameras are, and when I frame it's very important to me what's in and out of frame, because I know that these are—it's like grammar. It's like a language grammar. I'm just conscious of that. But the act of making is not like the act of viewing it, though I'm looking forward in the future to what the viewer would see.

Conway: Do you consider where the picture will be viewed when you choose or take the picture?

Polidori: No. Maybe scale of it's the only thing I—you mean like if it's in a gallery or in a book? No. Not really. Maybe now a little bit because a lot of the pictures deal with scale, and there's no book that could be that big. So perhaps recently, but for like thirty years no.

Levy-Hinte: I did want to direct David's attention to this particular photograph on the wall. It's this one by Peter Keetman, entitled *The Hand*, which is fascinating. I don't know if everybody can see it, but—not to give it away—there's three hands in the photograph.

Freedberg: Don't give it away.

Levy-Hinte: Yes. That's your job.

Freedberg: No, no. In fact, this is not that relevant to our discussion, because I said if we're going to talk about things that are around the wall we could talk about that. I'll just tell you why I said it. I'm not altogether sure that it relates to the discussion of Robert Polidori's photographs, but it does relate to something interesting in the cognitive neurosciences now, which we talked a

bit about last time, or the last time we had a discussion about such matters, and that relates to the discussion on mirror neurons.

In the second wave of publications about mirror neurons—in other words, the neural substrate of the sense that one has when one sees another person engaged in an action if you're engaged in the same action yourself. The basic article was with monkeys, then it was transferred to human beings, and then there was a third wave relating to the experience of touch. What happened was that the mirror neuron people took as an example the famous scene in James Bond—so this is a movie—in *Dr. No*, in which a tarantula goes across somebody's chest and you have the sort of feeling of an insect crawling across your own chest. Then they pointed out what happens when you see further insults to the body, do you have a sense, and I walked in there and I looked. Oh my God, there's a pain. See the oar going in the hand? So we have a sense, through sight, of imitative tactile sensation. This is one of the dimensions in the new theories of empathy, empathetic involvement with pictures, which we could talk about also with regard to yours, but we won't.

So how do we become empathetically engaged with objects? Now the interesting thing here for our discussion, which I'll curtail, is that I looked at it and thought, oh my God. I feel an oar through my hand, or I feel a sensation in my body. Then you look closer at the photograph and you see it's actually not a real hand, but just a wooden dummy's hand. So how lifelike does the image need to be to activate that kind of sensation? How many cues of lifelikeness are sufficient to engage us in an image which is supposed to be that of a hand? So this is the other extreme of those photographs.

Levy-Hinte: Exactly. And in my reading of the photograph it's in a way the question that the photograph poses. I certainly had precisely the same reaction: taken aback. Then you realize there's a contrivance there. But, again, there's something about the way in which our perception works that it essentially carries or evokes the same emotion as if it was a real hand.

Conway: And we didn't even need mirror neurons or a knowledge of them to get that, which is what's great about the photograph.

Levy-Hinte: Well, but in a way it sort of reflects that discussion.

Nickel: Yeah, exactly.

Levy-Hinte: Are there any questions, or should we continue babbling on?

Freedberg: Well, there is one further interesting question about that photograph. Do you have the feeling of pain in your hand specifically, or is it a kind of general affective feeling? There's a huge discussion now about the empathetic, the meaning of empathy. Is it sort of affective or is it sensory? This is completely unresolved. Do we feel it there in the hand, or is it just some kind of generalized feeling, empathetic pain?

A: Isn't that what poetry is all about and art's all about? It's sensory initially, and then suddenly it's—I won't say an idea, but suddenly it's moved to another realm.

Freedberg: I don't know. I can't answer that.

Levy-Hinte: Do you have a question?

A: This is the first time I've been in this venue and I appreciate the opportunity to have such a distinguished panel to put a question to. I've collected photography for twenty years, so I've talked with a number of photographers, and this question is about black and white and color. When I talk to working photographers, those who work in black and white, those who work in color, I usually don't see that they work in both mediums, especially at the same time. They might over years. When I try to find out why they're using black and white, or why they're using color and not both, or the other medium, they simply say, "I'd have to learn how to see differently." So I'm wondering if we can have some thoughts on black and white versus color.

Levy-Hinte: That's an excellent question.

Polidori: For me?

Levy-Hinte: For you first. Why do you work in color?

Polidori: My answer's really dumb. It's culturally based. Because I'm half French Canadian, and I remember when my mother used to buy black and white film. I said the English people get color film. So I saw black and white film as being synonymous with being a second-class citizen. This is a dumb answer, because it's not true. But to this day to me black and white looks ugly. I see in color, and to me black and white is less information than color. And, by the way, I know very little about the physiology of eyes. I read those Hermann von Helmholtz books, On the Sensations of Tone, and that's as far as I ever got.

Nersessian: That's pretty good.

Polidori: Yeah, you like that one? Color is a human sensation. It's like color programs is a sensation assigned to wavelengths, where we hear the actual cycles. So I guess hearing is more true, or whatever you want to call it, than where color is an interpretive program assigned to wavelengths out there.

Conway: Not compared to bats, we're not. Or dogs. I mean we just have different capacities.

Levy-Hinte: I think one interesting thing with that question is just the color/black and white divide. There's obviously a large aesthetic discussion to have, but bringing that back to the neuro-physiology of it, there's two primary divisions within the visual brain: the where system and the what system, or the dorsals and the ventrals, however you want to phrase it. At least the way I look at it, Bevil can enlighten us further, is that the system which allows us to place objects in space and to understand dimensionality is a system that does not incorporate color. In a way black and white photography tends towards images that are about form and structure and all these things that aren't the most specific aspects of the object. But one thing it does point out is why black and white photography can be so effective, even though it's missing an enormous amount of information that we generally take for granted.

Conway: So there are two things I guess that fall out of that. To unpack your first point about the physiological uses—artists refer to black and white as a value, and every color has a value that you can assign to it. Crudely you can imagine taking a black and white photograph, or a black

and white photocopy of a colored photograph, and every color in the photograph would then be assigned some gray value. What's being referred to here is the fact that the ancient part of your visual system that's common to all mammals is essentially colorblind in so far as it requires luminance differences in order to discriminate object motion. So if you make images that are equivalue or equiluminant, if you close your eyes you could imagine having red and green images where they would be the exactly the same gray value on a black and white reproduction. Those images are very difficult to see to that part of your brain, and actually they're unstable in many ways. There's a famous painting by Monet called *Impression Sunrise* in which he actually depicts the sun as an equiluminant, equivalued but bright red spot—equivalued with the gray surrounding clouds, which is a paradox, because the sun is always brighter than the background. But the effect that it creates is this sort of unsettling anxiety, because you can't actually pin down where the sun is.

So there is some truth to that. Whether or not that translates directly into black and white photography I think is less clear because it's certainly the case that artists, most famously Matisse, used or advocated the use of achromatic colors, black and white as colors. Indeed, in your color centers of your brain there are pronounced responses to black and white. So whether or not a black and white photographer is trying selectively to make something that is colorless or whether they're trying to do a translation of grays into colors I think is something that a given artist may have opinions about and we could unpack.

In my own work it's interesting—I went to Puerto Rico for a couple of weeks to go and do some paintings and when I came back I showed them to a friend of mine who's a neuroscientist. She got all excited and she said, "Oh, you went to turquoise seas," and I came back and I'd done just plain gray washes. And she was like, "But you went to go paint all of that color. Why did you come back and—." It was interesting, it was the first time I'd ever thought about it in those terms, because I was actually trying to capture the color in the black and white. That was the mechanism by which I was trying to do it. I think it requires a certain amount of practice, which speaks to your point, which is that artists get practiced at what they're doing and you develop a way of looking at the world that requires making mistakes and trying to solve those mistakes, and it's not so easy to just switch back and forth in doing so.

Nickel: Just a historical footnote: when photography was first invented there was a kind of platonic idea of what it would be. It was supposed to be color, but technologically it wasn't possible to make direct color photographs at that time, and it wasn't really until the turn of the century that any viable commercial means were developed. That was a good hundred years of enculturation, of understanding these objective documents being monochromatic, black and white. The world came to associate black and white as the colors of information. Remember *The Wizard of Oz*? It starts off in black and white, Dorothy gets conked on the head, there's a long dream that's in Technicolor, she wakes up and it's black and white again. Black and white were the colors of reality. *The New York Times* until the 1980s printed all their illustrations in black and white. Then *USA Today* went over to color first, and *The Wall Street Journal*—

Conway: But there are very good reasons why that's the case, why we have this prejudice that color is sensuous. It is sensuous. We all buy color TVs because we like them. It's not because we can't tell what's going on in a black and white TV. But the bigger point—and I think this is the point you're alluding to—is that color is very difficult to pin down. If you go and buy a TV and

they've got a wall full of TVs, all of them look different colors, but you take one home, any random one, and the color looks just fine. It becomes very difficult to pin down exactly what color is, and in color reproduction, which is what all photography is—

Polidori: Color photography.

Conway: I mean reproduction is all you get if you're doing color photography. You don't get real color. All you get is the machine's interpretation of how your visual system would respond to that. AThat's completely culturally informed. Just go and look at those early Technicolor films. They look weird. We look at them and go, "That's wrong color."

Polidori: They've faded though. Be fair, they've faded.

Conway: I think that is a very good point, but there is actually a cultural norm about what good color is today, and this is reflected in room lighting and museum lighting. There used to be this notion that we should have daylight inside museums, that it should be color-corrected to be daylight. In fact now they've done cultural studies over the last fifty or sixty years and it shifts over time what way people prefer, what they feel is natural when they go into museums. So it is actually a completely fuzzy thing that's difficult to pin down.

Levy-Hinte: When you do your color work do you make a conscious attempt to go back to the color that you remember, or do you treat the image?

Polidori: Well, yes, I try to make it look like what it looked like. However, I spend a lot of time on color. It's a very complex thing. I never made a good color photograph until the Apple computer came out. Or Photoshop. Let's be fair. It's a great tool. I printed fifteen years prior to that the old type analog color, which I never liked, because it was not precise enough for me. I think, coming from nowhere, that people that are good at color are good at music and vice versa. It's a Neptunian skill. And there are relative values. Your eye will adjust the 3200 k, like if you come out from 5000 k and take, I don't know, three, four minutes. Different people are different to a point. I mean you have an 800 k candle flame you're not going to really see good blues, because they're just not in that flame to begin with. I deal with relations and ratios, and try to put it out in these dyes, which are limited.

Conway: What's interesting about actually all of the photographs of yours that I've seen is that you push color saturation quite a bit further than we experience it. I would argue that's an attempt to capture the salience of remembered color. There are lovely psychological studies that are done—if you take, for example, an achromatic photograph, digital, on a computer, of a banana and you ask people to subtract the yellowness of the banana they will actually generate a purple or a bluish banana, claiming that it's achromatic. But they do so in order to counteract their memory that's attached to this object that's much more saturated than their experience of the object itself.

Polidori: I've been accused of this a lot, of like over-saturating.

Conway: Oh, really?

Polidori: I'm trying now to sort of calm it down more. I'm going to get really canned for this, but to be honest, part of it goes back to my early LSD experiences, where I got quite a lot out of them. It fixes something in my memory.

Alberini: These are photographic memories.

Polidori: Yes. And it deals with hypernesia, the opposite of amnesia, which is like my favorite state.

A: One thing struck me—as a person who said that you don't have emotion at the time of making the picture, of all the people speaking here you seem to be the most emotional.

Polidori: All right. I said I have emotions before and after. When I do it I just try to make it right. I'm executing. I'm in a verve mode. Somehow for me emotion is more contemplative. Maybe I'm wrong about that; that's my illusion of it.

Conway: I think it's technical. It's really hard to take a picture, and you've got to have everything in control.

Polidori: Yeah.

A: Actually, what I wanted to get to was the notion of when we see a piece of art what it evokes in us. When we see black and white, the evocation may have more to do with nostalgia in some way than the actual, that there's an absence of color when I think of what it might have been like had we started out in all color and there was no technical problem with creating black and white. My question would actually be to what extent is the involvement with looking at a piece of art, if it's a photograph—what it evokes in us, and to the extent that, for instance, now you have televisions that have even greater number of pixels per unit of color, to what extent does that provide a more vivid base from which to then recruit memory, that it helps in some way to make it more facile to evoke memory, and thereby evoke what we perhaps are looking for in the interaction, some sort of emotional response or emotional associations?

Polidori: I'm not sure I get the question, but for me color is a sensual thing. I'm not sure that it's just emotion. You know, what I'm up against—I take a lot of photographs of really tragic things. Like I really got in a lot of trouble with the Katrina work because I'm ripping off a lot of misery of a lot of people and making it look sort of beautiful. I always say, if I made it ugly would you look at it more? I bet you no. You wouldn't even look at it at all. So I use color as sort of the seductive thing, but I try to have another message, because I get back to message. For me color is sensuality. It's the objects in the picture, or the people in the picture, the subject of the picture is where the deeper emotion really lies. I think color is just skin. It's a seductive skin.

Levy: And it's fictitious too. It's not real.

Polidori: Well you can't make a photograph, or the TV, or a film, to be exactly like real color. You have to deal with the tools they give us, you know?

Levy-Hinte: In a way, coming back to this question as well, it's like is there something about the hyper-real nature of your photographs which perhaps make them more evocative towards

memory? I think perhaps that's part of where the question was going, and that isn't just for you to answer but for anybody to answer. Is that an observation that people feel is relevant, correct, or is it not relevant?

Nickel: I'm not sure this is going to answer the question, but it seems to me there's always two components. There's the technology of high def television or digital photography or whatever it might be, which is a moving target over time. It seems to improve. That's what we say about it. But at the same time it teaches us how to look at it as we do so, so we change with it. It's fascinating—maybe I can turn this back on you—if you think about special effects in movies the things that look so amazingly realistic when we first saw them. *Star Wars*, when it first came out. You look at it now, and you say, how was I ever taken in by this? That was state of the art technology at the time. But we've changed and the technology's changed at the same time. And it makes me wonder, now that analog photography is over [he gasps.]

Levy-Hinte: Oh, come on.

Nickel: It's true.

Levy-Hinte: No it's not.

Nickel: But it's directly related to that. If you plot out the use of color in art throughout the ages, people at every stage of the game used the pigments in the most saturated ways they can. Right now we're really lucky because we've got really saturated colors, and we're just going to keep pushing up against that boundary. You look at the kinds of video productions people are making now and the colors really are psychedelic. I would argue that it's actually not because it's better at capturing memory. I would argue it's because memory is uncapturable.

Levy-Hinte: Evoking, I said-

Nickel: No, I think it's not because it's evoking memory. I think it's because the memory is un-evokable. It's un-capturable.

Polidori: I said that it serves memory.

Nickel: It's so difficult to touch that we try and do the most obvious extreme thing we can, which is use really saturated color, and it still doesn't get us there.

Levy-Hinte: You keep intensifying the effect-

Nickel: I think that's why black and white photography is so powerful, because actually what it does is it just removes that veil entirely and says just remember the color as you want to, like the book that you read and you don't go and see the movie. It's much better that way.

Levy: Do we have another question?

A: My mother had Alzheimer's disease and at a certain point in her illness she was unable to recognize her own reflection in a mirror. Yet at the same time that that occurred she was able to identify herself in a photograph. Now a photograph is a rotated image, and a reflection. Looking

in your mirror is a reflected image. In order to recognize yourself in a photograph you first have to have some idea of your reflection. But if you lose one and you're still able to do the other, I was wondering how does that occur? Do different parts of the brain recognize different images, or how can you lose the ability to recognize one image of yourself but retain the ability to see it in another form?

Alberini: Maybe I can try, but before going into the one answer, was the photograph the same age of where she was looking at herself in the mirror?

A: It didn't matter.

Conway: So it could be a contemporary photograph?

A: A contemporary photograph or older photograph. It didn't matter.

Alberini: In that case—and this is not absolute explanation, it's a possible explanation—the amount of degeneration in the brain was more affecting the part of the brain that was used to recognize herself in the mirror rather than used to recognize a photograph, for some reason.

Levy-Hinte: Was she able to recognize herself in the mirror?

A: The mirror image was—she considered that a friend. She told me it was a friend and they went way back.

Conway: That's so charming.

A: But had she seen the photographs before?

A: Yes, of course.

Alberini: Was it that the photograph was not contemporary-

A: But they may have been similar to the other photographs. There was some bridge.

Alberini: Right, which means the process of recognizing yourself in the mirror—the part of the brain doing that was more damaged than the part of the brain that could process a photograph through a memory.

A: Maybe the difference is that the image in the mirror is affecting working memory, whereas the other image is a recollection. That's already rehearsed—

Alberini: Yeah, it's possible that that's the difference. But I don't think we can-

A: One is a rotated image. One is a reflection.

Freedberg: I just have one hypothesis, which I want to try on Bevil here. Bevil is the only person who can really do this. Isn't this because your vision is contra-lateral, like so much else in the brain—so that if you see yourself in a mirror it is actually somebody else, because you should be

seeing the directions reversed. So it's quite natural that you wouldn't recognize something in a mirror, whereas you would more naturally recognize something that was according to—

Conway: Yeah, I think I would actually endorse the claims that were made earlier. I think there are two issues about remembering a photograph. I would like to have done the experiment where you took a photograph of her at that moment, and then, using that photograph, had her look at herself in the mirror. If she still can do that then it would argue that it's either something to do with the fact that most of her memories are of herself in photographs, and in a photograph, where it is image reversed, there are similarities that are conserved throughout the ages, and the photograph you have in front of you in that inversion is actually invoking a memory of all those other photographs, which I think is the point that you were making.

#### Alberini: Right.

Conway: But the added thing, which someone just shouted over there, and I thought, oh yes, of course, that's static, is that it's very difficult to discriminate things that are moving, and if you're looking at yourself in the mirror inquisitively you're a moving target, and that becomes quite a challenge to trigger something.

Levy-Hinte: The last point on this, and then-

A: Another experience which I think took place long after she was dead, but if you take two mirrors and you put them together and you look into them at a 90-degree angle—

Conway: You could get the inversion.

A: You will get the photographic image of yourself rather than a reflected image.

Conway: That would be a nice experiment to get. Yes, very good.

Levy: We had a True Mirror here.

Nersessian: But do you think emotion has some to do with it, that the draining of emotions and the flattening of all the affects had something to do with not recognizing herself, whereas the photograph never has it anyhow?

Alberini: That's possible too. The part of the brain that is really affected is the limbic system, which is memory and emotion. I think it's very difficult to really have the answer to this question. It's unfortunate.

Nersessian: Well there's a lady there who has a question.

A: It wasn't exactly a question. I was going to make the point that you already established, that the mirror image is not only this bilateral opposite of a photograph, but it's also moving. Like a friend.

Conway: That goes way back.

A: And we go way back.

Nickel: Is that a learned skill, though? Do we have to learn to make the mental transposition?

A: Do you know the *le stade du miroir* by Lacan?

Nickel: Yes. That was one of my questions. I'm glad somebody knows this. Do children in cultures where there aren't mirrors go through the mirror stage?

A: That's what I would like to know. I would also like to know if Lacan is a papa, or even observed a two, three-year-old child in person, in the real world. Because this is a purely theoretical thing. Chomsky's is a purely theoretical theory which he then recanted, I believe.

Levy-Hinte: He's modified it a little bit. He still collects royalties.

A: That's the moment where the child sees itself in the mirror and for the first moment recognizes itself as—

Nickel: As an object.

Alberini: But there is a learning process in that. The children learn to recognize—there are experiments done in dolphins where they show that they can learn to recognize themselves in the mirror.

A: Right. I'm sorry, I have another comment I wanted to make, but I don't know if it's relevant. Somebody mentioned von Helmholtz, his pal Goethe. All of you who are artists, and I would think color photographers know about the physics of color, from Newton on up, and there is a physics of color that happens in the brain, right? That turquoise has a complementary contrast, some sort of magenta probably, right? Just as red and green are complements. Yellow bananas turn purple because that's what the eye does. It's not just acculturation, it's not just playing with opposites. It's something that the eye itself does.

Levy-Hinte: One could say the brain, perhaps. Or the visual system.

A: Yeah, the whole thing. But as Goethe pointed out when he came into an inn—in *Zur Farbenlehre* he talks about this. He came out of the sunlight into the darkened inn. He sees a beautiful girl with white skin and black hair and I think a red bodice. And then he looks away, blinks, and against the black wall he sees a beautiful girl with black skin and white hair and a green bodice, because that's the eye making that shift. It's something that happens in us.

Levy-Hinte: Does that invalidate everything that Douglas said?

A: Yeah.

Nickel: No, Helmholtz wrote about this. It's the nerves in the retina get fatigued by the bright light.

A: That's right, and it flips over to its complementary color.

Nickel: Right.

A: Newton himself said, "Where does color exist? It doesn't exist at the objects around us. It's a phantasm in the mind."

A: There's a corridor at MOMA right now, in a show that just opened, demonstrating this. I was at the press preview of it, and it actually hurt me optically, and I resented this position. You go through a long corridor of yellow light and then you see the next room is purple, speaking of rooms, so it will interest you to see it. That's Olafur Eliasson.

Conway: Oh, it's Olafur? Because Bruce Nauman has a yellow corridor that's very effective and almost—

Levy: We have another question here.

A: I was just thinking in relation to that photograph—I don't know if you all know, but Jeffrey Levy-Hinte curated this display of photographs. Hallie Cohen and I were putting together an announcement, a kind of brochure, and we were deciding which images to use. It was interesting, because we really liked that image, but then we thought it's so violent, it's so aggressive. So we didn't use it, and we actually felt the same way about those, which are obviously kind of beautiful images, but they're so aggressive, especially the one where the gun is being pointed at you. They both are kind of menacing in a way. I just thought it was interesting that I thought that was an aggressive photo because I thought that the hand was real, but once I recognized that it was a wooden hand it didn't change. It didn't become benign because it was a trick.

Levy-Hinte: Also, these are toy guns, and so is the name. So sort of another level of that.

A: Right. It's interesting because the photo, even if it doesn't represent reality and we know intellectually that it's not aggressive—we can't divorce ourselves from the impact of the image.

I also wanted to point out one other thing that I thought about earlier in the discussion, which is when I was a kid I have this very strong memory of, on the news, when there's a trial and the photographers aren't allowed in, and they get a court artist. I would always have this feeling of profound disappointment or sadness that it was drawings and that it wasn't real pictures, because it wasn't real, and I knew that the people—somehow it was less than the news, in a way. I just wondered if you had some comments about that.

Conway: We have this notion, I mean it's not invented that we think photographs are documents. They are. They do contain a lot of information in them. There's nothing fake about that. As the recent deal with Hilary Clinton and Obama—a scandal gets much more scandalized if you've got an image of it, because then everybody can see it and it gets—

Levy-Hinte: You know what's fascinating, when you go to court it's very similar. You don't have recordings. You have transcripts that are done with steno, which is the sense that because it was interpreted it is more accurate, more real, more dependable, which is sort of the other side of that. I mean that's the presupposition in that realm of recording the transcript.

Conway: I thought it was that they just didn't want people going back later with a photograph saying, no, you actually were doing this.

Levy-Hinte: It's much easier to manipulate the transcript, but a culture is developed around it, which in some ways reinforces what you're saying, that these are these practices which people have come to define, and in fact they fall apart under scrutiny.

Nickel: Right, and this is what we tend to forget about photography in our investment and faith in the technology and what it can do is that it's actually in most cases an investment and faith in the disseminator of the picture. We believe that the news organization is going to show a truthful picture. They've been able to manipulate photographs for more than a hundred years, but we don't believe that they're going to do it, anymore than we believe they're going to put a fictional story in the paper either. They're documentary artifacts, in part because of the institutions in which they function, not because of the technologies that produce them.

Levy-Hinte: Well, thank you everybody.