

Center for Genetics and Society
Talking Biopolitics with Ben Hurlbut and Patricia Williams
Wednesday, August 23, 2017
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This transcript was provided by Communication Access Realtime Translation (CART) Captioning, and has been edited by the Center for Genetics and Society for clarity.

Marcy Darnovsky

Welcome and thanks for joining us today. Talking Biopolitics is the Center for Genetics and Society's conversation series with cutting-edge speakers and writers and filmmakers about the social means and implications of biotechnology. And the right there's a -- it is being recorded and will be available.

Right below the slides, you'll see the closed-captioning location. And our captioner is here and let me take this opportunity to thank her. Thank you, Nicole. You also will see on the screen displayed the video that you see my image in at the upper right of the slide. Below that the Q & A box, and below that the chat box with the welcome message from Kayla. You can use either the Q & A box to [the chat box]. The difference is whatever you type into the Q & A box will be seen just by Ben and the CGS staff, and anything you type into the chat box is displayed for everybody online. We can also participate with questions and comments at #TalkingBiopolitics on Twitter.

This conversation is part of a series that has been going on for seven years now. Our two most recent events are displayed on the screen. The cover of the book *GMO Sapiens* and the cover is a baby floating in a flask. We have the author Paul Knoepfler on Talking Biopolitics. The other photo shows a hospital and a woman looking out a window, and next to her are the words "They came to have their babies, they went home sterilized." It's the LA county medical center. This film tells the story of the Mexican women who are pushed into sterilizations while giving birth at that hospital during the 1960s and '70s, and their lawsuit against the county doctors, the state of California and the U.S. government. As part of Talking Biopolitics, we interviewed the filmmakers and that interview is conducted by historian Alex Stern. You can view these two conversations, and well over a dozen more, on the CGS website on our YouTube channel. They're great resources for classes, for groups. And they're great ways to hear directly from one of the key people thinking about biopolitics. We'll be sending you those links in a follow-up e-mail.

I wanted you to know our next Talking Biopolitics on November 9th will focus on Shobita Parthasarathy's new book, *Patent Politics: Life Forms, Markets and the Public Interest in the United States and Europe*. The book cover shown here is a picture of a close-up of a cow in a field and the cow has in its ear a patent-identification tag. We'll let you know about this, we'll remind you about this date by e-mail, and also about other upcoming future conversations.

Just a few words about the Center for Genetics and Society. Basic information: just what the screen says about us. It reads the Center for Genetics and Society (CGS) is a nonprofit social justice organization that works to ensure an equitable future where human genetic and

reproductive technologies benefit the common good. And we also show the values in which CGS's work is grounded: social justice, human rights, ecological integrity, the common good, and democratic governance. Just a few words about what we're doing now at CGS. Our focus right now is on human gene editing. What is shown on the slide are two images about webinars that we have about gene editing. The first one is titled "Disability Justice & Gene Editing: Exploring Multiple Perspectives." Our partner organizations for that webinar are the Disability Rights Education and Defense Fund, The Disability Visibility Project. And on the right is an image where the title of the webinar is "Gene Editing and the Future of Reproductive Justice and the speakers for that one. We co-organized that webinar with In Our Own Voice: National Black Women's Reproductive Justice Agenda, and Black Women for Wellness. We are planning additional webinars on human gene editing and we'll let you know about those and like the Talking Biopolitics webinars, we'll be making those available online.

This slide also shows two other buttons. A donate button and a subscribe to our newsletter button and we invite you to do both of those things.

Now it is time to formally introduce our presenters. I'll tell you about them and then we'll ask them to come on with us.

Ben Hurlbut is Associate Professor at the School of Life Sciences at Arizona State University. He specializes in bioethics, the history of science, biomedicine and science policy. His work on bioethics and genetic engineering has been featured in *Nature*, *The Scientist*, and *The Guardian*. In addition to *Experiments in Democracy*, Ben co-edited the anthology *Perfecting Human Futures: Transhuman Visions and Technological imaginations*, detailing how the promises attached to emerging technologies are posing new questions for the human future as we know it.

Patricia Williams is the James L. Dohr Professor of Law at Columbia Law School. Throughout her career, both practicing and teaching law, she gained widespread recognition for the innovative ways she ties together feminist and critical racial theory. In 2000, she was awarded a coveted MacArthur Fellowship. Her books include *The alchemy of Race and Rights*; *The Rooster's Egg* and *Seeing a Color-Blind Future: The Paradox of Race*. She is also a columnist for *The Nation*.

Let me ask you to unmute your mics so you can share your web cam and join us and that will take just a minute. Here we go. Welcome, Ben.

Ben Hurlbut

Can you hear me?

Marcy Darnovsky

And here comes Pat. Let me just remind everyone who's with us today. We'll have Pat and Ben talk for about 30 minutes; and, after that, there will be a short pause to bring in your questions and comments. Remember you can submit your questions and comments at any time, either in that Q&A box that you see below the videos right now, below that in the chat box, or the Twitter feed at #TalkingBiopolitics. Thank you for being with us today and I'm looking forward to this conversation. Now, over to you.

Patricia Williams

Thank you, Marcy. Thank you so much. It's such a wonderful book. I so enjoyed reading this. I loved your title, *Experiments in Democracy*. It sort of fuses the question of experiments, which one automatically associates the lab and science, and not to mention the degree in which science is constructed as sort of apolitical, and you've put it right up against the notion of democracy, of politics.

I wonder if you can say a little bit about what I find most intriguing in this book, which is the sense that the embryo is being invisible to the naked eye, is the fields of a kind of political imagination that it is something upon which we project a whole range of civic political, legal categories that invite, but also disinvite, democratic participation.

Ben Hurlbut

First, let me say thanks to Marcy and the CGS team for pulling this together. And enormous thanks to you, Pat, for taking the time to have this conversation. Also thanks to all the people who are joining in. I see many friends on the list of names, so it's good to be with you all in a somewhat unconventional modality.

Thanks, Pat, for that question. The project of the book is to explore the ways in which, in American democracy, we have developed sorts of modes, institutions and discourses for contending with morally and technically complex problems in the biosciences, focusing on the embryo. And as you point out, one of the reasons, or one of the ways that I approached this conversation, or I approached this history, is to explore the ways in which an entity, which is on the one hand, you know, sort of an essential part of human existence and human biology, once it lands in the laboratory, is both accessible in new ways as an object of technological intervention and use, but also inaccessible in the sense that what it is and how it is, and how it's used and to what end and what rationales and justifications are mediated by all sorts of different factors.

One of the things I was interested in with this project was tracing how American democracy developed modes for contending with this sort of morally and technically complex problem by erecting new forms of expertise and new institutional context within which the relationship between society's modes of ethical judgment and the in vitro embryo would be mediated

Patricia Williams

When you talk about the degree to which science constructs itself as something outside of that conversation?

Ben Hurlbut

Yeah. So I think the -- these days we may think about issues of embryo research -- pick your issue in bioethics as a sort of bioethical issue. One of the things that came to pass in the period during which the project of human in vitro fertilization was begun, achieved and widely deployed, was also the development of this thing called bioethics. I think that if we begin by recognizing that the problem of how we should relate to human embryo in vitro, what's the right sort of ethical orientation and what are the right ways of going about asking that question in the public sphere, and for purposes of public policy. That's a democratic problem, and it became a problem not of just asking the question -- of what uses of embryos are appropriate or not -- but of how do we ask that question, and who plays an outsized role in asking and answering that question. And in what terms should we ask and answer that question? What are the shared premises, and shared forms of language, shared terms of debate, that should structure that?

One of the things that I trace is the development of public bioethics: the rise of public bioethics bodies that would ask and address these kinds of questions on behalf of the American public; and the ways in which they constructed their own authority by relying upon the authority of science to set the terms of debate in particular ways.

So if you think about this not as what do you need to know scientifically about human embryos in order to have an informed, ethical debate about them; but rather the other way around: What are the parameters in which a public conversation, with significant stakes for American democracy, should play out? What are the ways in which that conversation should be constituted, and what kinds of expertise must be relied upon in order to do that?

One of the things that I observed is how public bioethics bodies oftentimes constructed their own authority – their own ability as an ad hoc group of people with no particular connection to any sort of representational democratic process – could stand in for the public. And one of the ways that they did that is by relying on scientific authority to delimit the parameters of debate; but also to characterize that authority as extra-political, standing outside of politics, and as providing the baseline forms of reasoning and, more importantly, the terms in which ethical discussions should take place.

There you see them enacting a distinction between science and politics; between facts and values; between things that belong to experts (questions of fact) and moral questions that, in a democracy, in effect, belong to everyone. And the ways in which those boundaries are drawn, the effects that drawing those boundaries has, were quite profound on the way many conversations in the domain of bioethics have played out, and continue to play out.

And the consequences of that are very significant because we can't take these boundaries as given in advance, as the book tries to show. There is an enormous amount of work that went into drawing the boundary, and contesting the boundary, and shifting the boundary, and redrawing the boundary; and attaching new and different stakes to the drawing of the boundary.

The boundary itself between fact and value, between science and politics, is a major focus of contestation and controversy. And yet the debate the actors in the debate largely preceded and I think this applies so to speak. There are issues of knowledge it once resolved would rightly constrain the scope of discussion.

Put it very simply, the question of what the embryo is, what are the features of the embryo that we need to know about, and knowledge and incorporate into debate played a very profound role in configuring how ethical questions were asked. Where the question, "how should we ask these ethical questions" was answered by saying, Well, first we need to take into account X, Y and Z elements of scientific knowledge," and that, in a sense, addresses the ethical questions without addressing the ethical questions.

We've asked and answered technical questions. And yet they've solved ethical problems for us. So the way in which science, the institution of science, or let's say scientific authority as a kind of institutional locus of authority, was called upon to define and delimit the parameters of debate. Not only did they get their facts right, did they bring in the right facts, et cetera, et cetera. We have to problematize that fact by distinction to begin with. More broadly, what's at stake there is in drawing upon an ostensibly extra-political authority of science to limit the

parameters of debate, a judgment was being made about, in effect, right public reason: the way we should have these conversations; what questions should be asked; and what questions should, and will, go systematically unasked; What sorts of perspectives belong and what get written out of the picture in advance; what need not be entertained.

At stake is not only the specific bioethical questions, but the very processes through which we ask those questions. The kind of parameters of democratic participation in that process and the judgment for what the right form of democracy is, gets built into the institutions that have, over the years, acquired the feeling for dealing with these sorts of things.

Patricia Williams

It strikes me this is not just extra-political. It also creates a certain constitutional confrontation as well--in terms of legal discourse. One of the intriguing parts of the way in which you've described this is that it creates a setting in which you describe something called "conversation stoppers." And it's not just a structure of discourse. It is actually an institutional kind of deference you described as limiting the kinds of conversations we have. But it is a closed door in terms of the ability to have the kinds of legal and political conversations about categories which have somehow been hardened into a new ontology and therefore become unquestioned. That are treated as we tend to treat science, which is almost as a kind of mysterious authority, almost a religious authority. A kind of magical authority which is not a vocabulary that is easily addressed in the language of law or politics.

Ben Hurlbut

One of the things I wanted to understand is the nature of that outside influence and where it comes from. Through what processes it's awarded and on the basis of what tacit constitutional commitments that that authority is awarded. Therefore, through what processes is that tacit Constitutional commitment affirmed and reinscribed and incorporated into the institutions that deal with these very significant public problems. Maybe there are two little episodes that the book explores that I can point to to just elaborate this a little bit.

One is that there was a portion of the book deals with stem cell and cloning controversy of the 2000s. There was a period where those controversies are shifted out of federal level representative government, at least to some degree, and out of public bioethics bodies and so forth and were taken up by the states through direct democratic measures, through ballot issues by a couple of states. California was perhaps the most significant ballot initiative, but there were others.

In some of these states, this is supposed to be the sort of most unmediated mechanism in direct democracy. Yet in some of these states, there was a kind of behind-the-scenes negotiation about the very terms in which the problems that were being put before voters would be framed, and the very language which could be used. There was a lawsuit in California about the language that went into the voter information pamphlet: whether the term cloning could be used.

There had been significant effort within a large number of people within the scientific community to write the term cloning out of the debate, out of stem cell research to so-called therapeutic cloning, to replace that with a different phrase. So at stake before the court in these cases was the question of whether the representation that was being made to voters was fraudulent, which pervert the democratic process because the language being used did not comport with the scientific facts of the matter. It wasn't cloning and therefore the term

cloning cannot and ought not be used. Or whether it was political speech, in which case it's the apex of first amendment protection. That moment captures the constitutional dimensions of what is the modulating: not merely what's known, but the ways in which democratic deliberations play out as a judge of whether that deliberation is reasonable because the public ain't going to get all the facts right. But if the public is using language that, on the judgment of the scientific excerpts, doesn't comport with the facts, it doesn't comport with the scientific democracy. That isn't democracy; that's confusion.

This was an argument they had been advancing. But if you think about the sort of constitutional position of scientific authority in that configuration, it locates that authority as a kind of external, extra-political arbiter of the legitimacy of democratic deliberation, legitimacy of democratic politics; not nearly the veracity of particular epistemic claims. Particular bits of scientific knowledge.

Patricia Williams

I thought your discussion of the way in which that particular argument made its way from the ballot process to the court process, and to who can speak and who was not, who was the expert and who was not, what was relevant and what was not, was really illuminating. Go on.

Ben Hurlbut

The other thing I was going to say is this issue of "conversation stopper."

Anybody who was around in the U.S. during that period knows that the controversy over stem cell research was mapped as controversy basically over origin. I can go into reasons why I think that characterization isn't sufficient but I'll set that aside for now. Which also therefore sort of maps on to a kind of secular versus religious binary where it is kind of a religious right is the right that is implicated in these debates. And so at stake there is, of course, a deeply held constitutional norm in American liberal democracy. That is, the boundary between public and private. And those forms of reasoning that belong in and are protected within the private sphere but ought not come out into public, don't belong in the public square.

One of the quite remarkable moves that was made all over the place, and this is where I sort of use this framework of the conversation stopping, was a notion that where premises can't be held collectively, where they're sort of unintelligible to everybody, they don't belong to everybody in public. This is a well-established idea in certain lines of liberal democratic theory, particularly Rawlsian democratic theory. When we speak to each other about matters of public import, we've got to speak the same language. If there are certain languages you speak at church, that's fine; you don't bring those into the public sphere because they preclude engagement. They stop conversations. If I said, "God told me X," and you don't have a direct line to God, and the fact that you don't believe in him -- well there's nothing else to say. Therefore deliberation is inhibited.

But there was a sense in which the assertion that certain kinds of claims were religious claims by their nature, and therefore were conversation stoppers and therefore could not be included in the sort of broad public conversation that people on all sides of this issue were calling for, that that had a very significant disciplining effect on discourse. The key point there is this sort of disciplining effect, the foreclosing of conversations was done in the name of opening up conversations. Democracy can't handle these kinds of claims; and therefore, you

cannot make those kinds of claims. You have to speak this language rather than that language because that language is at odds with the sort of shared terms that are necessary for democratic deliberation.

And what's remarkable about this, partly, is simply that where this move was made, somebody is saying, "Well that's a conversation stopper and therefore we can't have that conversation." It was often made in response to statements that didn't trace back to religious convictions. In fact, there may even be people on the call here who are sort of dissociated with the secular left and got accused of being Catholics. Because they must be because how else could they take the position they are taking. And if they are indeed closet Catholics, they must take a position because we'll never learn what position they are taking. To me, that is a sort of constitutionalism in practice. That's a mapping of whose, what kinds of talk, what kinds of terms get to count in the public sphere, and who gets written out of that conversation.

Patricia Williams

At this point, we do want to bring into the conversation some of the people who do have questions. In a moment, we're going to have a pause so that we can open this up for the questions from audience members. And I invite you also to address the fact that you describe your book as a case study involving the embryo. But of course the way in which you present this has such application for things like medicine, for human germline editing. Much of the crisis of conversations that we are about to confront. But, right now, I think we're going to have a small pause while we transfer the technology.

Marcy Darnovsky

Thank you so much for getting us started on that. It's such an important conversation and there's so much to say. I'm looking forward to the rest of it. This break is going to give Pat a chance to take a look at some of the questions and comments that have come in. As she said, please keep them coming, either in that Q&A box, in the chat box, or on Twitter.

While she does that, we are going to show you some links to some of Ben's and Pat's work. The slide that we're displaying now, these are live links you can click on them now if you would like to, but we're also going to be sending them to you on a follow-up email. What's on the slide is, first, Ben's work: the Arizona State University faculty page and also a link to the book *Perfecting Human Futures: Transhuman Visions and Technological Imaginations*, which was published in 2016. Under the photo of Pat, there is a link to her Columbia Law School faculty page. She works at *The Nation*. There is also a link to the book, *The Alchemy of Race and Rights*, and her book *Seeing a Color-Blind Future: The Paradox of Race*.

The next slide shows some ways that you can follow this conversation on Twitter at #talkingbiopolitics. Also if you would like to find us, the Center for Genetics and Society is @C_G_S. If you would like to visit our website, it's www.geneticsandsociety.org.

I will now turn it back over to Pat and Ben to continue that conversation and bring in other people's comments.

Patricia Williams

One of the questions predictably does have to do with the application of what you're talking about to the public concern about human germline editing or about DNA editing generally, and the conversation that might have been started for things like the precision of medicine

initiative and its invitation for public participation. I think the concern is in terms of the risks and benefits and delivery of knowledge that will benefit the ordinary person in the context of controversies like Henrietta Lacks.

Ben Hurlbut

One thing to say about germline editing is it's also built or going to be built on, if it unfolds (I think it will unfold), very significant and extensive research involving human embryos.

I'm sure many people are aware of a paper published a few weeks ago. One of the things that's remarkable is it's, to my knowledge, the most significant and most public paper that's ever been published, certainly researched in this country, that involved the intentional creation of human embryos for research purposes. In that study they took human eggs and sperm from the carrier of a disease, and created embryos into which they delivered both the sperm and the CRISPR molecules at the same time in order to attempt to edit out the disease.

It's kind of remarkable that something that was deemed too categorically unacceptable by Bill Clinton two decades ago, sort of unfolded in public discussion below the radar. I just want to note that, and that is one initial step towards significant research enterprise that will involve these practices that are highly controversial in this country.

And yet, that first step was taken essentially in secret without the knowledge of, certainly, the wider public, but even people working right down the hall from this very lab at OHSU. And that was authorized, in part, by a set of administrative practices grounded in the notion that certain kinds of experts – bioethical experts, combined with scientific experts – can make a judgment about the appropriateness or inappropriateness about research practices.

Research practices that once engaged in lay the foundations for technological deployment or human reproduction more broadly. This is the same laboratory that's so called mitochondrial replacement therapy came out of. It set the ball rolling. Not merely without adequate deliberation, but with the notion that has taken place within the interior of that scientific world is sufficient. And that strikes me as remarkable. What's at stake is not just the future of the technology, but the ways in which our modes and capacities for contending with these sorts of technologies follow a particular trajectory. I think a trajectory away from asking the hard questions in ways that are difficult and controversial and slow, namely democratic modalities.

Patricia Williams

You sort of underscored, or you were implying, that there's a real competition between what we deem public and what we deem private, and where research dollars and the construction of the distinction of the accountability of the public sphere and government oversight and the private extractive interests at stake.

Ben Hurlbut

I think the distinction between public and private and how that distinction is drawn is fundamental and it's constitutive in all sorts of ways. For example, questions that were unequivocally public questions before there had been IVF on American soil, questions that were treated as questions, became private questions by virtue of the fact that nothing was done on a regulatory level and a bunch of people set up shop and people started buying their services and there was a private industry in which private individuals made private clinical judgments about what was appropriate or inappropriate. The fact that came into being

became a kind of social fact.

It was treated as an unquestioned, unquestionable social fact, that didn't warrant any kind of moral or political evaluation. Which embryo research became a major issue. There simply existed this large reservoir of embryos that were, in effect, waste that had been created through private mechanisms in a private sphere, which, you know, is sort of outside of the space of appropriate collective public moral judgment. And yes they could be imported in through the right mechanisms. In a sense, those practices in that construction of a public-private distinction got naturalized through the very deployment of the technology.

I think you can see the same thing going on in the public-private distinction as enacted in practice in scientific laboratories where there are certain things you can't do using public money but if you step across the hallway and your pipette tips are bought with funds, you step outside of one moral domain into another moral domain or outside of one regime of accountability into another, into a regime of unaccountability, or at least non-public accountability and you do what you will. But it's done in the name of the public good. It's done in the name of the particular imagination of progress. And what's done is at stake. But also that image nation of progress is what's at stake. Those constructions of accountability are what's at stake. The fundamental demarcations between what is public, what belongs to all of us as a sort of moral question or political question and what is private, what people can do if they can garner the resources and have the will is, those are also getting made in these moments.

Patricia Williams

We have a question about designer babies. The application of this technology to designer babies and it does seem to me that the next context of this is so many people do seem to feel that reproduction is a kind of essence (my own child), as opposed to locating some of this concern in the context of human experimentation. Just about one's own progeny, but about changing future generations and experimenting on those future generations with a technology genetic and cascading effects are as yet uncertain.

Ben Hurlbut

Yeah. I mean, I think, again, I'll just repeat myself and say that again, the questions of what's at stake, and therefore, in a sense, who are the stakeholders. Who gets to be around the table and ought to be around the table, are very much at play in the emerging debate. But in a way that is not fundamentally different from, and is highly configured by, things that have happened over the course of the last 50 years.

Just for example, it's notable that there was a period when we had pretty extensive robust debates about human genetic engineering and there was a moment where we pretty much quit having those debates. And those extensive, let's say, morally -- sort of to use a term that John Evans has used as a term of art, thick conversations -- conversations about the wider significance, not just for the object, the person who becomes the object of genetic engineering, but for how we understand people. What kind of people we think there should be in the world and why. What ideas of human integrity will govern the ways in which we comport ourselves as a society, the sorts of technologies that we develop, and the ways in which those inform norms that shape private as well as public activity.

Those robust discussions were 50 years ago. And we quit having such expansive discussions really in the early 1980s -- partly because we deemed those discussions to be,

you know, associated with questions that are private by their very nature. So the phrase "playing God" got linked to a notion of privatized religious sentiment that has no place in public discussion and the things that we can talk about in public are things that use vocabulary that we all share.

For example the technical vocabulary. It's a profoundly circumscribed discussion. I think that asking the question of whether this is the discourse that we want to employ, whether this is the right way of circumscribing the question, whether excluding these sorts of voices is appropriate, whether rendering these questions systematically unasked is appropriate, rather than doing it in that kind of a tacit and unconsidered and opaque and highly unaccountable way. That is the sort of challenge that we have before us. And so one of the issues that's very much in play around germline genetic engineering or gene editing, what conversations do we need to have beforehand and what kind of consensus would we need to arrive at in order to move on.

There was a call from one significant group of people at the U.S. National Academies saying that you need to demonstrate safety, but then there also has to be broad societal consensus. And in the recent report of the National Academies study group on this issue, there was a suggestion that well broad public dialogue, that's all well and good.

But the prerequisite is sort of demonstration of consensus around shared issues, namely issues of technical safety and efficacy. And it leaves little space for asking are there larger norms that are at stake here? And editing embryos of future children: Are we also editing the kind of shared moral imaginations that underwrite our kind of tacit orientations towards people and what is due to them and what is appropriate for them?

And by the way, the many people I've spoken to who are the product of the first wave of reproductive technologies, feel like the things that matter to them were left as the product of these processes, were left out of those discussions -- that their parents proceeded, let's say, thoughtlessly. Not maliciously, but thoughtlessly. There wasn't a milieu, there wasn't a sort of space in which to pause and think sufficiently about what the meaning of their actions might be for their very children.

Patricia Williams

Specifically, can you give an example of what you mean the people to whom you've spoken feel like what was left out?

Ben Hurlbut

Considerations about where you can act to by giving other people to have children the same leads 20 years later to your child having asked the question every time they meet a nice guy whether this is their half brother or not. Where a mother who wants to have the best possible child and shops for the best sperm donor, has a child who is marked not just with a kind of identity of the genius sperm donor from whom he was -- who is his biological father, but also the mental health issues, I mean, I think that the there are.

What I'm saying is that, in the experiences of the people who are the products of these processes, there are features of themselves that are constant preoccupations that didn't occur to their parents and they didn't occur to their parents because they were given a choice and the terms they were given were simple and straightforward and didn't invite reflection on these kind of difficult to imagine, but very real, complexities associated with this.

And this is merely of the scale of the family. What if we broaden it to the community, to the society, to the global community, and the sorts of norms that may or may not inform the ways we imagine our relationships with each other. It seems to be that those are the things that are at stake.

At a very minimum, good deliberation requires the acknowledgement of that, and the invitation for conversations of a sort that genuinely contend with those questions. That invite the forms of experimentation that are necessary in order to genuinely contend with those questions and that are very aware of and highly critical of the ways in which the power assigners of those conversations discipline out delimit the range of conversation; and most importantly the way they do that, in the name of engendering broad, open, reasoned, inclusive dialogue. They delimit the range of deliberation in the name of engendering deliberation. And that strikes me as what demands critical reflection and confrontation. Because in effect this is where democracy lives and democracy is at stake.

Patricia Williams

I'm wondering how your book has been received, the kind of conversations you've been involved in since you've published this book. Your book is so interdisciplinary. It seems to invite conversation from a number of perspectives. Have you begun to have conversations across disciplinary lines that encourage you that this larger vector for reflection might come to be?

Ben Hurlbut

I do think there are openings. I do think that this moment, because there is a general sense that the next wave of human reproductive technologies are going to up the ante a lot, there is a receptivity to asking harder questions than maybe have been asked in the past. So the response that I've gotten thus far, apart from getting a lot of nice e-mails from a lot of random people from a lot of disciplinary domains which is very nice, has also been kind of initial recognition that actually the way we have these conversations is configured; and that the stakes associated with the conversations are not just sort of "getting the ethics right" so that science can proceed in the appropriate ways. But actually asking what does right mean anyway and who says. But the second question is a harder question. And it's a more open-ended question. I mean insofar as that question is the animating question in democratic politics, it is a sort of perpetually unresolved question.

But in this domain, where there are forms of authority that aren't in the traditional pantheon of institutional power, namely the authority to know, to know best, I think there are particularly high stakes associated with that. Because science and technology are part of the fabric of modern life and play a role shaping what sort of future we will live in, what sort of people we will be, and that that kind of demands acknowledgement.

So to put it in simplistic terms, yes there are openings that suggest a glimmer of hope. But we have a pretty significant history here, and pretty significantly entrenched habits that we have to see before we can even consider whether they warrant reform. And the work of seeing them I think is pretty hard work that will take us some time.

Patricia Williams

On that cautionary glimmer of hope, I'm afraid we have to wrap it up. I'm sorry we couldn't get to all the questions. But thank you so much, Ben. This is a wonderful book.

Marcy Darnovsky

Thanks to both of you. I really want to thank you both for this conversation, and for all the rest of your work, too. I think you're both right in there. Your efforts to really illuminate, to start to answer questions about authority and power and the practices of democracy, that we have to bring to these huge social questions that are raised by these biotechnologies and other technologies. So thank you everyone for participating.

Also, we have just one more slide for you. It's more live links to our Twitter and our Facebook, and a newsletter to subscribe to and donate. We invite you to click on them. We have our URL for our website, www.geneticsandsociety.org. We'll be sending you an e-mail with all of these links and more and we would love to hear from you. And, most immediately, we ask that you please fill out the very short survey that you'll be directed to when we end, which will be now. So thanks again to everyone. Have a good day.

Patricia Williams and Ben Hurlbut

Thank you.