



Presidential Commission  
*for the Study of Bioethical Issues*

## **TRANSCRIPT**

### **Roundtable Discussion**

Meeting 16, Session 2  
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VICE CHAIR WAGNER: Happy to do that. Thanks for that wrap-up.

I will say I hope we figure out ways to move from an attitude of ethics obligation to ethics integration, and of course, that segues to our other working group, Applications and Implications Working Group.

Amy mentioned earlier that in the President's charge there was a specific quote that we should focus also on, and I quote, "the ethical dilemmas that may be raised by the applications of neuroscience research findings."

Anita, do you want to fill us in where that group is?

DR. ALLEN: Thanks a lot.

I really enjoyed working with the group, looking at the applications and implications of the research. Our group includes not only Dr. Gutmann and Dr. Wagner, but also James Sulmasy, Nita Farahany, Stephen Hauser, and myself. So it's been a great group.

Our working group is focusing, as Jim just said, on the second part of President Obama's charge, namely to "address some of the ethical dilemmas that may be raised by the application of neuroscience research findings." And with this in mind, we're going to be performing, I hope, two sets of tasks.

We're going to be, first of all, examining the bioethical implications of neuroscience research findings and relating some of the core principals of bioethics, formulating a potential ethical approach to dealing with those findings.

We're also going to be trying to examine the tension or the lack of resolution and agreement between and among some of the core ethical principles that we encounter in case studies that we will be describing in just a moment.

So to give you an update of what we've been discussing, let me begin. So

first of all, I want to describe or summarize our group's discussions related to the ethical issues raised by the applications and implications of the science and to tell you a little bit about how our discussions were structured.

They were structured primarily around a couple of case studies, and this working group considered ethical issues raised by the case studies and did it kind of as a model for identifying and approaching bioethical issues raised in neuroscience research applications more generally.

So let me just tell you about some of these case studies. Well, the first case study that we examined was a case study about the problem or the issue of moral enhancements. You know, moral enhancements are drugs or other materials or substances that could actually make us a little bit better at following the rules, following the expectations of society, and so do we want to go down this path? Do we want to actually make such, for example, pharmaceuticals available to the general public?

So one case study that we examined was based on an actual research paper that described the effect of a certain drug on research participants. It had the effect of actually mitigating aggressive responses to provocation in a simulated laboratory game.

More simply, in this experiment, some research participants were given a drug and then they were asked to perform a task that they believed, falsely fortunately, but that they believed was actually inflicting serious degrees of pain and suffering on other people. And what this research paper purported to learn is that it might well be that this drug could make some people less likely to inflict pain.

Now, so shall we be thinking about the possibility of giving medications or drugs to people as a way of causing them to be less aggressive and thereby to better fit in with society, be more functional in families, more functional in school, more

functional in their work?

So some of the ethical issues raised by this kind of possibility and raised in our discussion were concerns about justice, the justice of such drugs, the dignity, the human dignity involved in using pharmaceuticals to enhance ourselves morally; how such drugs or other resources might affect the notion of free will and autonomy. Is it really me freely deciding to be a moral person if I've taken a pill?

And what makes us human? Is part of being human being perhaps the kind of person who does make some mistakes of aggressiveness and so forth from time to time?

So you know, we also looked at the question of whether there's anything inherently different between, say, taking a drug to calm ourselves down and be less aggressive than taking a yoga class, for example, or playing a videogame that might make us less aggressive. And what is it about the idea of giving people medication to change their behavior and as a way of enhancing their morality than the idea of doing something more endogenous like the yoga class or videogame? What's morally relevant about these kinds of distinctions?

But this is an important conversation that we thought we needed to have and the general public needs to have about the possible applications of some of what we might be learning through neuroscience. If neuroscientists are going to be making discoveries for us that might help us to be, quote, unquote, better people, should we jump on that or should we be instead more reluctant to embrace any kind of exogenous supplements or enhancements to make us better? And are we really better, again, if we're taking enhancements of any sort?

The second set of issues that we discussed revolved around a case study

that had to do with using neuroimaging to predict impulsive behavior and how this method might be used in the criminal justice system, for example, in sentencing, in bail, in parole, and in other legal proceedings.

Could neuroscience help us do a better job of detecting a criminal and crime, preventing crime, deterring crime and punishing crime? And if it could, should we use those kinds of methods to get criminal justice better?

So some of the ethical considerations raised by our discussions were about the privacy of the brain. You know, if somebody could look at an image of one's brain and determine one's veracity, whether one's a liar or not, that might circumvent the person's self in a way which would violate their, as it were, moral right to mental privacy.

What about determinism? If we're using brain imaging to predict if someone's going to commit a crime or to mark them as someone who's likely to fall to recidivism, aren't we then in effect saying people don't have free will, but they are determined? We can deterministically investigate them and then know how to proceed with respect to that person.

So we looked at some of these questions, and whether the courtroom or the prison are places where we ought to be using neuroimaging and neuroscientific evidence. It's beginning to happen.

So we discussed the importance of thoughtful decision making and the reporting of scientific results because already, I think, we think the general public may be misunderstanding what can be learned from an MRI or an fMRI. They may think you can already do lie detection. You can already tell who the bad guys and the good guys are by looking at images of their brain.

So we think it is very important that whatever the truth of the matter is, the public is not misled as to scientific results. We don't want to exaggerate. We weren't going to make unfounded inferences. We don't want to overreach in the application of scientific findings.

We examined in our discussions the relationship between the drive for science, the push towards science going forward and the cautious and appropriate application of scientific results. We want to be modest about the results, especially because these results do bear on our very conceptions of ourselves as free and ethical human beings.

So through the discussion of these kinds of case studies about moral enhancement and neuroimaging and prediction, we are hopefully going to put some of the larger issues into a couple of different what we call them buckets of analysis about application.

So one bucket has to do with communication about neuroscience research, and the communication should be, we believe, accurate and scientists should not be misled themselves or mislead the public inadvertently or advertently about the potential applications of their findings.

There might be a temptation, right, to overstate the usefulness of one's results in order to get funding or whatever, but we want to make sure that neither the scientific community or the media nor any of us exaggerate and render inaccurate information that goes to the general public.

And, secondly, we want to make sure that if the science is shown to be accurate, that the ethical issues raised by that new development be properly analyzed, catalogued and assessed. So if we do get even very surprising findings that are

accurate, we want to make sure that we understand the ethical uses of that information, ethical applications of that information.

And the third bucket that we want to consider is the potential positive and negative application for the science that should be considered and the potential to improve lives and the possible unintended consequences or side effects that might impact society. We want to know, you know, what's the truth and then how can we use the truth in ways that are both useful to science and useful to humankind. If we can get rid of Alzheimer's or make being a mentally ill person less onerous on the community, on the individual, on the family, we want to do all of those things, but we don't want to do them without understanding that sometimes there are side effects we have to be cautious about, and we want to be careful also that we don't harm ourselves in an attempt to better improve lives and to improve the usefulness of our science.

So we anticipate that our working group will be meeting again to consider additional case studies. We don't think that the moral enhancement case study or the neuroimaging case study as it applies to criminal law exhaust all of the different case studies and the ethical issues that might be raised by them. We look forward to, as a Commission, preparing a report eventually on our suggestions and discoveries and our thoughts.

Thank you. Jim.

VICE CHAIR WAGNER: Thank you.

And, you know, I think you're making it clear and the group is making it clear that the results of these studies bear on some important areas: volition, justice, privacy; that we need to have a certain intellectual humility in how it is we communicate, our need for assessment, and the importance of evaluating benefit and

risk.

Comments for Anita about this group?

CHAIR GUTMANN: I wonder if one of the services we can do here is by using some examples to cut through the -- it's a negative aura, I think -- of what it means to -- and the word that's used -- "enhance" brain capacity. It's well known and Danny Kahneman has written this in "Thinking Fast and Thinking Slow", that people are psychologically disposed to protect against negative risks much more than to be open to positive developments. It's real opportunities, and that's just a fact about human psychology.

But, Anita, when you were talking about, you know, enhancements in the brain, I was thinking and I said to Nelson, well -- and you said giving people a drug to enhance their capacity -- "Well, if they're adults you can give it to them if they want it, but you can't force it on them."

But we know that -- and it is an issue in our society -- but we know that parents give children Ritalin. We think it may be overprescribed, but some children really need it presumably and others may not, but what I want us to think about is what the difference is between adults taking caffeine to get them awake in the morning and focus their mind versus a drug that might do that. Not "might"; there are.

So I think we just as an Ethics Commission, we have to drill down in the terms, you know. So most people take these drugs not for moral enhancements, but for enhancement of their being able to focus and do things.

And I would ask Steve in some ways if you're dealing with people who have diagnosed mental illnesses, aren't you in a sense enhancing their capacity? And where is there a clear line between that and looking to enhance our capacity to focus, to

do the things that we need to do?

VICE CHAIR WAGNER: Anita wants to jump in.

CHAIR GUTMANN: I want Anita to. Can Steve and then Anita? Or you do it, whatever you want.

VICE CHAIR WAGNER: I think Anita had --

DR. ALLEN: I think the expert should come second.

(Laughter.)

DR. ALLEN: I just want, Amy, to say in response to your comment I agree with you about, first of all, the notion that you said you can't force adults. Adults can force children perhaps, but I do want to underscore that people can be forced. For example, if you're incarcerated or if you're in a mental hospital, there's a sense in which you could be as it were against your will provided with drugs that would enhance your capacity to be a moral person in the sense of calm down and get back to life and meet your responsibilities. So in some sense there are whole populations of people who already are facing this idea of coercion.

Moreover, I think that individuals who are like you and me, we might feel that we have to take this drug if it's out there and we're being told that this is how we can control our bad tempers or our impulsiveness. So I'm concerned that someday the culture might evolve to the point where a lot of people are being told if you don't do this, you're not a good person because you could do it and be more socially compliant.

Now the expert.

DR. HAUSER: This is no expert in this area. I guess that the age old question is where we draw the line between personality traits or quirks to maladaptive tendencies to disease, and what is the invasiveness and the threat to our human integrity

that the drug or procedure would result in?

In people who are so consumed by abnormal hallucinations, delusions, violent thoughts, and by reducing the overwhelming nature of these, one could improve their memory, ability to function as we would think they would wish. I think most people would argue that that was a reasonable thing to offer somebody.

There was a wonderful paper published in *Nature* just this past fall showing that with a certain neuroscience-based videogame strategy, one could improve cognitive function in healthy elderly people by limiting distractedness. Distractibility is a major reason why older people can't encode and retrieve memories.

I think very few of us would argue against that sort of cognitive training to improve declining function. So I guess I don't know the answer, but the question is where along this continuum are we.

CHAIR GUTMANN: I think I'm in heated agreement with Anita and Steve, and I think it's really important that whatever we issue we look at the spectrum of helping people to enhance their ability to live life as they would like and, as Anita said, creating a culture or not creating a culture which blithely winds up forcing people to diminish their abilities, their emotional abilities to respond to the whole range of human experiences.

And let me just give the analogy that I think we need to have because we're dealing with the brain, which raises, you know, heightens the ethical sensitivity, if you will. So body enhancements, there's a range there as well. All of us have seen, if not in person, in print, what a child who has a harelip looks like and how important it is for children to be able to have access to the surgery, the cosmetic surgery, that would enable them not to live a life of being disfigured in ways that really impair their

abilities, you know, to function in the world.

And at the other end of the spectrum there are images, and let me just use the image since I'm a woman of women with, you know, breast implants that they don't need for reconstructive surgery post breast cancer, but you know, there are images, cultural images of that and they're breast implants that are used for those. We want ethically to say we don't want to have a society where every woman thinks she has to have big breasts. I can speak to that, and on the other hand, we don't want to say that enhancement, bodily enhancements, are bad things.

So does that, Anita, speak to it? I think it is really important that we as a Commission if we're going to recommend not having inaccurate hype in general reports, that we as a Commission speak more specifically to the range of ways in which the mind can be enhanced through neuroscience research and practice that should be welcome, those that raise complex questions, and those that are just from our perspective really beyond, you know, the pale of imposing on whole populations.

DR. KUCHERLAPATI: So, Anita, thank you very much. That's really great.

Much of the discussion that we are having, you know, really relates to helping disease and, you know, how neuroscience would be able to affect that. But I also want to point out that there is another facet that seems to be, at least to me, on the ascendency today. There's a large number of now social science experiments and social psychology experiments that are being conducted. I read them in newspapers, on radio reports about all of these types of experiments.

And some of those types of experiments really involve, for example, providing reward for certain types of behavior or punishment for certain types of

behavior. And when I listen to some of them, you know, some of them seem to be benign, but we have known of examples of extremes, you know, where people are given electric shocks, you know, if they didn't behave in a particular way, for example, and that clearly is an extreme of that.

I think that it is important for the Commission to identify perhaps, you know, one or two case studies of that nature where it's important to think about involvement of ethics, you know, in designing and conducting and interpreting those types of experiments.

DR. ALLEN: Absolutely, and our working group did discuss this very thing because some of the experiments that we read we thought, "We thought this was forbidden."—the Milgram experiments-- Yes, so we need to focus on how do we -- well, we want to know about the possibility of enhancement, but we also don't want to find that knowledge out using unethical research methods.

DR. SULMASY: Obviously we've got a lot of big questions that this working group is dealing with, you know, free will, determinism, therapy enhancement, justice, all those sorts of questions. Now, we've got a lot of work to do on that.

But if you'll indulge me for just a moment, as you were talking one thing that came to mind for me is a sort of overarching comment that I think applies to people who want to do neural enhancement, to people who are interested in neuroscience and criminology, to social science experiments, but also to policy makers and regulators, is a quote from my favorite poet, T.S. Eliot, who cautions us to be wary of those who dream of society so perfect that no one will need to be good.

Just from my perspective I think that kind of an attitude will be an important one to think about in all of our deliberations.

DR. FARAHANY: It's more of a comment, than a question, which is to say consistent with Dan just said about some themes that are emerging, I think a lot of these issues are issues that have been well debated and academic and philosophical and other communities, and that we haven't identified new, novel issues that go beyond many debates that have already existed.

And I wouldn't think that even given the diverse expertise of this Commission that we could resolve some of these longstanding debates like, for example, the difference between therapy and enhancement and where we might draw the line between those different things.

But it does seem like there's some general principles that we might be able to articulate and, you know, one that I heard repeated was even if that line is one that people haven't been able to resolve and I doubt we could resolve comfortably, the theme of coercion and a broader principle of autonomy and ensuring that whatever types of technological changes we embrace we do so with an understanding of the implications for social norms and social institutions, and that we think about those implications, is the type of thematic thing that we might be able to articulate as a principle.

So as we engage in some of these incredibly difficult and challenging conversations, I hope that the way in which we can approach them is by doing so at a broader level with principles that might apply to many of the different types of quandaries that we might encounter with neuroscience.

CHAIR GUTMANN: I agree with that. At the same time if all we do is enunciate the principle without giving examples, there's nothing new there either. In other words, I think we have to connect the examples like the experiments that seem to be beyond the pale or the different examples of how neural enhancements can work. I

think we have to connect those examples with the general principles because the general principles are out there, too, and the question is what is propelling the concern in neuroscience, the ethical concern in neuroscience. I think we have to make that pretty clear.

DR. FARAHANY: I agree that examples are an incredibly important way to be able to articulate the concerns. I just think that it's going to be challenging to do so without trying to come up with some new answer to what's therapy, what's enhancements, where do we draw the lines. Instead it's about different kinds of principles that connect different examples together about norms in society, about coercion versus autonomy, about the special place of autonomy around issues of liberty of the mind and privacy of the mind and things like that.

So I mean only to say I hope that what we're not going to try to do is draw lines between therapy enhancement on any of these examples, but instead try to use those examples as a way to articulate broader principles.

CHAIR GUTMANN: So let me try because I think this is important for what we're trying to do to clarify. Somebody has to draw lines. It would be foolish of us as a Commission to do it, but on the ground when scientists work and whether it's drawing a line between what's coercive what isn't or anything else, when scientists or people do it, they need some principles to bring to bear when they're trying to figure out where to draw lines.

And we want to articulate those principles, but we also want to show why, with real examples, why it's important to do that. Because if you can't, then you're not actually applying the ethical principles.

Does that make sense?

DR. FARAHANY: It does. I mean, I think we will play this out, but we're in agreement.

CHAIR GUTMANN: Okay.

DR. FARAHANY: It's just a matter of which principles are applying to resolve which quandaries, and I think it's a broader set of principles rather than trying to resolve, you know, any particular example that Anita articulates as ones that we've gone through as a subgroup.

DR. ALLEN: So I'm not sure I totally disagree with you, Nita, but one of the things I hope we can do because I think almost nobody is doing it really is to address the issue of whether we should be accepting of the remarkably kind of laissez faire, free market approach to mental brain enhancements as we have in the area of physical enhancements.

Dr. Gutmann mentioned the cleft lip versus the breast enlargement. I was thinking cleft lip versus lip filler versus tongue splitting. You know, we let clinicians do almost anything to people, right? I mean, this is serious. You can ask a doctor to do almost anything to you and they can do it to you. They can split your tongue. They can enlarge your breasts. They can put material in your buttocks to make them full. They can put materials in your lower legs to make your legs -- they can take off; they can put on. We have almost no ethical limitations on what clinicians can do to the human body.

CHAIR GUTMANN: I'm glad I wasn't the most vivid.

(Laughter.)

DR. ALLEN: So one of my anxieties is that when we get more knowledge of the brain, that will immediately translate into clinicians doing whatever the heck they and their patients want to be done with their minds and their brains, and

that worries me.

It also worries me that we may start coercing particular populations, be they prisoners or mental patients to use, quote, unquote, enhancements as therapy. So to me it's not points between whether we're going to be talking about high principles of coercion versus examples, but it's just that I don't want us to be timid in our willingness to ethically critique the directions in which we might go with our neuroscience-based interventions.

We've been to me too timid about critiquing the direction of physical enhancement.

VICE CHAIR WAGNER: Normally that would be a good place to stop, but, Steve, you've got a comment?

DR. HAUSER: I just wanted to sort of echo what Anita said. I agree with that quite a bit, and I think that when we deal with things such as enhancements, they're not entirely isolated personal decisions because what one neighbor does, what one's neighbor does influences what we will do because of our inherent competitiveness and maybe, you know, scarce resources and lots of people. So if all our neighbors' kids have decided to accept this enhancement, it will change our cost-benefit analysis as well.

DR. FARAHANY: If we want to get into that space of, you know, dealing with these issues particularly, I think that's fine. I do suspect that we will need to really air the different opinions because I don't agree that we should, you know, cast some aspersion upon it. I think that there are real concerns that you raised, Stephen, about thinking about the implications more broadly and recognizing that individual choices aren't isolated.

But there's a big difference between a clinician imposing a decision upon another person and a person making an autonomous choice to do so. And more than any other space, I think autonomy of mind is essential and the freedom to choose to do what you want with your own mind is incredibly important and how we balance the subtle coercions of society and explicit coercions in contexts like prisons where you can force psychotropic medications versus leaving space for individuals to choose to flourish in their own ways, whatever that might mean, I think is really important.

So I suspect we will have some differences that we'll really have to work out about where we think the line is between coercion versus celebrating individual autonomy in this space.

CHAIR GUTMANN: Could I just say that at this level that you've just said there actually is no logical disagreement on the table? So we will need to dig down because while it sounds, you know, one person is concerned about not having coercive kinds of influences, there hasn't been any actual logical disagreement here.

We will just have to see how it plays out. The one thing that I would add to this conversation that may help resolve some of the concerns is there's a difference between allowing people to use certain medications and funding it through government subsidized plans, and I hope there's the ability to distinguish because otherwise our health care costs are even going to run away further between those things that are needed for people to live good lives and those things that people want.

And I always like to quote one of our favorite philosophers of my generation, Mick Jagger. You can't always get what you want, but sometimes if you try real hard, you may get what you need. We have to try real hard as a society to make sure people get what they need, and then there's an open space as to whether they can

get what they want.

VICE CHAIR WAGNER: I think with that and to avoid some mission creep into popular music and --

(Laughter.)

VICE CHAIR WAGNER: -- and health care costs, we'll call this session a close. We've got about five minutes before we reconvene at 10:30.

(A brief recess was taken.)