

[https://www.youtube.com/watch?v=2pq\\_pnLBIYU&t=5472s](https://www.youtube.com/watch?v=2pq_pnLBIYU&t=5472s) 3.20.18 LMU Bioethics Lecture  
Dr. James Giordano Professor Neuroethics Georgetown University, Pentagon Advisor

18:30 ... Look at the power we have by being able to **assess, access, and affect the brain** ...

25:24 ... Increasingly we're using neural imaging for just this purpose. To be able to **recreate images that an individual has seen, feelings that an individual has felt, sounds, music that an individual has heard, simply from interpreting the pattern and registry of a brain scan** ...

28:47 ... genotype the brain...

29:33 ...other genes that may be highly, highly influential to our creativity, to our ability, to our violence, to our personality. **Are these targetable - in the womb? Can we create designer brains? Are they targetable after birth? Are they modifiable throughout the lifespan? The answer to each one of these ladies and gentlemen is yes. I give you no science fiction in this lecture. I only give you science fact** ...

31:50 ...and **I can target that - target it - can I change those things in directional ways by manipulating the structures and functions of the brain through a variety of levels of intervention that go from the benign to the exceedingly severe?** The answer to the question ladies and gentlemen is in fact - this is a rhetorical question - **the answer is yes, yes** ...

35:20 ... we have to be very careful how we're using the tools to assess and define normality and also how we then intervene ...

35:40 ... We can go right through the skull. Increasingly, the ability to transcranially stimulate and affect brain regions is becoming evermore not only a clinical reality, but a reality in our daily spaces...**transcranial electrical and magnetic stimulation**...

42:08 ... You want to know what I'm talking about here? This is no abstraction. Show of hands ladies and gentlemen, how many of you had a dream last night? Wasn't it real when you had it? Were you in your dream going "I'm dreaming"? Absolutely not ... Your brain reality is your reality. And if in **fact I can import information into that brain, and take outputs from that brain and link that to an avatar so that brain thinks that its embodied**, moving in the world and experiencing the world, can we do this? I have two words for you **Stephen Hawking. Yeah, we can do these kind of things** ...

52:02 ... I'm not gonna stand before you for a moment and say let's adopt a simple precautionary principle and let's just stop this stuff. **Can't stop it.** You know why? Because it is a **global event that captures a hundred and seventy-five billion currency dollar market a year**. That's greater than some country's gross domestic product folks. Highly competitive ...

1:03:10 ...to embrace the stance that is advocated by the late philosopher and ethicist Hannah Arendt ... well known for is a detailed study of the war criminal Adolph Eichmann ... What she saw was a middle-level bureaucrat who was doing his job in a way that he thought was in lawful order ... She commented on the “**Banality of Evil**” – that it’s there in perhaps each of us ... In so doing, he committed the crimes for which he ultimately swung from the gallows ... crimes against humanity ... crimes against the essence of what it means to be ... humane ...

1:06:03 .... to recognize that in fact we as the builders have not only a bias but a responsibility as the engineers perhaps of our evolution ...

<https://www.youtube.com/watch?v=2Zp8nHYegqI> 11.23.20 US Naval Academy Lecture  
Dr. James Giordano

9:04 ... various aspects of **guided electromagnetic current** and displacement that then allows us to influence the brain in a range of different levels certainly through machine computational and brain interfacing but ever more through the use of **electromagnetics, onboard clouding, satellite technology** - the very same thing that operates your cell phone is providing us not only windows to the brain but vectors to the brain that **allow us to read information in real time from brain nodes, networks, circuits, whole brain systems - remotely and also to remotely affect those brains** ...

21:44 ... and as soon as we begin to realize what we can do to our own we can also do certain things in contrast to others to decrement their performance while in fact getting force advantage to ourselves ... **This is a weapon** ...

26:04 .... My question there is **who owns those data? Where do those data go? How might we be able to use those data?**

27:25 ... **I can get into your brain through either narratives and information or perhaps even directly in some way or another and I can affect your stance, your posture, your thoughts, your emotions, and your behaviors. No science fiction folks, this is science fact.**

30:05 ... we're engaging what are sometimes referred to as the three a's **assess, access, and effect**. but I want to be more specific in this context. We're talking about **affecting the brain. We're talking about targeting the brain. Targeting the brain to target individuals**. Targeting individuals on our end to make them better. Targeting individuals who may be competitors or adversaries so as to then decrement **certain aspects of their thought, emotions, and behaviors**, so as to create a tech readiness military advantage on our side. And if I can target key nodes and networks in the brain I may be able to do so in ways that are not explicitly injurious to the outside of that individual, but **certainly modify their thoughts, emotions, and their actions** in ways are going to be

more amenable to the way **I want them to think. I want them to emote. I want them to act ...**

35:32 ... And there's a variety of ways we can do that. Essentially, here we're working within military medicine to affect the brain to quote **mold the mind and all that the mind does ... observations, orientations, decisions, and actions ...**

36:09 ... A big thanks here to the United States Air Force who funded this initial project several years ago, have engaged in what we call neuro hope utilizing neurocognitive sciences ...

37:35 ... actually look at that individual as a bioweapon, a weaponized individual particularly when they're then linked to a variety of different computational and or weapon systems ...

46:15 ... **various forms of directed energy are capable of having effects upon the brain** and certainly we've already talked about data and the vulnerability that big data then renders as well as its capability to in fact engage neuroscience ...

46:55 ... Why is this so important? Because neuro is easy to get. A lot of the stuff we can get right off the shelf.

55:32 ... functionally working in the field for the past four decade I can tell you that neuroscience and neurotechnology are not only under consideration they are contextually being applied in a variety of national intelligence security and defense agendas worldwide. Clearly there's an interface there with this field called neuroethics. How do we fight for right and freedom utilizing these tools and technologies at the same time keep our honor clean ...

[https://www.youtube.com/watch?v=Ez4m\\_NqSRCU](https://www.youtube.com/watch?v=Ez4m_NqSRCU) 7.26.17 Georgetown Mad Scientist  
Dr. James Giordano

17:26 ... our understanding of what the tools are has been obtuse. Earlier in the morning you heard about **electromagnetic pulsing and the use of a variety of electrosonic and electrophysiological devices that can be used against individuals as well as groups ...** the level of sophistication accuracy and the granularity which these things can be used and increasingly will be used is expanding ever more rapidly ...

21:28 ... and on the other side we're **learning more about the way individuals who are the target of intelligence operate. As a consequence of that, we can then do is manipulate intelligence** in a proactive way - once again this is what we call NURINT ...

24:29 ... Pandora's Box because there are ethical issues that need to be addressed with regard to the viability of the private space of the brain, what that means about

interfacing the brain to engage the mind, and whether or not this does represent a viable space or an inviolable space with regard to international norms. Right now, this is still a relative gray zone, but I pose this to you because this is **an area that the intelligence community is looking at ever more deeply to be able to harness the brain sciences, for not only information acquisition with regard to understanding about the way brains work, to interpretation of narratives and the underlying physiological drives that may compel them and respond to them, but also to be able to actually access brains and affect them, so as to be able to extract information** more saliently and perhaps more safely. Again, a lot we can do. The question is, what should we do with it ...

27:01 ... Moreover, **what do we do with individuals who have been both modifiably and non-modifiably advanced** so as to then make sure that they stay at the cutting edge? In other words, **what do we do with individuals who receive these enhancements**, that may either be extractable and not extractable, after version 1.0 becomes obsolete? Is there some obligation to them to give them version 2.0? 3.0?

27:50 ... These are real ethical, legal, and social issues that need to be confronted because **the realities of what I'm telling you here are not science fiction, they are science fact, that are poised for operational engagement within the next 60 calendar months** ...

37:40 ... brain works as nodes and networks, and not as key sites that are doing any particular thing, **I can also utilize various forms of electromagnetic radiation and energy to be able to disrupt brain function. The brain is electromagnetic organ and like any other electromagnetic substance, the integrity of those networks is reliant upon the electromagnetic pulses that flow in between them. Utilizing electromagnetic sensory and disruptive devices in this way, with ever greater fidelity and with ever greater granularity, can be used as not only an organ against individuals but against groups.** And in fact this is some of the work that we've seen that has been conducted previously in what was the Soviet Union now Russia, and also China is looking very very deeply into what electromagnetic pulse generation can do to the brain with regard to treating diseases, **and also incurring certain disease states in individuals who may then be susceptible, who may be exposed to such pulses.** Of course the dual use viability of that becomes evidence ...

38:46 ... drugs and/or devices to modify the integrity of brain function that we realize can **also modify individual's perception of time and space.** We talked earlier about how these may be used in interrogation scenarios and this too may be **used against key individuals – be able to modify their perception of time, their perception of what occurred and what did not, memory modification,** etc...

<https://www.youtube.com/watch?v=Qsh6CSPokUo> 2.11.22 Havana Syndrome Webinar - UTSW/University of Texas Southwestern - Closing questions

18:47 Moderator:

Another question was **has anyone tried to study civilians who feel they may have been suffering from similar symptoms** or exposed to such conditions? Anything in the literature that anybody's aware of along those lines?

19:02 Giordano:

**Yeah.** There's evidence coming from some of the international literature for **individuals who've been exposed to various forms of rangeable and non-rangeable acoustic stimuli** both in the in the auditory range as well as the ultrasonic range. Certainly we know there's a lot of **work having been done on the Frey effect, and there is a body of literature both international and some of it domestic with regard to the effects of scalable pulsable microwaves** that exist below the thermal artifact.

29:24 Moderator:

So why did we only see this now in 2016 and onwards?

(Response begins 29:32) Giordano:

30:15 ... I think one of the things that was conspicuously absent is an awareness that the current sophistication of the science and technology could be utilized in those ways that presented potential harms and threats to individuals who might be so deployed ...

30:57 ... **It's not just a question of individuals who are deployed overseas.** Yeah, I mean clearly they represent probably the low-hanging fruit in the first tier of perhaps viably affected individuals who may be in harm's way. But the accessibility of the science and technology, inclusive I must say, of the possibility for do it yourself - not to say that the do it yourself community's in anyway capricious and nefarious - but the fact that these types of technologies number one are out there, number two, that if you will, the instructions to create such a thing might also be out there. For example, extant patents that might then be corruptible. Number three, that there may be not only nation states but individual actors either as proxies or independently that might see this as an opportunity, I think also makes it very very important as others have said, that there's an increased awareness among the medical community of at least the viability of these types of things to prose from harm, if not risk and what the actual threat risk might be like anything else.