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**From:** Jeffrey Epstein <jeevacation@gmail.com>  
**Sent:** Tuesday, May 28, 2013 10:46 AM  
**To:** [REDACTED]  
**Subject:** Re: Thanks

give me a piano music analogy, / watching the string=, ? after key inputs,? interesting but not dispositive of anything meaningful

On Tue, May 28, 2013 at 6:40 AM, Ed Boyden <[REDACTED]>= wrote:

I agree we need a top-down! Two thoughts:=br> -- Yes, developing mapping circuit technology and then applying it to

go. As we plan out these mapping technologies, we're actually beginning experiments to map out these aversive things too. We are collaborating with many groups along these lines. We need to finish the fundamental technology building so that we can obtain maps at the right level, and then we can acquire datasets that are compatible with top-down theory, to be sure.

-- Another way to think top-down is to work our way inwards, from the

-- is observable; if a feeling or thought is prominent enough, it will be manifest through these channels as an observable. Thus we can also

to associate neural activity with these internal states and observables. In theory this should scale to arbitrarily complex internal states, not just simple aversive states.

Best,  
Ed

On Thu, May 23, 2013 at 11:24 AM, Jeffrey Epstein <jeevacation@gmail.com <mailto:jeevacation@gmail.com>> wrote:

> i think you need a top down as well as bottom up. as looking at= my piano  
> while being played, i can go string by string ( not string theor= strings). hammer by hammer, material of string , molecular inter=ction  
> naturalvibration, harmonics, sympathtice vibration but i wo=ld not hear  
> or understand the melody or music being played. I believe that =ach  
> individual has its own encrpytion algorithm, , as the neural=net grows  
> it encrypts some input signals. some are hard wired. so instead =f emotion  
> , movement, speech, etc, I think a proitable area of initail inquiry s=ould  
> be the hard wired aversive stuff only. smell of dead meat. = reaction  
> to fire. i tihnk that aesthectics will be the greatest ration of o=tput to  
> input. . or the least energy to decode. . dissonance, cannot=be easily  
> resolved so the energy to decode the information, is too high and beco=es

> painful. Does a dream state come upon us, or do we dream al= the time  
> and concious state relegates the dreams to behind the screen. When=sleep  
> deprived the dreams begin to pop through the screen, as hallucin=tions.  
> a breakdown of the screen , results in a form of schizophrenia, where t=ey  
> cann no longer distiguish between voices. dream produced while awak= or the  
> awake state angel on the shoulder whispering. . I am an avid f=nder of  
> the bleeding edge in many fields. keep me up to date on what you a=  
> doing, and hope to see you in your own habitat.

>

>

> On Thu, May 23, 2013 at 11:04 AM, Ed Boyden <[REDACTED]<mailto:[REDACTED]> > wrote:

>>

>> Hi Jeffrey,

>>

>> Yes, it was great chatting about all the ways neuroengineering is<=r> >> going to go in the coming years, revealing both fundamental

>> mechanistic brain maps, and providing the control knobs for fixing=br> >> brain disorders and understanding complex phenomena like

>> consciousness. Would be great to talk about how then to make

>> big stumbling block to date is the lack of good data, but that'=s about  
>> to change, thanks to our current and future efforts! Then we wi=l  
>> have many things that require deep mathematics to understand!

>>

>> Ed

>>

>> On Thu, May 23, 2013 at 1:16 AM, Joi Ito <ji@media.mit.edu <mailto:ji@=edia.mit.edu> > wrote:

>>> Hi Jeffrey.

>>>

>>> Thanks for a really enjoyable conversation and your hospitali=y tonight.

>>> Look forward to connecting again and receiving you at the Med=a Lab on my

>>> turf. ;-)

>>>

>>> - Joi

>>>

>>

>>

>> --

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