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**From:** [REDACTED]  
**Sent:** Thursday, January 2, 2014 5:57 PM  
**To:** Jeffrey Epstein  
[REDACTED]  
**Cc:**  
**Subject:**  
**Attachments:** Re: signature.asc

Thanks Jeffrey. Jeffrey was talking about you in the context of Bounded Rationality which relates to an ongoing conversation I've been having with him. I was digging through old email and I found the following.

Now that I'm at MIT, I'd love to reconnect and see how your thoughts have evolved in the last decade and share some of my thoughts.

- Joi

On Mar 23, 2004, at 9:53 PM, [REDACTED] wrote:

> Dear Joi,  
>     Unsurprisingly, it has taken me a long time to try to construct a  
> more precise model of tradeoffs between money, energy, information,  
> love, etc. (Unfortunately, I have lots of work to do for my day job.)  
> Here you go, though. Much of this will be impressionistic. I'll flag  
> with a \* the things that are mathematically precise or can be made so  
> (I won't put in any math, though!).  
>  
> I would like to make more precise the part of our conversation that  
> had to do with narrative. You made the point that classical economics  
> is based on a rather bald and unconvincing narrative (to paraphrase  
> Bertie Wooster) that the only thing that is good is money, and the  
> only thing better than money is more money.  
> Only a very few obsessed people operate with this principle as the  
> sole basis for their narrative, however. Most folks construct a  
> narrative on which to base their behavior out of a variety of  
> different principles and 'sub-narratives.' (Mind you, I'm a little  
> uncomfortable with the word 'narrative' itself: I may have mentioned  
> to you during our conversation that I was negatively impressed with a  
> remark that Edward Said once made to the effect that 'The problem of  
> the Palestinian people is that they don't have a narrative.' Perhaps  
> more to the point, they don't have food or land or schools.)  
>     But the stories we tell ourselves do form the basis for the decisions  
> we make: this is where classical economists fall down in thinking that  
> decisions are made with only money in mind. And in fact, if we look  
> upon narratives as the basis for the thought process behind the making  
> decisions, then there is quite a lot of mathematically precise stuff  
> that can be said about them.  
>  
>     Suppose that someone (a person, a dog, a computer) is faced with a  
> yes-no question: Do I buy this suit? Do I pee on the rug?

> Do I crash? (I'll let you decide who asks which question.) To make  
> any such decision requires weighing a number of factors, or =nputs, in  
> the process of making the final decision. For example, I need a =uit,  
> but I don't have much money this month; I like dark suits and this is  
> =n the light side; on the other hand, the geometric pattern is great;  
> =uch a suit is unlikely to show up again. Or: I really need to pee,  
> but =I'll get in big trouble if I do it on the rug. Or: I am  
> overwhelmed with conflicting requirements and many tasks to be  
> performed =imultaneously; is there a way I can find to schedule them, or not?  
> One can think of the reasoning process that goes into attempting to  
> make a decision as the process of constructing a reasonable narrative  
> whose conclusion is the result of the decision.  
> (E.g., I can't make it outside in time, so the rug it is.) From the  
> perspective of the person making the decision, the =onclusion to the  
> narrative (the yes or no) is not determined until the narrative itself  
> has been constructed. (From the perspective of someone else,  
> of course, the narrative may have a foregone conclusion. That damn =og:  
> it always leaves it until too late. Stupid computer! Seth is  
> =ncapable of buying a suit.)  
> This feature --- the being that makes a decision can not in =eneral  
> know the answer beforehand --- is a reflection of a mathematical fact:  
> \* no physical system, whether human, computer, or dog, can model its  
> =wn full behavior any faster than the behavior itself. One can  
> construct fragmentary, incomplete models of oneself that capture some  
> aspect of one's behavior. But to construct a full model of oneself  
> requires at least as many physical resources (atoms, energy, time) as one =ossesses.  
> In other words, the only complete model one can make of oneself is  
> oneself itself.  
> This self-referential conclusion is the basis for a number of famous  
> mathematical theorems, including Goedel's incompleteness theorem and  
> the halting problem. But its primary expression in everyday life is  
> the undecidability of decisions before they are made.  
> What does this have to do with the existence of conflicting  
> narratives? Well, one of the main reasons that a classical economist  
> makes a highly oversimplified model of human behavior is to render  
> that behavior predictable within the model. Once one takes into  
> =ccount love, religion, a sense of duty, sheer orneriness, and the  
> rest of the sub-narratives and features of human existence out of  
> which we construct our behavior and which form the basis for our  
> decisions, then not only can we not predict what we're going to do, we  
> can predict hardly any human behavior at all.  
> Indeed, I think that it can probably be established =athematically  
> that \*any theory that is sufficiently simple to allow the easy  
> =rediction of human (or animal, or computer) behavior, is too simple  
> to be =redict that behavior correctly; and \*any theory that allows the  
> correct prediction of behavior is sufficiently complex that its  
> predictions cannot be evaluated in a closed form. This is basically a  
> consequence of Goedel's theorem: mathematical theories have a  
> threshold of =omplexity; once you're above the threshold, the theory  
> contains statements that =re true but cannot be proved to be true,  
> statements that are false but cannot be proved to be false, and  
> statements that can be taken equally to be true or false, with no proof either way.

> In the case of human behavior, this intrinsic undecidability arises  
> from the construction of narratives out of a variety of =ifferent  
> subnarratives and inputs; many possible self-consistent narratives can  
> be constructed from what one knows and what one believes. But these  
> different narratives, though each internally self-consistent, need not  
> be consistent with each other. Indeed, the different possible  
> narratives thus constructed can wildly contradict eachother and lead  
> to radically different conclusions.

>  
> OK, that's probably enough abuse of mathematics in the service or  
> disservice of social observation for today. I hope that you are doing  
> well and look forward to having lunch again one of these days.

>  
> Yours,  
>       Seth  
>

On Jan 3, 2014, at 02:50 , Jeffrey Epstein <jeevacation@gmail.com> =rote:

> seth ,joi, i think you two will like each other

>

> --

> \*\*\*\*\*  
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> seth ,

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