From: "jeffrey E." <jeevacation@gmail.com>
To: Joichi Ito <[redacted]>
Subject: Re: Direct Germans
Date: Sat, 06 Jun 2015 14:40:06 +0000

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i dont know where you are mathematically, . I would go straight to category theory. . algebraic topology is a subset. of a very broad elegant method of reasoning. it starts with objects and arrows. mathematics is also a small subset of this reasoning system. for example. the set (1,2, 3,). is diffcult to parse. is it a collection of a metric space. does it have order. ie second postion means something greater than first. . are they just arabic symbols. do they follow and algebra. does 1=1.(identity) , if 1+1=2 much more complex do and 2 +1= 3 does 1+1+1=3 . for example first position plus first postion does not equal second postion. if there is nothing better than N , and 1 is better than nothing. does that mean that does that mean that 1 is better than N

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On Sat, Jun 6, 2015 at 10:24 AM, Joichi Ito <[redacted]> wrote:

> I again feel like maybe I need to study math. I only know enough to describe non-messy things. How do I start?
>
> > On Jun 6, 2015, at 10:22 AM, jeffrey E. <jeevacation@gmail.com> wrote:
> >
> > math is a notation that tries to describe messiness. the more holistic. shape. mouthiness. is a more elegant way of descrining certain concepts and mouthiness for a characteristic of food (temp chewiness. tastes)
> >
> > On Sat, Jun 6, 2015 at 10:11 AM, Joichi Ito <[redacted]> wrote:
> > Turns out membrane proteins are also amazing molecules for color… colors of light change their geometry which our nerves can sense. It's interesting how color goes from light -> molecular geometry change -> electrical energy in neuron -> shapes in visual cortex -> shapes in our brain.
> >
> > Sorry, I'm still at the wrong scale, but…
> >
> > The math part is interesting. How do you think neurons and biology map onto our brain? Brains seem pretty messy compared to math.
> >
> > - Joi
> >
> > > On Jun 6, 2015, at 9:49 AM, jeffrey E. <jeevacation@gmail.com> wrote:
> > >
> > > ive had a lot of back and forth with chomsky . the description of some of these things that category theory helps frame is really beautiful. . coherence, is a pretty and contiguous shape, symmetries. make it both simple and complex. . taking the donut and twisting it into a know changes its topology and mathematics. Im afraid I can begin to make the case for feng shui, . doesn't make me happy but it can be organized into a symphony of light modulated inputs. . (I know its sounds a but woo woo. but it has serious math behind it.
> > >
> > > On Sat, Jun 6, 2015 at 9:39 AM, Joichi Ito <[redacted]> wrote:
> > > Maybe this is too microscopic, but Ed's work on ground-truthing science - the physics behind the biology and Shuguang's work in understanding membrane proteins will probably help us understand cellular communication including the use of proteins and possibly other forces like magnetics and electrical and more crazy things.
> > >

> > I was remember the picture you had about the cells communicating as an model of "pricing" of "value". The thing is that the cells communicate and transact using proteins that interact with cells via membrane proteins. We have only discovered 500 membrane proteins so far and the human genomes encodes for 8000 of which we only have discovered 20. I'm not positive, but I think understanding these membrane proteins will unlock a bunch of really interesting networks of communication both in the brain and between human beings that we don't understand yet. Shughuang has part of the key, which is a way to identify these non-water soluble proteins using what is called a QTY conversion. Not sure if you're interested, but when we meet next, I should sit down and explain it to you if you don't already know. It's pretty fascinating. In addition to figuring out how cells signal and how the networks of proteins in our body work / environment work, this also unlocks many of the secrets to smells.
> >
> > I din't know this but it turns out that we have 5-10 different membrane proteins per "odorant" that detects little parts of the bigger odorant molecule and they do this very fast. Each membrane protein senses part of the structure and they create an neurological signal based on this pattern and we figure out the smell…
> >
> > And the company we invested in, O2H is called O2H because the key to understanding membrane proteins is to make the non-water-soluable membrane proteins, water-soluable by converting the certain amino acids which retains the structure but changes the solubility so O2H is sort of "water reversed". O2H has all of the commercialization rights to this field of study.
> >
> > But… more broadly…
> >
> > there is one sort of random "sense"… it turns out that we have a cluster of nerves in our optic nerve that only sense blue light that sets our circadian. That's why they say blue light affects mood and jet lag. These nerves have nothing to do with the nerves that we "see" with.
> >
> > We know for a fact that magnetics and electrical signals affect the brain so I'm sure we can "sense" these.
> >
> > Have you heard of people who put super-magnets in their fingers to sense metal?
> >
> > http://io9.com/what-you-need-to-know-about-getting-magnetic-finger-imp-813537993
> >
> > Tenzin would probably have some good thoughts on this.
> >
> > I also have a very smart guy who is trying to convince me that this works:
> >
> > > http://tinyurl.com/qfoafft
> > >
> > http://tinyurl.com/nv8thk6
> >
> > - Joi
> >
> > > On Jun 6, 2015, at 8:49 AM, jeffrey E. <jeevacation@gmail.com> wrote:
> > >
> > > my question , for today is how many senses to we really have.? . what are their ranges. do we sense infrared. without awareness. . storm brewing etc.
> > >
> > > On Sat, Jun 6, 2015 at 8:45 AM, Joi Ito <ji@media.mit.edu> wrote:
> > > I remember Martin asking me some question about why Asians don't say answer things directly.
> > >
> > > Here's sort of an answer to the opposite question. :-)
> > >
> > > >> http://www.quora.com/Why-are-Germans-so-nosey/answer/Yves-Granger
> > >

> > > - Joi
> > >
> > >
> > >
> > > --
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