

Re: Peano's space-filling curve

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Daniel Grubb <grubb@lola.math.niu.edu> wrote in message
news:ca7k54\$gns\$1@news.math.niu.edu...

>

>>> *Please note that I'm not saying that you should
>>> believe us because we're Mathematicians! Simply
>>> not believing the things we say is in some sense
>>> a reasonable option. But if you simply didn't
>>> believe us it's hard to see why you keep asking
>>> us about these things...*

>

>> *Ahh. There's the rub, and time for explanations. You
>> of all people certainly deserve them.*

>

>> *Primarily, because I want to understand. Because
>> it (maths) fascinates me. The way its total
>> non-worldliness, nevertheless, invades every aspect
>> of the real world. Also it bugs me that there are things
>> that I don't know about or can't comprehend. And the
>> only kind of knowledge I can have any respect for is
>> that which I understand.*

>

>

>> *This attitude is perhaps one of your best qualities. The
>> desire to understand is fundamental, in my mind. Unlike
>> many other areas, mathematics takes quite a bit of
>> careful study
>> and awareness of subtleties to really understand what is
>> going on. Jargon is mainly important because it clarifies
>> which particular concept is being used. This is, possibly
>> unfortunately, unavoidable in an area where closely
>> related concepts may have *very* different properties.
>> This will also be true of many of the 'hard' sciences.*

>

>> *Feynman told of a situation where someone claimed that she
>> couldn't talk about physics because nobody understands it.
>> His reply was that she couldn't talk about *because* some
>> people understand it.*

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- > *In areas that nobody really understands, everyone is able*
- > *to say something that sounds reasonable and get a*
- > *following. But in areas that *are* understood, the*
- > *terminology has progressed to the point that only those*
- > *well-trained can use it correctly.*

Once again, Dan, you have sent my mind racing out along new tracks. You do seem to have an inordinately effective talent for doing this.

At the cutting edge, what you say is undoubtedly true. When I was a chemist, before this poacher turned gamekeeper, I wrestled with the meaning of quantum states in the atom and their relationship with bulk phenomena. I passed my undergraduate examinations, I now realise, not because I had understood the material, but because I had understood how the examiner's mind would be working. Years later I grasped the significance of some of this stuff and with that came the realisation of what I had done. I didn't write to the University asking them to defrock me because, ironically, I was probably now worthy of the degree they had conferred on me years before.

Along with all those other things that worry me, like can I keep control of the blackfly on my broad beans without using any chemical insecticide, I now worry that the world has not changed enough. The young are not prepared for the challenge ahead. Most of them live in the third world, in countries where 99.9% of the population are unaware of climate change. And in first world countries we still keep turning out graduates in the same old way. Many, like me in my time, may not know what Gibbs Free Energy really is – just how it's defined.

You mention Feynman – a great communicator as well as a great physicist. My belief is that we need to model ourselves on the great communicators when we interface with the lumpenproletariat, using the essence of these people even while, or if, we reject their message e.g. Adolf Hitler and Ronald Reagan, to take two, diametrically opposite communicators and their respective messages. Society's big mistake is to employ teachers who try to teach children, when we need teachers who inspire them to learn

Cheers

John