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Gooey Ducks and Naked Physicists

Part V
Beam me up Scotty!

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Abstract: An allegory of modern science.

Part V

What a day! I feel like I just ran an intellectual triathlon!

After winding my way through the switchback curves of relativity, calculus, and theoretical physics, (and swimming against the tide of naked physicists) I'm exhausted, beat!
And the evening's still ahead! That's right. Tonight's the night. The ballet!

Eva said her sister would be wearing a blue dress…yeah, that narrows it down a little.
Ooh…the mysterious lady in blue. Mystery, adventure, romance? Don't want to miss this!
Hmm…I wonder how Eva told her sister how to recognize me?

But don't get distracted. Focus!
There's still plenty of time before I have to hit the showers. I gotta wrap this up!

When I first started looking into the math of relativity, I had no idea it would lead to this.
Digging and digging, I feel like I just hit the blue kimberlite–the diamond hunter's dream!

Who knew! Modern theoretical physics is just calculus on steroids!

I looked on Amazon and found one of Newton's books:

> *The Method of Fluxions and Infinite Series: With Its Application to the Geometry of Curve-Lines*

Wow! Doesn't that just say it all? Infinite series!

Calculate to infinity!

Calculus just keeps calculating! It's the science of endless calculation!

Now there's job security!

So modern theoretical physics is just calculation to forever!

Open-ended calculation–open-ended theory.

It goes on forever, but goes nowhere!

That must be why modern theories of physics won't resolve.

Calculating infinity–there's never any chance for resolution with calculus!

Seventeen

Calculus? Infinite points along a curve, limits it can't reach, a beginning but no end…

A math whose limits create infinity?

A math that calculates infinity?

Now there's a math to write home about!

Calculus may be the poetry of mathematics and the soul of theoretical physics,
but calculating infinity? When does reality sink in?

When does the shift from idealization to reality take place? [7]

I found a definition of infinity on Wikipedia:

Infinity is an abstract concept describing something without any limit.

Looking a little further, I discovered that John Wallis is credited for introducing a mathematical symbol for infinity to use in equations, ∞.
Amazing! A symbol allowing math to step from the mundane concrete world of actuality to soar in the nebulous, intoxicating realm of abstraction and imagination!
Could this indeed be the very symbol that paved the way for calculus and theoretical physics?

Nice to have a symbol to work with, but is it really possible to calculate the impossible?

Infinity–no beginning, no end. Infinitesimally small or infinitely vast and large.
Bigger than big, smaller than small. It takes it all in!

Unquantifiable, unreachable, unattainable, indescribable, indefinable…always beyond the limits of measure.
Infinity–the immeasurable measure!

I looked at Webster's definition:

Infinity: The quality or state of being infinite. (Yeah, that helps a lot.)
The assumed limit of a sequence that increases without bound.

Wow! I thought the concept of infinity was difficult to grasp, but a limit of infinity?
Limited by a limitless limit? Limited by limitlessness!
Leapin' lizards! Try sayin' that three times fast!

This is huge!

Infinity is like all the mysteries of the universe rolled into one.
It's the Johnny ball and everything!

It is a riddle, wrapped in a mystery, inside an enigma.[8]

And since infinity is an abstract concept, everyone can have their own interpretation!
You can imagine anything! *Anything*! An infinity of infinities! How can you beat that?

Yeah, we may be limited by reality, but with infinity the realities are unlimited!

For the mathematician and scientist, infinity must be irresistible!
Just imagine: having the chance to work with infinite number and infinite space–infinite parallel lines in a plane, infinite planes, infinite axes…infinite tangibles and intangibles!
Here's a realm of true mathematical freedom!

Hmm…no math police, no science sheriff, freedom to calculate and freedom from any rules–infinity is the final frontier, that higher plane of math nirvana…a place for math and science to really stretch out and run–*free as the wind and as dangerous as the sea*![9]

Wow! "Beam me up Scotty!" But then again, what happens when you outstrip the math?

When you find yourself on the other side of the looking glass, in Wonderland, the Red Queen, the March Hare, and Alice already there ahead of you–your reference to reality gone–
free to interpret and imagine time, space, and matter anyway you want, what d'ya do?

I'm starting to see it! By calculating (multiplying, dividing, increasing or decreasing) something infinitely, sooner or later, all that's left is the imagination!
But how do you measure or calculate imagination? What kind of unit would apply?

Infinity (or a limit of infinity) implies a concept of measure (of comparison, proportion, and scale), but it always extends beyond the limits of math and measure.
Holy mackerel! Infinity is the mathematical vanishing point!

How 'bout that? Infinity? It might just be the perfect springboard for imagination–for endless exploration of theories, possibilities, probabilities, and thought experiments.
But reaching for infinity?–something that has no end in sight, no chance of resolution?
This could close the door to solving anything, forever!

Eighteen

Wow! I feel like I just came to the party!

Could it be that simple? Could it really be true?
This tangled web of theoretical physics and calculus is just about infinity and the imagination?

It kinda makes sense.

- Theoretical physics? If I take away calculus, what would be left?
- Calculus? If I took away infinity, what would be left?
- And infinity? Without imagination, what would that be?

It's so obvious! If I can't imagine infinity, then I can't have calculus or theoretical physics!

So it all boils down to imagination! Who would 'a thought!
Yeah, what is theory without imagination? What is theory but imagination?
And if I think about it, what are we without our imagination?

I wonder: should I rethink my take on math, philosophy, and Latin translation?
Maybe I'll revise Descartes' *Cogito, ergo sum* (I think, therefore I am) to a new credo of theoretical physics and calculus: *I imagine, therefore I am*!

I've heard of the intelligence quotient; but the imagination quotient?
Intelligence, imagination, creativity?

Hmm…I know imagination powers my intellectual engine. It's the juice!

The other night I rode on the back of a snowy-white bear, bounding along a sparkling river through the sylvan forest. I can still feel the rhythm of the bear's gait, the wild rush of wind against my face, the rawhide leather reins in my chiseled hands.

What a rush, what a ride, what a dream!
Too bad I woke up!

Imagination, reality? I'm starting to see the real dilemma of science.

It must be difficult enough trying to describe and interpret reality with mathematics,
but creating a math to calculate or quantify the infinite imagination?

How do you create a math for theory, for imagination?

Sources:

7. Close to Tragic, comment on an Emily Dickenson poem, *I Died for Beauty.*
8. Winston Churchill, radio broadcast in October 1939.
9. Quote taken from telenovela, *La Teacher de Ingles*, 2011.