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# Gooney Ducks and Naked Physicists

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## Part IX The Age of Theory

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Abstract: An allegory of modern science.

## *Part IX*

Wow! It just occurred to me!

Of all the stages and ages of mankind: the Stone, the Bronze, the Iron, the Axial, the Middle, the Dark, the Age of Enlightenment and Reason, the Computer Age, the Age of Aquarius?

And now...science searching for a theory of everything—everything a theory?

I get it!

We're in the Age of Theory!

How 'bout that! I'm living in a whole new chapter in the ongoing development of mankind!  
This is stunning! I'm overwhelmed!

Wow! A new category or classification of civilization!

Science is going to have a field day with this! The era where the sciences of anthropology and physics come together; where human intelligence and physical science finally collide!

I should write an article about it and send it to *Scientific American* and *Physics Today*!  
I could give a precise scholarly definition; coin a new catch phrase...title it:

“Humanity Evolves to the Golden Age of Theory!”

Yeah, all my life, all I've ever heard about are theories! There are theories for this and theories for that! Theories of Evolution, of Relativity, of String and Everything!

Theory reigns supreme! Theory is king! Theory rules!

I wonder, though: when people look back on this Age of Theory, what are they going to say?

They will likely exclaim, “Why on earth were they looking so hard for a theory of everything?  
Why not an answer for everything?”

Yeah, where's the answer? *Where's the Beef?*

So I guess it's not all over, Rover!

If we can have an Age of Theory, why not an Age of Answers!

Wow! The Age of Answers—The Age of Truth!

Now I can't wait! That's the age I wanna live in!

Imagine that—a genuine, authentic “Age of Theory”!

Makes me curious: When scientists say “theory,” I wonder just exactly what they mean?

I found an article on the internet titled “Evolution Is Not Just a Theory” about science’s take on theory:

*When scientists use the word theory, it has a different meaning to normal everyday use... In science, a theory is not a guess, not a hunch. It’s a well-substantiated, well-supported, well-documented explanation for our observations. It ties together all the facts about something, providing an explanation that fits all the observations and can be used to make predictions. In science, theory is the ultimate goal, the explanation. It’s as close to proven as anything in science can be.*

Wait a minute...“close to proven”? Holy mackerel! So theory never equals proof?

Wow! There’s a banner to fly on the flagship of this “Age of Theory”:

*Theory  $\neq$  Proof.*

What a wild and crazy idea! Theory only *approaches* proven but is never *actually* proven!

I must say, theory is starting to sound a lot like calculus again to me!

Approximate proof? Approximate truth? How would I express that mathematically?

Hmm...theory, infinitely approaching a limit of proof—proof as a limit:

$\lim_{theory \rightarrow proof}$

What a novel concept! If theory never equals anything, what is it?

But the article goes on:

*Some people think that in science, you have a theory, and once it’s proven, it becomes a law. That’s not how it works. In science, we collect facts, or observations, we use laws to describe them, and a theory to explain them. You don’t promote a theory to a law by proving it. A theory never becomes a law....In fact, if there was a hierarchy of science, theories would be higher than laws. There is nothing higher, or better, than a theory.*

Whoa! Nothing higher, or better, than *unproven* theory! Is that any way to run a railroad?

What about proofs and truths?

Yeah, somethin’s definitely out of whack here! Something’s wonky!

## Twenty-one

Somewhere in the back of my mind, amidst those sticky, sweet memories of grandma's hotcakes smothered in chokecherry syrup, I remember my grandpa telling me the story about how, as a child, he believed that when he closed his eyes, and it was dark for him, it was dark for everyone! Imagine that! Just by closing his eyes, he thought he could turn the whole world dark! Wow! What a fantastic tale I could spin with that theory!

I could title it "The Grandpa Theory" –definitely a sci-fi/comedy classic!

In my tale, I could create my hero, "Theoretical Science" (Theroy or "Roy" for short). And whenever Theroy chose to close his eyes to the light of truth, the whole world would be left stumbling around helplessly in the dark! I can just envision the slapstick, comedic chaos!

What a story! Boxed in with theory! No way out! Proof not possible?

Hmm...just how on earth did theory become an end in itself? Who did turn out the lights?

Yeah, with the ultimate goal to theorize and not to prove, how can we ever get any answers?

All I can say is that, in my line of work as a top-notch private eye (and I say that with the utmost humility), when all I have is theory, that's when I know for sure I ain't got proof.

I don't have the answer! I know I'm stuck! I'm stumped!

Maybe that's it! If theory is being held as the highest goal, then science must not be able to find proof! So science is stuck, too? Now I can relate!

Aah...the cool mountains of truth rise tantalizingly in the distance like a tall frosty martini, but here we are, trudging drearily across the dry, flat, barren plateau of theory!

Parched and thirsting for truth? Looking for something long and cool? What's a fella to do? I guess, until an actual breakthrough occurs, if you don't have proof, and you can't find proof, you make do with what you have. Set up a lemonade stand—make lemonade out of all those lemons!

So the "Age of Theory" is like a marketing strategy—realistic, pragmatic, practical science. Without proof, science makes theory appear to be the desired commodity, and touts theory as the ultimate goal! The motto and slogan—the sales pitch—of theoretical science:

**WHO NEEDS PROOF WHEN YA GOT THEORY!**

"Got Theory"? It's not just for breakfast anymore! Wow! I'm almost convinced myself!

It must be like the “logic” of the Monkey King:

*We know it to be true because we always say it is true!*

Yep, you can’t help but admire the audacity of theory—the gumption of assumption!

Theory: It doesn’t have to equal anything, it doesn’t have to prove anything, and the only way to get rid of one theory is to run a “better one” onto the field to replace it.

I think I understand now how the game’s played!

It’s a no-holds-barred theory for everything and everything a theory!

Ra, ra, ra! Sis boom bah!

Go, Theory!

But wait a minute, Jim! I don’t wanna be left sitting on the bench!

If I wanna play in the game, too, I need my own theory!

Oh, that’s right! I almost forgot! I already have a theory!

Yeah, theoretical physics uses calculus to express its theories, and the circle-square math of calculus can’t be resolved, so the theories of physics can’t be resolved. That’s simple enough!

Holy Toledo, Batman!

If my theory’s correct, that must mean this “Age of Theory” could also be called the “Age of Calculus”! How ’bout them apples, Newton?

But then again, since calculus is all about squaring, maybe this “Age of Theory or Calculus” should really be called the “Age of the Square”! There you go!

$$\frac{\textit{Theory}}{\textit{Calculus}} = \textit{The Square}$$

Back to “square” one! So we’re really in “The Square Age”? “The Age of Squaring”?

No! I’ve got it! This is the “Age of Squares!”

Ahh, that’s better! Now I know I’m in the right age!

And I know Eva would agree!

Ooh! There goes the phone again! I’ll have to call them back later.

Can’t stop now. I’m on a roll!