

*Dr. Seuss, Mitochondria, and the Virtue of Honesty*  
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**Opening words**

Today the soul is in dire need of stewardship and protection against cynicism. The best defense against it is vigorous, intelligent, sincere hope, not blind optimism, because that, too, is a form of resignation where we think that everything will work out fine and we don't have to work hard to make that happen. I mean hope bolstered by critical thinking that is clear-headed in identifying what isn't working in ourselves or the world, but then envisions ways to make it work and create that and endeavors to do it. In its passivity and resignation, cynicism is a hardening, a calcification of the soul. Hope is a stretching of the ligaments, a limber reach for something greater. ... There is nothing more uncynical than being good to one another.

-- Maria Popova. Commencement address Annenberg School of Communication, U Penn, May 16, 2016

**Reading**

Whether the universe is composed of an infinite number of blind atoms or one all-seeing nature, two things are clear: first, I am a part of the universe governed by nature; and second, I am related in some way to the other parts like myself... Because I am related to the other parts like myself, I will not seek my own advantage at their expense, but I will study to know what is in our common good and bend every effort to advance that good and dissuade others from acting against it. If I am successful in this, my life is bound to flow smoothly, as one would expect for the dutiful citizen who is always looking out for others. -- Marcus Aurelius, 121 – 180

**Sermon:**

***Dr. Seuss, Mitochondria, and the Virtue of Honesty***

A few weeks ago my wife and I had the pleasure of having our 5 year old grandson, Drake, stay with us for a few days while his mom, our darling daughter, attended a meeting in Scottsdale. As Sam and Michelle can attest, having a grandbaby-baby around is a Good Thing, as is knowing that it is temporary. One of the special Good Things about that experience was sitting on the couch with the boy snuggled up against me and reading Dr. Seuss stories to him. Reading to a child is always precious, and certainly there are any number of good books to choose from, but the Dr. Seuss stories have a special appeal for me.

One reason is tradition. We have a four volume compilation of Dr. Seuss books that we got after our first child was born, nearly 40 years ago, and while I was reading from one of them to Drake, my wife found a photo of me reading from the same books to his mom when she was 5.

It actually goes back another generation. When I was a child and had my tonsils out, a member of our church visited me in the hospital and gave me a copy of "Yertle the Turtle." Dr. Seuss and I go way back.

The second reason that I like Dr. Seuss stories is that they provide important lessons conveyed in poetry and pictures that suck a child in and make a point obliquely. Theodore Geisel said that he never started a story with a moral in mind. "Kids," he said, "can see a moral coming a mile off and they gag at it. But there's an inherent moral in any story." [Grownups are no different. As Emily Dickinson advised: "Tell all the truth but tell it slant ..."]

For example, for those of you who were never introduced to Yertle or have forgotten:

On the far-away island of Sala-ma-Sond  
Yertle the Turtle was king of the pond.  
A nice little pond. It was clean. It was neat.  
The water was warm. There was plenty to eat.  
The turtles had everything turtles might need.  
And they were all happy. Quite happy indeed.

They were ... until Yertle, the king of them all,  
Decided the kingdom he ruled was too small.  
“I’m ruler,” said Yertle, “of all that I see.  
But I don’t see enough. That’s the trouble with me.”

Doesn’t the meter of that poem carry you along? Anapestic tetrameter: two unstressed syllables, then a stressed: But I don’t see enough. That’s the trouble with me. It flows easily, but it is not easy to write.

So Yertle commands his turtle subjects to create a higher throne by standing on each other’s backs.

He sees more (and therefore rules more), but is not satisfied and demands to go higher.

“Turtles! More turtles!” he bellowed and brayed  
And the turtles ‘way down in the pond were afraid.  
They trembled. They shook. But they came. They obeyed.”

But in the end, it all comes down. One turtle eventually revolts, the turtle column shakes, and Yertle falls.

And today the great Yertle, that Marvelous he,  
Is King of the Mud. That is all he can see.  
And the turtles, of course ... all the turtles are free  
As turtles and, maybe, all creatures should be.

That theme – a person gets way too full of himself or herself and is brought low or, more positively, learns his or her lesson and becomes more humble, is very common in Seuss. *King Looie Katz*, *Bartholomew and the Oobleck*, *Gertrude McFuzz*, all share that. Theodore Geisel, Dr. Seuss, didn’t care for pompous authority. He once said, “I’m subversive as hell.”

Of course, Yertle is not just about humility. It ends:

And the turtles, of course ... all the turtles are free  
As turtles and, maybe, all creatures should be.

Remember, I was read that when I was about six. As were my children. And now their children.

I count that as a Good Thing, because it matters what stories our children are brought up with. *Horton Hears a Who* is about compassion and dignity: “A person’s a person, no matter how small.” One of my favorites, *The Sneetches*, in UU terms affirms the worth and dignity of every person, in words that children, and even grown-ups, can understand.

In the story, there are two kinds of Sneetches on the beaches: some have stars on their bellies and some do not.

But, because they had stars, all the Star-Belly Sneetches  
Would brag, “We’re the best kind of Sneetch on the beaches.”  
With their snoots in the air, they would sniff and they’d snort  
“We’ll have nothing to do with the Plain-Belly sort!”

To cut short the anapestic tetrameter, Sylvester McMonkey McBean comes along with two machines that, for a price, can do a neat trick. One can take stars off and the other put stars on. And so, in search of the proper status,

All the rest of that day, on those wild screaming beaches,  
The Fix-It-Up-Chappie kept fixing up Sneetches.  
Off again! On again!  
In again! Out again!  
Through the machines they raced round and about again,  
Changing their stars every minute or two.  
They kept paying money. They kept running through  
Until neither the Plain nor the Star-Bellies knew  
Whether this one was that one ... or that one was this one  
Or which one was what one ... or what one was who.

But in the end ...

I’m quite happy to say  
That the Sneetches got really quite smart on that day,  
The day they decided that Sneetches are Sneetches  
And no kind of Sneetch is the best on the beaches.  
That day, all the Sneetches forgot about stars  
And whether they had one, or not, upon thars.

Of course, it isn’t so easy to undo prejudice.

We seem now to have more Make-a-Mess Chappies than Fix-It-Up Chappies. But it helps, does it not, to hear when you are five or six or seven that belly stars don’t matter. That is a foundation to build character on.

And to keep working on as well. As part of the ministerial search process, in December we will have a UUA-sponsored workshop called “Beyond Categorical Thinking” that will give us here in UUCP a chance to find out what Star-Belly ideas we might harbor without being fully aware of them.

Stories about respect and freedom are important to hear and re-hear, whether it is Dr. Seuss, *A Wrinkle in Time*, or *To Kill a Mockingbird*. Let me slide sideways now to another story, non-fiction, although partially speculative, that recalls in me a bit of the sense of wonder that I had when I was six. Here I draw from a book called *The Vital Question* by Nick Lane. I won’t try to do this in anapestic tetrameter.

The earth cooled enough to have surface oceans about 4 billion years ago. Within about half a billion years, one-celled life had appeared in the oceans. You can actually tell that from very tiny

fossils. That is pretty fast. How that happened is not fully known, of course, but the best ideas have to do with thermal vents on the ocean floor sending chemical- and energy-rich fluids through sub-sea formations that have pores about the same size as cells. Such formations exist and could contain the chemicals long enough to allow key reactions to happen. The possible geology and chemistry is worked out well enough to pass the plausibility test. The key point is that single-cell life developed quickly, either only once or only one type survived, because all cells now share common mechanisms for encoding and transferring information via DNA, and producing and using energy via proton pumps and ATP (which is another three letter acronym you may have heard of, adenosine triphosphate.) Now, I knew that DNA was universal, but I didn't realize how universal the energy system is. Every cell on the planet uses some variation of the same way to harness and use energy.

Early on, the evolutionary path of single cell life split, and there became (and still are) two basic types: Bacteria and Archaea. They share many things, including the energy system, but differ in some ways, like how their membranes are constructed.

So, one cool thing about this is that single cell life developed quickly and with high probability, maybe inevitably given the proper conditions. And now that we know that planetary systems are very common, single cell life is likely fairly common in the universe. It wouldn't be the same as it is here – there is no reason that Earth's version of DNA code would be universal. But it is probably out there.

However, and this to me is the amazing thing, for the next two and a half billion years there was only single cell life on earth. Bacteria and Archaea, bopping along. Little bags of chemicals, not too complex structurally -- no nuclei, for example. They developed quickly, and then got stuck, never getting bigger or joining up to get more complex. Lane argues that there was an energy barrier. A cell that gets energy and nutrients from the outside, through its cell membrane, can only get so big. The surface area of the membrane goes up as the square of the diameter, but the volume inside that is hungry goes up by the cube. Get too big, and the inside starves. So, for two and a half billion years, just little balls of DNA and ATP, floating around, evolving, learning to live in different environments.

And then, a most improbable event happened. One archeon engulfed a bacterium, and instead of just dying, the bacterium continued to live and multiply inside the archeon. Eventually, through evolution, most of the combined DNA was centralized in a nucleus, the engulfed bacterium specialized in producing energy, becoming mitochondria. We know that because in modern cells, in every living thing, the mitochondrial membranes are built like Bacteria and the outer membranes are built like Archaea. Mitochondria are the power plants in cells, and their development broke the energy barrier. Voila, cells could get bigger, eventually combine and specialize, and the phenomenal elaboration of nucleated, multi-cellular life began. The crucial point is that all of this complex life shares fundamental biochemical pathways and molecular structures. You, a starfish, an oak tree, and a fungus, use the same genetic and energy systems. We are absolutely interconnected.

And it all goes back to one improbable event, one single common ancestor, something that happened *once*. So single cell life may be common in this universe, but complex life may be very rare. This Blue Boat Home of ours is special, indeed. That is a pretty cool creation story -- but you may be wondering: what does this have to do with Dr. Seuss? Let me explain.

Well, a few things. First, Seuss cared about our interconnected web. His book, *The Lorax*, tells of beautiful Truffula trees that are thoughtlessly and entirely cut down for a meaningless

commercial enterprise, polluting the water and air, and driving off the Brown Bar-ba-loots, the Swomee-Swans, and the Humming-Fish.

Seuss believed in taking responsibility for our world.

Second, it matters what stories we tell our children. If we want them (and us) to believe in the inherent worth and dignity of all people and in the interconnected web of life, then we need to tell stories, straight or slant, to help them internalize those principles. And tell them stories that feed their sense of wonder.

Third, the story drawn from science and the Seuss stories share a common foundation, and that is the importance of honesty. Science, of course, absolutely depends on it. Science tries to tell the truth and tell it clear, probing the boundaries of what is known, and inviting correction. Poetry and fiction may tell the truth slant, but truth, however imperfectly known, is still the goal. To be honest with ourselves and with each other, and to stand up for honesty and to expect it, is crucial. "This above all, to thine own self be true, and then as follows night the day, thou canst not be false to any man." There is no place in a free society for lies. To be ruthlessly honest, especially to ourselves about ourselves, and to be open to our own limitations and willing to hear others' honest stories, to invite correction, is not at all easy or always welcome. It is necessary. In our society today, if being honest is being subversive, then let's be subversive as hell.

Finally, Dr. Seuss teaches children not just to believe, but to act.

*The Lorax* ends with an admonition, Unless:

Unless someone like you cares a whole awful lot,  
Nothing is going to get better.  
It's not.

Over 100 years ago, the Unitarian minister Edward Everett Hale wrote, quite uncynically,

I am only one,  
But still I am one.  
I cannot do everything,  
But still I can do something;  
And because I cannot do everything,  
I will not refuse to do the something that I can do.

Let us be a gentle, angry, active people.

Our children, and our children's children's children, are counting on us.

Blessings on us all.

May it be so.

### **Closing Words**

Anyone can become angry -- that is easy, but to be angry with the right person, to the right degree, at the right time, for the right purpose, and in the right way -- that is not easy. - Aristotle, 384-322 BCE