

July 25, 2010

**Time Immaterial
by David Wertheimer**

Reading #1: Ecclesiastes, Chapter 3: 1-11

For everything there is a season, and a time for every matter under heaven:

A time to be born, and a time to die;
A time to plant, and a time to pluck up what is planted;
A time to kill, and a time to heal;
A time to break down, and a time to build up;
A time to weep, and a time to laugh;
A time to mourn, and a time to dance;
A time to cast away stones, and a time to gather stones together;
A time to embrace, and a time to refrain from embracing;
A time to seek, and a time to lose;
A time to keep, and a time to cast away;
A time to rend, and a time to sew;
A time to keep silence, and a time to speak;
A time to love, and a time to hate;
A time for war, and a time for peace....

God has made everything beautiful in its time; also God has put eternity into the human mind, yet so that we cannot find out what God has done from the beginning to the end.

Reading #2: Rainer Maria Rilke, from The Book of Hours

My life is not this vertical hour
in which you find me in such haste.
I am a tree in front of my own background,
I am only but one of my many mouths,
and the one which is the first to close.

I am the silence between two sounds
that only with difficulty grow used to one another:
for the tone of Death also wishes to be heard—

But in the darkness of the interval
they make peace with one another, trembling.

And the song remains beautiful.

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Last month, Nate, the 10-year-old who is very much a part of my life (he calls me his

“Duncle,” short for Dad/Uncle), finished the 4th grade. I asked him to reflect on how the school year had been, and he told me that the 4th grade had sped by much more quickly than the 3rd grade. I asked him why he thought that was the case. This wise little guy said that, as he gets older (imagine that!), time seems to pass more quickly. He hypothesized that time would speed up until he was fifty, and then start slowing down again after that. “When you are 50, time flows at exactly the right speed, because it’s the middle of your life. After that, it slows down again until you are 100 and die.”

Well, I wish I could agree with him. I am a bit past 50, and I don’t have any sense that time will start slowing down anytime soon. In fact, it seems to keep speeding up. The days, weeks and months fly by at an accelerating pace, giving new meaning to the old Jim Croce lyrics many of us in this room will remember from his signature song, *“There never seems to be enough time, to do the things you want to do, once you find them.”*

A maudlin song for a potentially maudlin topic. I could really get going riffing off of those lyrics, but instead – much to your relief I am sure – I will take this talk in a different direction.

Nate really got me thinking about time. In particular, he got me thinking about the relativity of time. That topic gets very complicated, incredibly quickly. For example, Einstein’s theories postulate that the past, present and future all exist simultaneously. Einstein wrote about the relationship between space and time as a four dimensional structure, that pushes us beyond our three-dimensional way of conceiving of the world. When his close friend and colleague, the Swiss-Italian engineer Michele Besso, died in 1955, Einstein wrote in his condolence letter to Besso’s family that although the scientist had preceded him into death, it was of no real consequence, “...for us physicists believe the separation between past, present and future is only an illusion, although a convincing one.”

This might be considered simple kind words to a grieving family, but coming from Albert Einstein one needs to at least pause to consider that these words were not merely strung together lightly out of standard sympathy in the face of death.

This is not a scientific lecture, so – again to your relief, I image, I will derail this line of my argument so that I don’t start diving into a discourse on the theory of relativity, and start talking about something I know less than very little about.

Instead, let’s take the conversation back to the basics – what we do know something about – which is the ways in which we experience the passage of time as individuals. I’ll jump from Einstein to Facebook. I have become a Facebook devotee, largely because it has re-connected me with large pieces of my past – my own history – and pulled many old memories of faces, names and experiences into the immediacy of my present. Facebook has, in a sense, both made me aware of how much time has passed in my life (based on how far back some of my friendships go), and how inconsequential that passage of time really is based on the faces and personalities that remain so recognizable across the canyons of decades that lie between then and now. Facebook – and technology in general – have compressed the time of our lives into something very flat and compact.

In fact, with the increasing speed of communication, one could argue that it feels like there is even less and less time into which we are trying to compress more and more content.

Back in my college days, I was considered the hot dude in my dorm because I had a portable ELECTRIC typewriter. Remember those? Then along came fax machines, cell phones, computers, email, texting, twitter.... When I was a boy, the fastest way to get an urgent message to someone, if you couldn't reach them by phone, was a telegram. Now you can reach just about anyone, anywhere on the planet, in a matter of seconds. If you can't call me, email me, if you can't email me, text me.

All these tools should make us FEEL like we have more time to spend on the more important things in life. But how many of us feel like this is what has happened in reality? These tools that accelerate our communications are taking up more and more time, and leave me experiencing that I have less and less time in each of my overcrowded, busy days.

It's interesting, but every tangent I take here leads me to a topic or thought that creates the risk of spinning me out of control. Time is quite a topic.

So, back to Facebook. In the compressed world of people in my life from nursery school to the present that comprise my prized group of "Facebook friends," there are a number of men and women who were, many years ago, students of mine when I taught high school. One of them, Robert, now pushing fifty himself, posted this recent comment on his Facebook wall:

"It's getting later a lot earlier than it used to. How do you perceive the passage of time?"

This was a rather intriguing comment, especially given that it was posted as the Spring days were getting noticeably longer and longer. So it couldn't be a reference to the diminishing light of autumn days. Robert was suggesting, I think, that the days themselves were seeming to move more quickly as he aged, with the lateness of the evening coming upon him with surprising rapidity and urgency.

"Where did that day go," we often ask ourselves.

Time, once again, seems to be accelerating around us, leaving us feeling cheated as days, weeks, months and years fly by, flinging us ever more quickly towards our inevitable deaths.

Our sense of time, our sense of time passing ever more quickly, our sense of shortening days and approaching old age, seems very much to have the capacity to get in the way of how we want to live our lives. It would seem an inconvenient truth that we try to avoid, but which has an uncanny way of creeping up on us nonetheless.

Or perhaps not.

I have been reading an interesting book by Alexandra Horowitz called “*Inside of a Dog: What Dogs See, Smell and Know*”. It’s quite a good read – She tries to get inside of a dog’s body and head to understand how they perceive and interact with the world. She discards the anthropomorphic ways in which we tend to perceive our pets – and what they are experiencing – and dives inside the physiology and psychology of dogs to see and understand the world through their own senses.

Horowitz concludes that dogs do not experience time in any of the ways that we think they do. Yes, they get hungry at mealtime when their tummy alarms go off, and they become creatures of habit that seem to know when we go to bed, what time we are going to get up in the morning, when we’re coming home from work, etc. But because they are so very different from us physically, their sense of time is different as well.

For people, I would argue that the power and dominance of our brains in our physiology make the brain the locus of where we perceive, think about and experience the passage of time. Not necessarily so for our canine companions. Their considerably smaller brains can probably only achieve a fraction of some of what our brains can accomplish or conceptualize. Their noses, however, are 2 to 3 million times *more* sensitive than ours. They can regularly smell things even our super-computer brains cannot possibly even imagine.

One of the things dogs smell is time. Try that again: One of the things dogs smell is time. Dogs, according to Horowitz, actually measure the passage of time primarily through their sense of smell, completing complex calculations about their universe based on the age of the smells they encounter. Their sense of smell is so powerful and important to them that it becomes their calculus of time.

I sense this may be true from having watched my own dog, Kari, over the past eight years. She gets up every day, experiences the world, goes to sleep at night and repeats the exercise again and again. She doesn’t bemoan – or even notice – the passage of time. She doesn’t express any more – or less – excitement with each day. She greets every day the same way – with the same enthusiasm for her breakfast, for her morning walk, for her naps, her play time, her dinner – with amazing consistency. She doesn’t think about the calendar of the year, or an upcoming vacation, or the slowly creeping arthritis in her legs that any of us might use to measure the passage of time and the inevitable march towards our decay.

However, it’s fascinating to watch Kari perform the simple act of walking down the hallway on the main floor of the building in which we live in Seattle. She knows it’s where we live, she knows where the elevator is, she knows what direction to go when she exits the elevator on our floor. But HOW she travels through the halls is distinctly related to her smell-based sense of time. With her super-sensitive nose, I’m sure that she can smell the presence in the hallways of my odor, my husband Paul’s odor, the odor of the dog upstairs that hates her. We’ve walked that hall thousands of times, so to Kari our smells must permeate it.

If I am the first one home in the evening, Kari does her normal trot to the elevator. Dinner is just around the corner, or up the stairs. If, however, my husband Paul has just beaten me home, and has been in the hall within the last 10-15 minutes, Kari dances and races down the hall, knowing that someone she loves (or at least someone who feeds her) has JUST been there. She will even trace his precise path – from the garage door to the mailbox to the elevator – in exactly the sequence in which Paul has moved through the space. My nose has no way of making these types of distinctions. For Kari, however, it's a breeze. Literally. It's her nose that tells her that Paul has just been there, and her sense of smell that she uses to mark the recent pathway of his presence. Her nose has told her about what time it is – in other words – her doggy clock says it's "just past Paul". That's the time, for Kari.

That's all well and good for a dog, but the question remains for those of us humans without the time-measuring noses: How does our notion of time work, so different from that of a dog, so logical in the mind of 10-year-old Nate, so complex in the mind of Albert Einstein?

It's interesting to note that our linear calculations of time – the sense that time moves forward from one point to another in a straight progression through our experience – is a relatively recent and distinctively modern Western phenomenon. Most cultures have described the passage of time as something more circular. This may in part be related to the fact that human beings, to contemplate themselves and their circumstances, have regularly turned their eyes towards the heavens. There, things certainly do seem to run in a circular fashion. The movement of the stars, the retrograde motion of the planets, the phases of the moon – all would appear to be moving in grand circles.

Even before it was understood that what we observe in the sky is in part the product of life on a revolving planet in a heliocentric solar system, we saw the passage of time as something cyclical. It may be no wonder that the Aztec calendar stone is round, and that traditional stories of life in ancient times in many cultures start with the phrase "Many moons ago..." For non-equatorial cultures, the regular cycle of changing seasons further reinforced this perspective, even before we understood them as the reaction to a planet wobbling on its axis as it rotates.

In Hindu religious tradition – especially during the Vedic period some 3000 years ago, time was often pictured as a snake chasing its own tail. This circular image suggests that the beginning leads back around to the end, where the cycle starts all over again. From this vision may come the roots of beliefs in reincarnation.

The Babylonians, ancient Chinese, Mayan and Norse peoples all had cyclical calendars. Even the early Greek philosophers – the Pythagoreans, Stoics and Neoplatonists, described time as something circular.

Given this grand vision of the circular nature of time, it may come as no surprise that the more linear nature of time – of time moving in one direction in a straight progression of

events, and the sense of time that we tend to experience in our own culture and lives, has its roots in the Judeo-Christian tradition, and in particular in the writings of Augustine. He was among the first to propose and then insist on linear time in contradiction to cyclical time. His reading of the Biblical texts – both Jewish and Christian, led him to conclude that the Bible espouses this perspective based on his understanding that many important events – from the creation to the resurrection – happened only ONCE, and are leading unavoidably to the final judgment, at which point time will cease as it merges with eternity.

Time marches on, in a Christian view of the cosmos, and at some point merges with the resurrection of the Christ. Figuring out precisely when this will happen, of course, became the rub in Christian thought, and many a millennial cult has come and gone based on their own faulty predictions of the immanency of the end times.

During the medieval era, the arrival of clocks that could accurately measure the passing of time only helped to reinforce the notion that minutes, hours and days were ticking away towards some final period of great revelation. As one contemplates the great time machines of the ancient cathedrals of Europe (and I have seen many of them, for they fascinate me), it surprises me that the huge round faces of these clocks didn't somehow impress upon the viewers that time was, perhaps, circular in nature.

But, having left the Middle Ages behind, where does all of this leave us in the present? I think that we have only recently, and barely, begun to figure time out.

Back in college, in the days of my portable electric typewriter, I had an astronomy professor who taught several classes on cosmology, which I found a most fascinating topic. This professor had been part of the team of scientists at Princeton who, in the 1960's, had discovered the remarkable evidence that supported the theory of the Big Bang – that the universe had started in a cataclysmic explosion and was moving outwards through space as a result of that explosion at rates that, at the far edges of the universe, approach the speed of light.

What was unclear to cosmologists at the time I was a student in college was whether or not the universe would continue to expand forever into space. In this theory, the fate of our universe is based on the amount of matter in the universe and the density of that matter, which was not known in the 1970's. The question was whether or not there is enough matter to exert enough gravitational attraction to slow down the expanding universe – to halt its growth and eventually cause it to begin to contract back into itself, collapsing into a reverse of the explosion that gave it birth to begin with.

This question perplexed cosmologists for many years, and I think that part of the reason it is such an important question is that it is related quite clearly to the question of time – and whether time is linear or cyclical. If the universe is going to continue to expand forever, time is linear. We will all, as my cosmology professor used to say, ultimately die of astronomical boredom, as there will be nothing left to look at in the night sky when everything is finally stretched so far apart across the universe. If, however, there is

enough matter in the universe to slow and reverse the initial explosion, as we collapse back into ourselves we will need to acknowledge that time is cyclical, and that it's very likely that the Big Bang will happen over and over again, as it has been happening since what is, in this model, the unimaginable beginning of time.

Since my years in college, it does appear that the astronomers have figured this one out. The discovery of "dark matter" – the particles of matter that exist between stars and galaxies – cannot be seen with the finest telescopes but can be calculated to exist based on measurements of the slowing rate of expansion of the known universe. There is, according to the current calculations, considerably more than enough "dark matter" out there to slow us to a halt and begin the reverse collapse of the universe.

So, at least as we currently understand our universe, cyclical time wins. The universe, the source and essence of all matter and spirit that surrounds us – both things we can perceive and things that we will never be able to see or comprehend – is a massive, massive engine of creation and destruction. Everything that has been created will eventually come to an end – whether we're talking in the scale of the life of a June Bug or the expansions and contractions of the universe itself. Everything – absolutely everything – follows this rhythm. It's just that the pace of the beat and the nature of the tune vary in the most extraordinary proportions.

Within this conception of time, my primary world view – which you may recall as somewhat panentheistic based on my previous visits to your fellowship – can find a comfortable, if not comforting, home. Pantheistic – and panentheistic – world views – those belief systems that see the essence of god as permeating all of creation – have often depicted the universe as going through extremely long epochs of birth, growth, decay and destruction. Within some Hindu traditions, these cycles can range up to 300 trillion years – the lifetime of the gods themselves before their rebirth. Given the recent discovery of "dark matter" and the cycles of the cosmos, how amazing that this ancient tradition may have gotten it as close as possible to right. The snake chasing its own tail.

Within this framework, however, the concept of time made measureable at a human scale becomes so difficult to comprehend that it is almost absurd to be obsessed about it. It seems almost silly to measure it. Within this construct, the most precise atomic clock – or even the wristwatches we wear every day – are ultimately a waste of effort, because time has very little significance when we fail to put it on its proper scale. Our lives are but nano-seconds – if that – when contemplated in the context of a more universal measure of time. This doesn't mean that our lives don't matter to us – for surely they do – but at a grander level, they are cosmologically irrelevant.

So, my own belief, at least this month, is that our own experience of time is a human construct through which we attempt to better understand our (fundamentally puzzling) experience as human beings. In other words, time is one of our ultimately futile attempts to find meaning in a universe that we can never fully understand – if it is something that could ever possibly be understood at all.

That we remain obsessed with the passing of time, with our own aging processes, with the experiences of the ancestors and our best hopes for our descendants, is just a manifestation of the one of the peculiarities of our species. We just can't help ourselves. Kari, my smell-conscious canine companion, would think us quite silly for this obsession, if she could even figure it out. She exists in the moment, and will – in her own way and her own time – live out the cycle of creation and decay in doggie-time, without worrying about it one bit. Even as I watch her age and anticipate my own sadness when she ultimately dies and is gone, it is somewhat refreshing to watch her move through life, so much a part of the cycles of this northwest corner of our planet, connecting time to her nose, as part of her way of understanding her doggy experience. That seems so healthy.

As a human construct, the obsessive, brain-focused way we measure time in our culture is of necessity highly subjective. This brings me back to young Nate. Our attempts to understand time within our own limited capacities for logic means that our perceptions of it will be flawed, and change as we grow, as our limited understanding would put it, "older". And this means that, whenever it is we are trying to capture what time means, or how quickly it does or doesn't fly by, we will almost always be almost completely wrong.

Where does this leave us? Well, not with any grand insights that explain everything in the universe to me clearly. It leaves me as puzzled as ever about the secret to life, the key to understanding, and the pathway to wisdom. If those secrets, keys and pathways can ever be understood, they will be revealed by far greater minds than mine.

For now, I will choose simply to enjoy the ride. I shall ignore the gray hair that covers my head, the wrinkles that begin to line my face, and the bones and muscles that begin to complain when I quicken my pace. That's all just part of the story, and part of the plan. It really has nothing to do with time, which – in the final analysis, doesn't even really exist anyway, at least beyond the structures we have created to try to measure it. As I was created, so I will decay. As I have been born, so shall I die. Everything in between is nothing more than the amazing journey through existence.

And what a wild trip it is.