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Far-Future Piece: 1414 PCE - the great blueberry incident.

At this point, Humanity and The Individual has been thinking explicitly in terms of time and peace for roughly 1500 years. Oddly enough, there exist *way* more tents¹ than anybody 1500 years ago could have imagined.

Tents everywhere. Tents within tents. Small tent cities. Tent homes. Not really any tent vehicles (anymore at least) as teleportation recently became a viable mode of short-range transportation in the past 200 years. (The exception being starships, as some too are tents.) Oddly enough, teleportation emerged at exactly the same time as the explosive percolation event² of tents. Historians argue about why this is, but to be honest, not many people care. Over time, this period came to be known as the Great Tent Revolution. The Great Tent Revolution was caused by what to date is the greatest Human technological accomplishment. The advent of these tents changed the entire outlook of our species.

These tents were an exotic new material-temporal technology, a discovery—an accident—now referred as the *great blueberry incident*. This tent technology was not an invention, though many believe we should have prioritized an invention program to realize such a technology sooner. Really, they should have.

The two people who discovered this technology—both of whom The Individual—were part of a materials research and development program, tinkering with advanced tent materials about 200 years ago, presumably applying learnings to space colonization technology of some sort. One day while maintaining the universal piece in their intersecting world, a particular type of nanowoven bilayer fabric was erected as a fully enclosed small tent. This was for the purpose of studying its ability to protect some plant life—in this case some blueberry plants³ with whitish-green unripened berries—from harsh exterior elements. Apparently plasma was involved, so naturally there was a ton of exotic scientific and radio-frequency equipment strewn about the lab. It was pretty crowded in there for the two scientists.

That particular day the lab partners erected the tent, things were pretty tense. It was this whole situation. The blueberry plants were placed and sealed inside the tent, including some simple hydroponic equipment. All the equipment was powered on and ready to engage the experiment, but with such close quarters and all the brushing and bumping these two scientists couldn't really contain things any longer. They agreed it was time to perform some urgent unplanned research; it really was an unsafe situation with all that equipment around.

Suffice to say, when the two were finally satisfied with each other's scientific results (roughly an hour later) some equipment had been jostled and bumped around. During their research, one piece of equipment was actually knocked entirely over by an aggressive side-experiment, crashing to the ground against the tent. The tent was consequently subjected to a particular

¹ The Individual's favorite tent: https://www.mountainhardwear.com/p/trango-3-tent-1854061.html

² explosive percolation popular overview: https://www.quantamagazine.org/the-new-laws-of-explosive-networks-20150714

³ unripe vs ripe blueberry: https://www.healthbenefitstimes.com/9/gallery/bilberry/Unripe-Bilberry.png

phase modulated electrostatic driver, with some random parameters because the buttons and knobs were all mashed up.

As it happened, the two were up late the night before (drinking zefralite and presumably conducting more vigorous research) so The Individual that sealed up the tent was a little foggy and couldn't remember if they turned on the hydroponic system. They opened up the tent to check; the hydroponic system was indeed turned on. Something was off though. The unexpected result of their spontaneous fit of vigorous research was that inside the tent there was now a *small patch of blueberries*⁴ ...and ripe enough to eat! Huh. Their tent was designed to protect those blueberries while they ripened at the usual rate, something about two weeks was when they would check the berry plants again.

That's funny... The Individual thought, reaching in to perform an n = 1 berry trail. They popped a single berry in the mouth, carefully chewing it around, checking for odd or unusual tastes before swallowing. Yup, tastes right too. Holy fuck. Holy FUCK. ! The Individual picked another and another then excitedly invited their lab partner to join in on the feeding frenzy. They decimated that little ripe blueberry patch, once sour and inedible an hour before.

After destroying the blueberry patch, they carefully stepped back, disciplined this time to avoid touching anything. They reverse engineered the situation over the course of the next week.

These two scientists ultimately shared a Nobel Prize⁵. Humanity had officially freed up time.

In what seemed like overnight, everything changed. The universal piece saw massive and immediate improvement. Trivial conflict—skirmish—basically evaporated. One of the first things people did was catch up on sleep. Fear Of Missing Out due to sleep was no longer a detractor from inner peace. People also found time to work out their trivial—erosive—disagreements. Much of that persistent societal sense of pressing urgency just melted, though not all. It was a big deal. It was a much bigger deal than the newfound teleportation technology. Time trumped space. Teleportation was an afterthought.

We call them *timetents* now. These are conductive nanowoven bilayer fabric enclosures than when sealed and subjected to the a resonant phase modulated electrostatic driver, and at just the right points on the tent structure, the rate of entropic increase in the tent rises to a point specified by the *time compression ratio*. As it turned out, the timetent was not an electromagnetic phenomenon, rather it was a gravitational phenomenon caused by the mass of the tent's boundary vibrating *just right*. For Humans in a timetent this ratio is up to about 1 : 10, one second outside per 10 seconds inside. Plant matter for agriculture is much simpler than Hominoid forms, so plants like wheat can experience time compression ratios of up to 1 : 100. The smallest tents with the simplest contents currently reach ratios of up to 1 : 314.

Popular demand quickly sought after compression ratios greater than 1:10 for Humans, so the next step was to create timetents within timetents. A timetent required the power output of a lab grade fusion reactor, so the timetents that housed smaller timetents needed to be large enough

⁴ ripe blueberry patch: https://res.cloudinary.com/miles-extranet-dev/image/upload/ ar_16:9,c_fill,w_1000,g_face,q_50/Michigan/migration_photos/B17496/B17496-blueberries.jpg ⁵ Nobel Prize: https://www.nobelprize.org

to fit an entire reactor inside (rather large in most cases). Timetent design and nesting therefore depended on the progress of fusion reactor miniaturization. At the current time being, the maximum nesting factor is two. Only two timetents may be erected within a third. Humans can achieve a compression rate of up to 1:314, plants, up to 1:1414. One current engineering goal within the time machine for peace is to achieve the nesting factor of three within the next 100 years. The Individual is hard at work to make this happen.

A few mega timetents were erected not long ago, easily able to achieve the above ratios, being large enough to nest up to two tents within and live comfortably as a community. These turned into entire communities devoted to the universal piece—peace process *centers* for the universal piece computer if you will. The mega timetents were places that large groups could congregate to work out complex social problems. Process efficiency of the universal piece skyrocketed. Managing the timespace piecetime became a breeze. Timetent peace centers *worked*. People had the time to work out their differences—to *harness* their difference potentials for the sake of doing useful work.

So these days, people don't *timetravel*; these days, people *timestay*. Timestay wouldn't be possible without fusion reactors, because timetents require a ton of energy to speed everything up inside the enclosure. Before timestay technology, modern physics knew only of *time dilation* (time slowing down) as a physical phenomenon. Now though, *time compression* (time speeding up) is the primary focus of interest. Nowadays entire academic disciplines are dedicated to optimizing timetent compression ratio efficiencies. The entire medical industry tripled-down on technological life extension research and development. After all, life support in timetents is crucial to prevent premature death with use.

Time accounting is likewise a burgeoning industry, for with all this extra timef—

* FLAPP-FLAP-FAP-FAP!

A heavy gust of wind shuddered the delicate tent perched high in the mountains, snapping The Individual out of the future timespace world he was currently exploring. It was only sometime around 10 PCE. Timetent technology was primitive, in its infancy. Strictly trivial.

Holy shit. That would be the ultimate invention...

Time outside that tent always seemed to slow down for The Individual when holed up inside it. The timetent. This *would* be the ultimate invention, quite the time machine indeed.

Sure that particular *approach*, that *imaginary* technology, it was probably a fantasy, but the *concept* of the timetent was obviously important, and certainly attainable. We needed ways to have more time, but at the *right* time.

The universal piece running piecetime will certainly rely on some sort of technology that frees up time when we need it most. Maybe it's like me camping, the trivial sort, or maybe it's like in that movie **Inception**. Hmm.

The Individual went back to work, but he was curious to devise a starting point for such an imaginary physics, a *future pointer*, a computational reference within his world piece computer signifying something not yet existent.

If our spacetime manifold is falling through the greater timespace, perhaps massive objects accelerating in time are the non-inertial frame equivalent to the static gravitational reference frame such as a planet. That is, in the same way experiments in the rocket accelerating at just the right rate are equivalent to those performed on the surface of the earth⁶, where g = a.

Maintaining that gravity is equivalent to acceleration would would mean that in that rocket ship, acceleration creates mass underneath my feet on the order of the mass of Earth.

On the earth though, what force is accelerating against my feet in the equivalent case? The ground isn't moving. But an acceleration implies movement through space of some sort. What if the equivalent accelerating force is acceleration along the dimension of time itself. Maybe something in the radial direction is accelerating my mass along a time dimension parallel to that of gravity. So, while my mass isn't moving the the radial space dimension, perhaps it is moving faster and faster in the radial time direction.

This might be the key to inventing the ideal timetent technology. To accelerate stationary mass in a given region of spacetime, but along the respective time dimensions instead of space...

Pause. The Individual was feeling confused about reference frames again. He momentarily stopped the universal piece to start the thought-chain over again. The Individual went back to scribbling symbols and staring at the paper scattered about the tent interior glowing red in the daylight. The hypnotic rustle and pitter-patter of wind and snow on the tent brought the subjective time outside that space to a crawl. This primitive time machine, this little timetent, was perched among the giant mountainous masses looming, a timespace matter mindmachine piloting this little time machine, this vessel on a journey to explore farther and farther reaches of the surrounding timespace.

Travels were fruitful.

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⁶ equivalence principle: https://en.wikipedia.org/wiki/Equivalence_principle