

A Toast to Humanity  
by Tom Badrick

Edward Smolka raised his glass with a characteristic pride that was all his own.

"It's been a hell of a ride, hasn't it?"

With an almost sadistic grin on his face, Gary Cullen returned the gesture and awaited the next toast.

"Can't argue with that kind of logic! And my arm grows tired from all of this celebrating! So what's this one for?"

Ed paused thoughtfully for a moment, his glass of vintage wine held high in the air. He scratched his bald head and pursed his thin lips until they vanished into his face. Then, his greying eyes widened with epiphany.

"Aha! To Lauren Evans! That young lady I never had the confidence to ask to my senior prom!"

"Another good one!" Gary completed the toast enthusiastically, though he never personally knew its female subject, "To Lauren Evans, whoever the hell she was! And whatever the hell she may be doing now!"

Gary took a generous sip of his 1982 Chateau Ausone. It was too fruity, and had an aftertaste of old licorice. Or tennis shoes. In all honesty, it tasted rather disgusting, but it was the extremely expensive kind of disgusting, and that was enjoyable. Two years before that moment he had learned that saving money was a waste of good decadence. Also, it was French, and though he knew very little about fancy alcohols, he chose to blindly accept the repetitive hype that the Franks knew their fermented fruits. Two years prior, such acceptance would have only preceded a serious empirical study, with wild hypotheses, endless data, and many, many experiments. But that was then, this was now, and now was quite intoxicated.

Anyway, it was his turn to toast. It's what they had been doing for the past hour or so, and they still had some time to kill.

"While we're on the subject of hell," he began, feeling inebriantly clever, "This one is for the devil himself! What would we be if it weren't for earthly temptations?"

Ed laughed and nodded his head.

"Probably about as boring as two old physicists drinking wine in a study! And I would have never made tenure at Rivers Cross without him!"

"And I'd never have graduated public school!"

Another joyful toast between two old friends, all the while brimming with laughter and nostalgia. Dr. Smolka and Dr. Cullen had been working together at Rivers Cross University for almost thirty years to the day. Together, they had worked hand-in-hand to give its physics department the sterling reputation it now had, and deservedly so. Their combined studies and ceaseless efforts in matters of particle physics and quantum mechanics were initially what changed Rivers Cross from a small private school to the uncontested bastion of scientific and historical learning that it had become. Their offices were equally adorned with awards and decorations of all kinds, and they often bantered playfully about who had received more recognition. But, honestly, they both had lost count of their merits ages ago. Discovery itself was their truest reward, and this they always shared humbly. It was so even now as they celebrated their latest and most important study on the mass of light and the nature of 'clumping photons.'

Ed Wobbled a bit as he raised his glass for another toast.

"This one is for Rivers Cross itself! And its teachers and students! And that twerpy little guy in the back office whose job it is to argue against our annual budgets!"

Gary answered the toast and gave his colleague a punch on the arm. In a more sober condition, his carpal tunnels would have painfully disagreed with such a display of affection.

"Owen Darda is his name, and refusing funding is his game!" Gary smirked at the silliness of his terrible rhyme, "To think that there are people out there who aspire to be nothing more than roadblocks and buzzkills!"

"To Owen Darda and all twerps everywhere! I'd be nowhere at all if my life weren't so difficult!"

Dr. Smolka poured himself another glass. In its own curious way, his life had been difficult. He was the unexpected byproduct of a workaholic father and a mother with a prescription drug problem. He seldom spoke of his early family life, but he thanked pinball for keeping him out of too much trouble, aside from maybe stealing a

quarter or two. A self-proclaimed 'wizard', he would often navigate the busy streets of Hartford and move from one store to the next, stopping at any shop that happened to have a pinball machine prominently displayed. He wouldn't always play, and was just as content with watching as he was participating. His love for the game is often what he credited for his devotion to physics as he bloomed into awkward adolescence.

As for Dr. Cullen, he was the first to admit that his early life was heavily sheltered. His father and mother were both attorneys, and had met and married at Cornell. Though their busy schedules often left him with little nurturing attention and an absent-minded nanny named Mildred, he was actually babysat by an unending pile of books of all kinds. While most kids were painting Thanksgiving turkeys with their hands, he was learning to read and do math. As he developed, his parents' law books temporarily sparked his interest, but he felt the laws of man were too boring and predictable to be worthy of any great study. Especially when they were compared to the random clusters of organized chaos that were the laws of nature itself. Before his tenth birthday, Gary already had the mind of a scientist, and a love of physics propelled him into a field he felt God had made especially for him.

Lest he forget. Better not leave the big fella out. You know. Just in case. Gary led the next toast.

"And this next one is to God himself! King of kings! Master of mysteries! Purveyor of purity! Cultivator of confusion! Royalty of wrath! Dictator of devotion! Bane of bad guys! Maestro of mercy! Um..."

Ed chided his old friend for his rampant abuse of the English language.

"As if the world was in need of more terrible wordsmiths! Remember, Gary. For every toast that runs too long, there are two others that never even get honored with speech! Get on with it!"

Gary's eyes widened a bit as he thoughtfully stared at the ceiling, perhaps hoping to catch one honest glimpse of that divine being which may or may not have been guiding his every step and stumble in life. Or, in the very least, watched him masturbating in the shower.

"Luchador of love?"

"My sentiment exactly! Cheers!"

The clock on the mantle had struck 11 and the sun was rising high in

the sky. There had never before in human history been a bolder occasion to be so far drunk so well before evening. Ed adjusted his seating so as to not be staring directly into the sun presently beaming through the window of his study. Bright lights always played hell with his cataracts. Then, as soon as he lowered his glass, he threw it high in the air once again in a flash of insight.

"On this day," he began, "I toast to the light while I can still see it! While we both can still see it!"

"Clever, clever!" Gary encouraged his partner, "Cheers! On that note, ever schedule that surgery you've been putting off?"

"Tomorrow at two-thirty!" Ed said with a giant grin. Gary doubled over with laughter, and his friend soon joined him. His stomach hurt, but he hadn't had this much fun in ages, and neither of the two had any plan of ever stopping. It took him quite some time to regain his composure for his next toast. He cleared his throat and raised his glass again.

"And this next toast is to wisdom itself! For the wisdom in us both has made this a very special morning!"

"Cheers!" Ed said with a hard nod, "And ignorance has made it as equally silly a morning!"

"To both then! Wisdom and ignorance!"

There was more biting truth in their last toast than there had been in all the toasts so far that morning, for only the combination of wisdom and ignorance could create such a strange situation. Was it really an appropriate time to be drinking the day away? Of course. It was the only time there would be for doing such a thing.

Between juggling their standard faculty schedules, Dr. Cullen and Dr. Smolka had spent the past year studying light. More specifically, they had been investigating photons and their behavior when accumulated in extremely large amounts. It had been long regarded by scientists that photons were massless objects, and the math always added up to support the case. However, they weren't satisfied with these dated conclusions. Together, they had developed an interesting device used to capture individual particles of light and prevent their escape, all the while accurately counting, plus or minus five hundred million, how many photons had entered the vacuum-sealed device. Their original intention was to acquire enough photons to create a physical weight, one that was noticeably affected by the planet's gravity, and from there

count back to an accurate measurement of the weight of a single photon itself. It was ambitious, exhausting, and thoroughly within the realm of the two brilliant minds standing up to the task.

In the midst of their study, Gary and Ed had noticed a very peculiar phenomenon. As photons accumulated into their device and were unable to escape, the density of the particles naturally increased, and with it, the amount of energy each photon contained. Allowing the cluster to grow and the energy to increase, they eventually recorded a measurable mass somewhere in the range of  $.8 \times 10^{-976}$  grams. But in that moment, when gravity's effect could finally be measured against its evident mass, something strange began to happen. The photons had clustered themselves into the center of the container, and any additional photons added to the container were immediately added to the cluster. As more photons were added, the high-energy cluster began to grow. The photons were ignoring the gravity of Earth and instead seemed to be creating a gravitic force of their own. All the while, it expanded faster and faster as more photons collapsed into its center. Instead of bouncing around freely, all entering the container were being pulled into the center of this bizarre and unexpected reaction.

Like a black hole. A cold, unfeeling, celestial body-swallowing black hole. And it kept growing.

"Here's to lazy Sundays!" Ed continued the morning of toasts with yet another, "and all of the ceaseless work in between! They wouldn't be half as enjoyable had the days not been so busy!"

"I'll raise my glass to that!" Gary cheerfully agreed, "And to time itself! Cheers!"

Frightened by what they had created and its possible consequences, Dr. Cullen and Dr. Smolka were able to contain their experiment before it could potentially grow out of control. First, they ceased their controlled flow of photons into the mass. Then, they ensured no contact with any other photon sources by encapsulating it into an opaque container made completely out of lead, and then later encasing that lead box with yet another lead box, and then a third made of tungsten at an even later date. They postulated that if the photon singularity created within the box was exposed to standard light waves, it would grow at a rate as fast as the speed of light itself, and all of earth would be swallowed in a mere .0425 seconds, and then the entire solar system only a few moments after that. In a small box inside of a box inside of a

box, they had created doomsday itself.

Using the logical minds that had brought them so far in their respective career paths, The two decided to keep their findings a closely guarded secret, and all the while falsely accepting the theory of a massless photon. Falsifying the data on their study, they encouraged all other scientists to disregard their wild notion, and a good idea which was evidently false continued to perpetuate science textbooks and journals for the next two years. Unfortunately, it wasn't very long in our earth's lifespan that they made a new discovery that demanded they reveal their findings at the cost of everything they had ever known.

It was Gary's turn, and his current train of thought led to a very appropriate toast. He raised his glass once again, decreasing the amount consumed with every sip so as to increase the number of toasts in each glass. There was little time to waste filling it so often, and the overpriced swill was running near empty.

"To curiosity!" Gary shouted across the room, "Mankind's deadliest predator!"

"And in every case it was always worth it! Cheers!"

After bringing their previous 'failed' experiment to a hasty conclusion, Dr. Cullen and Dr. Smolka decided to lay low for a while. They spent the next few semesters light with research yet heavy with instruction, doubling up their student responsibilities as they taught night classes and branched out to other science courses to consume their free time. Neither was married, and it was often presumed by students and staff alike that they were a couple, but they both knew their first true love was always science. Shaken by their previous apocalyptic experiment, they tried to distract their wandering and wondering minds, and did what they could to preoccupy themselves with daily life, maintaining too much on their plates to be distracted by future studies.

However, as funny coincidence always seems to happen to funny people, Gary was brought full circle after completing a semester on introductory astronomy. As a fun project for his freshman students, he assigned all of them the task of looking to the night sky and choosing a celestial body at random. Then, they were to research that particular body, track it for about a week, and return with a full report on its composition, past, present, and potential future. It was a fun little diversion for him to keep his students watching the sky, as it was easy

for ones so young to forget its beauty and significance as both a macrocosm and a microcosm.

As his freshmen scoured the night for its most interesting constellations and brightest stars, Dr. Cullen decided to do the same. Then, on a fateful night two and a half weeks prior to that current date, he stumbled upon something truly fascinating. Upon further, careful study, it became the greatest of horrors, and old fears became new again.

One night, he took his telescope to the heavens, knowing full well that Arcturus was a beautiful sight in mid April. Strangely enough, however, he found himself unable to locate it despite days of cloudless weather. He was familiar with the old astronomical tricks to help pinpoint one of the brightest stars in our spring sky, but it just wasn't there. Mildly puzzled, he made the logical assumption that something in space was obstructing his standard view. Intent on studying the phenomenon further, he hurried to the observatory on campus to have a more powerful glance. Much to his temporary relief, Arcturus was back, but it was what he observed nearby that had him on the phone with Dr. Smolka at 2 O'clock that night.

Edward donned his coat and rushed to the observatory, almost immediately confirming what Gary had informed him of. Beneath Arcturus, there was a strange band of impenetrable blackness lazily stretching far to the left and right, much like an untaut rope. Before, it had passed in front of the bright orange giant and was obstructing its view. Now, it sat slightly below and blocked view from a few other known stars within its range. The strangest part came from the behavior of the light emanating from Arcturus itself. It almost seemed to be bending itself into the strand of blackness, and its light appeared to be swallowed up. The absorption of light by an unknown mass seemed disturbingly familiar to the both of them.

Arcturus was how far away? 35 light years in the least. But this cosmic anomaly had passed in front of it, completely obstructing its light and then not in only two hours. How close was it to earth? More importantly, where was it going? These were the two primary questions which caused both esteemed doctors to inexplicably abandon their courses mid-semester and return in full force to the physics lab.

Edward was dizzy. He was too old for this sort of stuff. His partner certainly was as well, as he was only three years his elder. However,

that had never stopped him from playfully lording his 'superior wisdom' over his esteemed colleague. A few years could make all the difference in the world, after all. On that note, it was his turn to toast.

"This one's to the information controllers! Those people who decide just what it is that other people know, need to know, probably should know, don't need to know, shouldn't know, and damn well better not know!"

"We've come to know those people pretty well, haven't we?" Ed replied as he returned his friend's toast, "I think the guy at Fox's name was Miles?"

"At Scientific American we had a David I think," Gary returned thoughtfully, "I'm usually paid to think. But not today! Today I drink!"

"Then I toast to the drink as well, and this overpriced bottle of rotten fruit worthy of a financial loan! Cheers!"

Dr. Cullen and Dr. Smolka labeled their discovery the Photon Belt, naming it after an old hippy term which was coined way back when uninformed children decided that science and imagination were one in the same. From what they could gather with their hasty studies, that rosy, meandering blackness in space was composed of a similar density of photons as the one they had created in their lab, the one they believed very nearly doomed them both and earth along with it. Along its trajectory, it absorbed light rays into itself, causing them to disappear from sight like a black hole. What was more disturbing was at its current rate and pattern of motion, it would be passing across earth in approximately two weeks. They weighed their options accordingly, and none felt very positive.

What was the worst case scenario? Any physicist could tell you the possible result of enough densely-packed, high energy photons of the right wavelengths and frequencies. They had an interestingly deadly way of interacting with living tissue, and cancer was probably the least of it. What would that say of photons of an infinitely unknown density at an infinitely unknown energy level? Dr. Smolka predicted instant and utter annihilation, as matter coming in contact with such a high level of photon activity would simply disintegrate into energy and cease to be.

And the best case scenario? The belt would absorb light and nothing more. Then, as it continued along its determined path, we would merely be engulfed in complete blackness for an indeterminate amount of time. The belt was expanding, and was sure to be at least a few light years

across. If its motion could be compared to the speed of light itself, then all on earth would be blind for at least two to three years. It was more than enough time for everything on the planet to die in absolute blackness. Perhaps that *was* the worst case, and the former was actually the best. Either way, the only answer was the end of the world.

They tried to bring it to the public's attention, praying to all that a conglomeration of brilliant minds might be able to stem an inevitable tide of darkness. Unfortunately, nobody would listen, and their reputation of challenging the massless nature of a photon and 'failing' still clung to their names. Scientific journals and rival universities alike dismissed them as foolish has-beens. Here they were claiming evidence of the apocalypse itself, yet the proof they claimed was sealed within a box which they dared not open to the world. At the same time, nobody cared to take the time and effort to repeat their forbidden experiments. Furthermore, they highly discouraged doing so, which made the scientific community even more sceptical of their motives. Many were waiting for an inevitable book deal and prime time special, but neither would ever happen.

In desperation, they sadly dismissed the academic community and tried to spread the word through mass media. This was the worst idea they had ever agreed upon, as they were made the laughing stock of the entire planet. It was a post 2012 world, and everyone had grown tired of 'conspiracy theories' regarding the world's end, no matter how scientifically plausible they may have been. Their last cry for help was apathetically dismissed by most as cheesy entertainment and cheap laughs by news agencies desperate for advertising revenue. They were almost immediately approached by producers regarding a new reality show based around 'fringe' science which they vehemently dismissed. Besides, what good was a reality show that would only last two weeks?

Perhaps it was better that way. How would people react if they actually believed that the end of the world was only days away? Perhaps it was better that they continued with their daily lives, continuing on like they had on any given day. Watching TV, climbing mountains, blowing up diplomatic embassies, building better mousetraps. After all, they only had two weeks left of their favorite nonsense. Then it would no longer matter, as if it ever had.

But that was two weeks ago. And this was today. And today was for drinking, laughing, and reminiscing. It was not a happy occasion, but

there were grounds to celebrate nonetheless. Those five well-known stages of grief had already passed, and all that was left was sombre (But not sober.) acceptance. The photon belt would be there soon, and then that would be all. The only thing left to celebrate was that brief moment of vindication when everyone looking to the sky would suddenly realize that something didn't seem quite right as that black ribbon from space rapidly swallowed them whole. Then there would be nothing left but to see firsthand what was on the other side of being.

The time had almost come. Gary took a quick glance out the window. There was nothing to be seen yet, but the band's approach was actually low on the Eastern horizon for the time being. It would rise high enough for all to see, then they would have about 8 seconds to contemplate its meaning before all would be gone. It was more than enough time to vocalize a quick prayer or a few end-of-life regrets, but Gary assumed it would be mostly football, beauty pageants and butt scratching.

But there would be no bad feelings today. End times were happy times, as it left nothing else to worry about. After all, they were scientists, and that was just the way the universe was. Cold, silent, and strangely comforting in its consistent yet immobile attitude.

"Humans are such silly creatures, are they not?" Gary asked his dearest friend.

"They are," Edward replied, "And now I have my next toast! To humanity! There's certainly nothing like us! And there will probably never be anything quite like us ever again!"

"Excellent!" Gary agreed, "To humanity!"

Edward raised his glass one last time for their final toast, and they finished their wine in unison.