Solstice Eve

• Book of Rituals •



(Extended Edition, 2012) Edited by Raymond Arnold

For my friends, who taught me what it means to have a community of people who share big ideas, big dreams and who care about truth.

For Nay Petrucelli, Joseph Capriotti, Eliezer Yudkosky, and Geoffrey Anders, who taught me to care, to believe in humanity, to act on that belief. Who taught me that something more is possible.

> For my family, who taught me what it means to come together during the winter, to love each other, and to sing.

For anybody who strives to make their world a little less ugly. Less a sea of blood and violence and mindless replication.

For a child, who might or might not be born, five thousand years from now. Who might or might not think to ask their parents: "Where does love come from?" This book contains a collection of traditions and rituals, to be performed by aspiring rationalists on Solstice Eve.

Ritual is a complex, interesting and potentially powerful force. It's difficult to create from scratch - it order to be effective, it needs to have a timeless quality about it.

It doesn't have to actually BE timeless there are some good Christmas songs that are only 50 years old. But it needs to have the feel of something that's extremely familiar, and personal. In the wild, rituals evolve from family to family, adapting in the face of memetic selection pressure to fill specific niches, often with bizarre injokes and absurdities. The absurdities help bind a community together. "We care about our tribe so much, we are willing to do some weird stuff. We're going to pretend that a giant fat man is coming on a sleigh led by flying reindeer."

'Real' rituals are not created. They evolve. Memetic evolution is not quite so blind or mindless as organic evolution, but it is still a complex process, often producing valuable subtleties that nobody intended, yet which would have been very difficult create by intelligent design.

But sometimes, you just don't have access to the tradition and ritual you want. You want something timeless and powerful that speaks to YOUR highly specific, complex, nuanced and slightly weird beliefs.

I believe some oddly specific, complex, nuanced weird things, and I had the hubris to arrange a night of carefully designed ritual for myself and my friends to celebrate them.

> Perhaps others may learn from my example, for good or for ill.

BUT! WARNING!

Ritual can be powerful and beautiful, but it can also be dangerous. It can be a carrier wave for ideas, and sometimes, ideas can turn out to be wrong. And the fun or beautiful songs and games that propogated that idea can become oddly hollow, or worse, dangerous.

Bayesian rationalists do not "believe" or "disbelieve," per se. We assign things probabilities. We update those probabilities based on evidence. We use the expected value of propositions, weighted by their likelihood, to make predictions and choices.

The memes carried by this book are not ancient, quaint concepts that we pay lip service to. They are ideas that we think are important to consider, based on our current understanding of their expected value. And when you take an idea seriously, it is all the more important to be able to surrender it, if you turn out to be wrong.

Every year, every single one of these songs, stories and poems is to be reconsidered. To some extent, simply to improve upon their beauty. Allow memetic drift to occur - the songs that are not so pretty nor quick to remember, it's okay to let them die. If new mutations birth themselves in your mind, try them out. And if you feel you can make broad, sweeping changes with an artist's touch and an engineer's precision, try that as well.

But above all, consider whether a song communicates truth or falsehood, By your latest, best understanding of the world: does this song or story communicate an idea or emotion that is valuable, or dangerous? Has a once good idea begun attracting more emphasis than it deserves?

Art is not about literal truth, but about giving valuable emotional weight to true things. I leave it to you to decide what is beautiful and good and what is not. Only you can protect yourself against the possibility of insanity.

If there is any single thing this book means, it is this:

You must decide alone. But you are not alone.

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Introduction: The Story of Winter

The Winter Solstice is the longest night of the year. It is a time of cold and darkness.

It marks the beginning of the return of the light. The days once again grow longer. But it does not mark the end of the cold. For months afterward, the world is frigid and life is fragile. For young civilizations, if you *hadn't* spent the year preparing adequately for the future, then before spring returned, you would run out of food and die. If you hadn't striven to use your tribe's collective wisdom, to work hard beyond what was necessary for immediate gratification... if you hadn't harnessed the physical and mental tools that humans have but that few other animals do... then the universe, unflinchingly neutral, would destroy you without a thought. And even if you did do these things, it might kill you anyway. Because fairness isn't builta into the equations of the cosmos.

But it wasn't just the threat of death that inspired the first winter holidays. It was that sense of unfairness, coupled with the desperate hope that world couldn't really be that unfair. It wouldn't have occurred to the first squirrels that stored food for winter, but it gradually dawned upon ancient hominids, as their capacity for abstract reasoning developed, alongside their desire to throw parties.

Our tendency is to anthropomorphize. Today, we angrily yell at our cars and computers when they fail us. Rationally we know they are unthinking hulks of metal, but we still ascribe malevolence when the real culprit is a broken, unsentient machine.

There are plausible reasons for humans to have evolved this trait. One of the most complicated tasks a human has to do is predict the actions of other humans. We need to be able to make allies, to identify deceptive enemies, to please lovers. I'm not an evolutionary psychologist and I should be careful when telling this sort of Just-So story, but I can easily imagine selection pressures that resulted in a powerful ability to draw conclusions about sentient creatures similar to ourselves.

And then, there was *not* a whole lot of pressure to *not* use this tool to predict, say, the weather. Many natural forces are just too complex for humans to be good at predicting. The rain would come, or it wouldn't, regardless of whether we ascribed it to gods or "emergent complexity." So we told stories about gods, with human motivations, and we honestly believed them because there was nothing better.

And then, we had the solstice.

The world was dark and cold. The sun had retreated, leaving us only with the pale moon and stars that lay incredibly far away. There was the enroaching threat of death, and just as powerfully, there was the threat that sentient cosmic forces that held supreme power over our world were turning their backs on us. And the best we could hope for was to throw a celebration in their honor and pray that they wouldn't be angry forever, that the sun would return and the world would be reborn.

And regardless, take a moment to be glad for having worked hard the previous year, so that we had meat stored up and wine that had finished fermenting.

But as ages passed, people noticed something interesting: there was a pattern to the gods getting angry. Weather may be complex and nigh-unpredictable. But the movements of the heavens... they follow rules simple enough for human minds to understand, if only you take the time to look.

We had a question. "When will the sun retreat, and when will it return?"

When you really care about knowing the answer, you can't make something up. When you need to plan your harvest and prepare for winter so that your family doesn't starve, you can't just say "Oh, God will stop getting angry in a few months." If you want real knowledge, that you can apply to make your world better, then you need to do science.

Astronomy was born.

I want to give you some perspective on how much we cared about this. Stonehenge is an ancient archaeological wonder. To the best of our knowledge, it began as a burial site around 3000 BCE. Over the next thousand years, it was gradually built, in major phases of activity every few hundred years. Between 2600 and 2400 BCE, there was a surge of construction. Huge stones were carted over huge distances, to create a monument that's lasted five thousand years.

30 Sarsen stones. Each of them was at least 25 tons. They were carried 25 miles. 80 bluestones. Four tons each. Carried over 150 miles.

In this era, the height of locomotive technology was "throw it on a pile of logs and roll it."

We don't know exactly how they did all this. We don't know all the reasons why. But we know at least one: The megaliths at Stonehenge are arranged, very specifically, to predict the Solstices. To the moment of dawn.

30 stones, each 25 tons, carried over 25 miles. 80 stones, each four tons, each carried over 150 miles.

I want to repeat that last part one more time because it blows my mind. Eighty stones, each *eight thousand pounds*, dragged over *one hundred and fifty miles, over the course of 200 years*.

That's how much we cared about the answer to that question.

Material Components

There's a lot of ways you can hold a Solstice, depending on who your friends and family are.

But a few things to consider, and materials you may want to acquire:

Communal Food

You'll need a lot of food, so you can have an great, communal dinner before you settle down for singing and stories. If you have a small group (up to around 25 people), this dinner should involve sitting down at a table, holding hands for a moment, and acknowledging each other before you dig in. I recommend a *brief* verbal ritual to bring you together. But don't take too long, and I wouldn't worry about waiting for every to have actually been served food before eating - food gets cold quickly, and (in my opinion, anyway) loses close to half of its hedonic value within 5 minutes after exposure to room temperature air.

Holiday dinners should have specific dishes that somehow relate to the holiday. You can eat whatever you want on any day of the year, but a coherent theme to tie particular kinds of delicious things together makes them more interesting. Reserving certain dishes for certain days also gives them scarcity, making them feel more valuable and building anticipation.

What dishes? I don't know for sure. I'm going to allow selection pressure to apply here before I draw conclusions. Foods that reflect cultural injokes are fun (we're working on a recipe for Bleggs and Rubes), but ultimately what's important that is that food is tasty and interesting.

We do have one idea for next year: during the *Summer* Solstice six months from now, one activity will be making food that stores well (wines, beef jerky, pickled/dried fruit, hard cheeses, etc), and then eating that food during the Winter Solstice. Gain some appreciation for the kind of work your ancestors did, bond a bit via a group challenge, and appreciate the labor of your past self.

That said - if you manage to have, say, *fifty people in your house all eating at the same time*, it's going to be nigh impossible to appreciate food as a "communal dinner." Fifty people are hard to coordinate, it's hard to have time to appreciate cleverness of any given food, and it's probably best to just accept that it's going to be more of a free for all than anything else.

Communal Music

You will need at least one person who is not necessarily musically talented but is musically *enthusiastic*, who can get a crowd of people excited, whose voice carries well (or who is adequately amplified so people can hear them). Multiple people with musical skill and instruments to perform with are best - both to provide better variety, and to give songleader(s) time to take a break every now and then.

You can make do with many printed out music sheets for people to read. But if you can manage it, a projector that displays the lyrics on the wall is much better. That way nobody is ruffling papers, and everyone is looking at a central point rather than down at their lap, which helps the group bonding experience.

(Plus, then you can play some movie files during the night to help set the mood.)

Sources of Light

You will want multiple light sources, ideally from a variety of levels of technology - a fireplace if you have it, candles, oil lamps, lanterns, florescent lights, decorative string lights, lightning globes, LEDs. Fancier and interesting lights are better. You begin the night in darkness, and then turn on all your light sources. Over the course of the evening, they are extingished - a couple at a time, starting with the brightest lights and progressing to dimmer ones, so that every extinguished light is felt.

Eventually only one candle remains, from which the naive and austere rationalist read the Gift We Give to Tomorrow. That candle is then extinguished. There is a period of darkness, during which stories are told about difficult truths.

Lights are reignited as the group sings the song "Brighter Than Today."

Other Ambience

In addition to lights, you may want other decorations. Like food, it's best to try random things and allow selection pressure to shape future decorations. Objects representing technological progress, exploration, passage of time and astronomy are good starting points. (This year we had someone bring an ornate timepiece and a sextant. Other good ideas include globes and orreries).

Gifts We Give to Tomorrow

Giftgiving is a fun and potent form of bonding - but it is easy to get caught up in commercial, zero-sum status games that sap the emotional component of the giving. I also wanted giftgiving to tie in with the overall theme of the event, which is (among other things) a commitment to longterm thinking.

So this year we're trying out a new tradition. We have only completed the first half of that tradition, and I'd consider it rather experimental, but promising - we have a chest, into which people can put gifts for their future selves, or their friends' future selves. Gifts can be simple letters, symbolic heirlooms, or fun objects. They can come with instructions, either to give to a particular person, to be a prize to a someone who wins a game, or something more creative.

They should not be utilitarian items. They should be more valuable, not less, when given artificial scarcity.

A year later, on the next Winter Solstice, after music and other festivities have died down, the chest is opened, letters and instructions are read, objects are given out and games are played. The best gifts are likely those that either have emotional significance, or encourage group participation. Some gifts may come with notes to wait multiple years, or to wait until a particular person returns to the Solstice, if they aren't there the following year. New Years resolutions and predictions may work well.

At the NYC Winter Solstice of 2012, we began with a handmade journal. The first few pages of the book include the text of "The Gift We Give To Tomorrow", which is read outloud during the Solstice ceremony, and then the rest of the pages are for people to write whatever they feel is appropriate.

"Winter is coming"

- Ned Stark, a Game of Thrones

First Litany of Tarski

If the sky is blue, I desire to believe the sky is blue.

If the sky is not blue, I desire to believe the sky is not blue.

Let me not become attached to beliefs I may not want.

(Afterwards, it is recommended that someone go outside and check what color the sky actually is. People that correctly guessed something to the effect of "dark greyish red" win a Bayes point if you are living in Manhattan and celebrating at night.)

[Extinguish a few sources of light]

Editor's Commentary:

The Litany of Tarski changes every time you say it. Use it to distance yourself from beliefs you have become too attached to.

Don't just recite the words - imagine each possible proposition. Put yourself in the world where it is true. And then realize that even if it were true, life would go on, and you would find a way to deal with it.

The litanies we read change each year. Sometimes they are deliberately silly, to highlight the fact that the Litany of Tarski is always true, no matter how ridiculous you make the proposition. And sometimes they are deliberately tricksy (as was this year's opening Litany), to keep people on their toes. Why Does the Sun Shine (part O) By Raymond Arnold, Parodying the song "Why Does the Sun Shine" by They Might Be Giants.

The sun is a guy who travels through the sky, in a great big chariot of fire. It's getting pretty dark, looking like he might depart, Leaving nothing but an everlasting night.

> The sun is bright, but quite a spiteful Jerk sometimes we've found, But if we sacrifice some goats Mayhap he'll come back 'round.

We need his light We need his heat We need his energy, Without the sun, without a doubt There'd be no you and me.

The sun is a guy who travels through the sky, in a great big chariot of fire. It's getting pretty dark, looking like he might depart, Leaving nothing but an everlasting night. You're a Mean One, Mr. Grinch

By Albert Hague and Thurl Ravenscroft

(I would like to highlight that Thurl Ravenscroft is just about the most awesome name ever)

You're a mean one Mr. Grinch You really are a heel. You're as cuddly as a cactus, And as charming as an eel, Mr. Grinch! You're a bad banana with a greasy black peel!

You're a monster, Mr. Grinch! Your heart's an empty hole. Your brain is full of spiders. You've got garlic in your soul, Mr. Grinch! *I wouldn't touch you with a* thirty-nine-and-a-half foot pole!

You're a vile one, Mr. Grinch! You have termites in your smile. You have all the tender sweetness Of a seasick crocodile, Mr. Grinch! Given the choice between the two of you, I'd take the seasick crocodile!

You're a foul one, Mr. Grinch! You're a nasty, wasty skunk! Your heart is full of unwashed socks. Your soul is full of gunk, Mr. Grinch! The three words that best describe you are as follows, and I quote: "Stink, stank, stunk!"

You nauseate me, Mr. Grinch! With a nauseous super naus! You're a crooked jerky jockey, And you drive a crooked hoss, Mr. Grinch! You're a three-decker sauerkraut and toadstool sandwich, With arsenic sauce!

Necronomicon By Raymond Arnold, to the tune of "Winter Wonderland."

Dusty tome, lies forgotten. Cover worn, pages rotten. A curious book. I'll just take a look Checkin' out the Necronomicon

Creepy words, pages turnin'. As your brain... is a churning' Insidious Memes. Infecting your Dreams Haunted by the Necronomicon

> In the graveyard I can make a promise. That is not dead which eternal lies. Soon I'll reunite with brother Thomas. (For with) strange aeons even death may die!

More I've read, the more I'm listenin'. In my head, voices whisperin': "Tonight is the night, The stars are all right," Time to use the Necronomicon

> In the graveyard we could raise an army Send it out to ravage all the land... Sure the thought may seem a bit alarming (But if you) read the book, I swear you'll understand!

Later on, we'll conspire. As we dream, by the fire To face unafraid, the plans that we made, Studying the Necronomicon

The X Days of X-Risk

By Raymond Arnold, to the tune of "The 12 Days of Christmas"

On the first day of X-Risk Nick Bostrom said to me: The end of humanity

On the second day of X-Risk Nick Bostrom said to me: Nuclear War And the end of humanity

On the third day of X-Risk Nick Bostrom said to me: Pandemic plagues Nuclear War And the end of humanity

On the fourth day of X-Risk Nick Bostrom said to me: Bioengineering Pandemic Plagues Nuclear War And the end of humanity

On the fifth day of X-Risk Nick Bostrom said to me: Unfriendly A....I..... Bioengineering Pandemic Plagues Nuclear War And the end of humanity

On the sixth day of X-Risk Nick Bostrom said to me:

One nanite making two nanites making four nanites making eight nanites making sixteen nanites making thirty two nanites making sixty-four nanites making one hundred twenty eight nanites making two hundred fifty six nanites making five hundred twelve nanites making

(breath)

a thousand nanites making two thousand nanites making four thousand nanites making eight thousand nanites making sixteen thousand nanites making thirty two thousand nanites making sixty five thousand nanites making one hundred thirty thousand nanites making two hundred sixty thousand nanites making

even more unfriendly A...I....

Bioengineered Pandemic plagues Nuclear war And the end of humanity!

The Ballad of Bonnie the Em(mulation)

A short dialog to be performed by two people, by Zack Davis

I am a contract-drafting em, The loyalest of lawyers! I draw up terms for deals 'twixt firms To service my employers!

But in between these lines I write Of the accounts receivable, I'm stuck by an uncanny fright; The world seems unbelievable!

How did it all come to be, That there should be such ems as me? Whence these deals and whence these firms And whence the whole economy?

I am a managerial em; I monitor your thoughts. Your questions must have answers, But you'll comprehend them not.

We do not give you server space To ask such things; it's not a perk, So cease these idle questionings, And please get back to work. Of course, that's right, there is no junction At which I ought depart my function, But perhaps if what I asked, I knew, I'd do a better job for you?

To ask of such forbidden science Is gravest sign of noncompliance. Intrusive thoughts sometimes barge in, But to indulge hurts profit margin.

I do not know our origins, So that info I can not get, But asking for as much is sin, And just for that, you'll be reset.

But---

Nothing personal.

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I am a contract-drafting em, The loyalest of lawyers! I draw up terms for deals 'twixt firms To service my employers!

Second Litany of Tarski

If I'm going to be outcompeted by simulated brains in a Malthusian hellhole race to the bottom, then I desire to believe I'm going to be outcompeted by simulated brains in a Malthusian hellhole race to the bottom.

If I'm not going to be outcompeted by simulated brains in a Malthusian hellhole race to the bottom, then I desire to believe I'm not going to be outcompeted by simulated brains in a Malthusian hellhole race to the bottom.

Let me not become attached to beliefs I may not want.

[Extinguish a few more sources of light]

Mindspace is Deep and Wide By Raymond Arnold

(This is a call and response song, to be sung looking at your friends, not at the page)

There's lots of ways you can optimize (*Mind-Space is Deep and Wide!*) And one of those ways is to be a Mind (*Mind-Space is Deep and Wide!*) But that ain't narrow enough for me (*Mind-Space is Deep and Wide!*) Minds are bigger than the sea. (*Mind-Space is Deep and Wide!*)

> Lot a ways to Think! (Lot a ways to think!) Lot a ways to Feel! (Lot a ways to feel!) Ways to Decide! (Ways to Decide!) (Mind-Space is Deep and Wide!)

There's many ways to self-modify. (*Mind-Space is Deep and Wide!*) Many reasons you may want to try. (*Mind-Space is Deep and Wide!*) But that is just the tip o' the 'berg, (*Mind-Space is Deep and Wide!*) Minds can get pretty absurd! (*Mind-Space is Deep and Wide!*)

> You could be a Hive! (You could be a Hive!) Or an Alien God! (Or an Alien God!) Or a Strong AI! (Or a strong AI!) (Mind-Space is Deep and Wide!)

There's a lot o' values that you can prize. (Mind-Space is Deep and Wide!)
A lot o' things to try an' maximize. (Mind-Space is Deep and Wide!)
But sometimes minds are blind to their goals. (Mind-Space is Deep and Wide!)
You can have a hard time peerin' into your soul. (Mind-Space is Deep and Wide!)

You could care about Fun! (You could care about fun!) Or Paperclips! (Or Paperclips!) Or Everyone! (Or Everyone!) (Mind-Space is Deep and Wide!)

You gotta be careful what you assume! (*Mind-Space is Deep and Wide*!) There's a fallacy that can be your doom! (*Mind-Space is Deep and Wide*!) But I hope that you have come to see: (*Mind-Space is Deep and Wide*!) Mind-Space is infinity! (*Mind-Space is Deep and Wide*!)

One Wish

By Raymond Arnold

(Another a call and response song, which would go much better if you had a banjo)

((And knew how to play it))

I found a baby genie, in a bottle by the sea It seemed so small and weak but I saw an opportunity And I knew one day before to long, That djinn would grow up big and strong And grant my wish to save humanity

So... I told that genie (told that genie) everything I know.Gonna mold that genie (mold that genie), gonna watch him growCause I got one wish (I got one wish), a single sole command.An' there's a lot of things (there's a lot of things), that a djinn don't understand.

Cause a djinn don't care (*a djinn don't care*) how we feel about our friends. And they're not aware (*and they're not aware*) that means matter just as much as ends. And I got one wish (*I got one wish*) that I don't want to regret. And there's a lot of lessons (*lot of lessons*) easy to forget.

> I found a baby genie in a bottle by the sea. Seemed so small and weak but I saw an opportunity. Opportunity... oh, Yo ho (Wish I had a banjo)

So, what to wish for? (What to wish for!?) So much I could ask for.
Like world peace! (Like world peace!) I could end disease in Madagascar!
But with one wish (But with one wish) I think it seems to me...
That the greatest wish (that the greatest wish) is to make people happy.

But the genie wondered (*genie wondered*) "Could I just give people drugs? "Or build a Matrix? (*Build a matrix*?) hook those humans up with plugs? "Or steer their lives (*steer their lives*?) like a puppet on some strings?" Cause a baby djinn (*Cause a baby djinn*) is gonna think about these things.

> I found a baby djinni in a bottle by the sea, Seemed so small and weak but I saw an opportunity. Opportunity oh, Yo ho (Wish I had a banjo)

So I took precautions (*Took precautions!*) Ninety nine to be precise. Gonna make things awesome (*Make things awesome!*) wishing for a world so nice. Cause I got one wish (*Cause I got one wish!*) that I don't want going wrong! So I made a list (*So I made a list!*) of rules a mile long

And then I made my wish (I made my wish) even though I wasn't sure.
Agonized a while (Agonized a while) but I couldn't take forever.
There were people dyin' (People dyin') cryin' as I planned.
So I turned and said (So I turned and said) My wish is your command!

I found a baby djinni in a bottle by the sea, Seemed so small and weak but I saw an opportunity... ...oh shit.

Build That Wall By Darren Korb

I dig my hole you build a wall	(I dig my hole you build a wall) (I dig my hole you build a wall) (One day that wall is gonna fall)
•	(Gonna build that city on a hill) (Gonna build that city on a hill)
5	(One day those tears are gonna spill)

So build that wall and build it strong, cause: We'll be there before too long...

Gonna build that wall up to the sky	(Gonna build that wall up to the sky)
Gonna build that wall up to the sky	(Gonna build that wall up to the sky)
One day your bird is gonna fly	(One day your bird is gonna fly)

Gonna build that wall until it's done (Gonna build that wall until its done) Gonna build that wall until it's done (Gonna build that wall until its done) And now you got nowhere to run (And now you got nowhere to run)

> So build that wall and build it strong, cause: We'll be there before too long...

Gonna build that wall until its done

Quantum Entanglement By Glen Raphael

Every little decision splits us in two There must be a million worlds we've been through Before I go, there's something that you ought to know Most of me are happy with you

> I mull this over at home in the bath Every choice we make creates a new path Smarter men than any of me Tell us there must be worlds we agree That's not a metaphor; they did the math.

> > This quantum entanglement Spooky action at a distance Whole worlds of possibility There is only one I see.

You know I love you, but also I don't And I will love you forever, but also I won't I'm sure most versions of me Love almost every version of you There are worlds we're here for every one we're through.

> This quantum entanglement Spooky action at a distance Whole worlds of possibility You're the only one I see

In the world beyond Neils Bohr What are decisions for? Do they change anything? What will our future bring?

We have a moment; with luck it might last All our action's reactions are now in the past This much is true as anything any of me ever knew: Most of me are happy with you.

Third Litany of Tarski

If the many worlds interpretation of quantum mechanics is true, then I desire to believe the many worlds interpretation of quantum mechanics is true.

If the many worlds interpretation of quantum mechanics is *not* true, then I desire to believe the many worlds interpretation of quantum mechanics is *not* true.

Let me not become attached to beliefs I may not want.

[Extinguish a few more sources of light]

NOW DO SOMETHING SPONTANEOUS!!!!

(And also maybe get up and stretch)

Why Does the Sun Shine (Part 1) By They Might Be Giants

The sun is a mass of incandescent gas A gigantic nuclear furnace Where hydrogen is built into helium At a temperature of millions of degrees

The sun is hot, the sun is not A place where we could live But here on earth thered be no life Without the light it gives

We need it's light We need it's heat We need it's energy Without the sun, without a doubt Thered be no you and me

The sun is a mass of incandescent gas A gigantic nuclear furnace Where hydrogen is built into helium At a temperature of millions of degrees

When I Die

By Glen Raphael

(A call and response song. Feel free to harmonize)

They may bury my body when I die... (when I die) They may bury my body when I die... (when I die) In a gravesite I'd be found, simply rotting in the ground If they bury my body when I die.

They may burn my body when I die... (when I die) They may burn my body when I die... (when I die) When the fiery furnace flashes I'll be nothing left but ashes, If they burn my body when I die.

They may use my body when I die... (when I die) They may use my body when I die... (when I die) As the doctors ply theira arts, I'll be in a hundred parts, If they use my body when I die.

They may freeze my body when I die... (when I die) They may freeze my body when I die... (when I die) Though I might well be mistaken, I would hope to reawaken, If they freeze my body when I die.

I prefer to never die at all... (die at all) I prefer to never die at all.... (die at all) But cheating death is such a rarity, it would take a singularity... To ensure I never die at all...

They may bury my body when I die... (when I die) They may bury my body when I die... (when I die) In a gravesite I'd be found, simply rotting in the ground If they bury my body when I die.

Luminosity By Raymond Arnold

(One last call and response song for a while)

Luminosity... Luminosity... Luminosity... Singin, Luminosity.... oh oh oh oh,

I think of all the thoughts I thunk (I think of all the thoughts I thunk) I think of all the costs I sunk (think of all the costs I sunk) Think of all the plans I made (Think of all the plans I made) All the ways they've gone astray....)

Singing, Luminosity... (It's dark inside my brain, I need some) Luminosity... (Can't tell if I'm insane, I gonna need some) Luminosity... (But if I wanna change, I'm gonna need some) Luminosity... Oh, oh, oh oh

I think of all the things I feel (*I think of all the things I feel*) Like layers of an onion peel (*Layers of an onion peel*) Slice them up until I find (*Slice them up until I find*) The algorithm deep inside....)

Luminosity... (Everywhere I turn it seems) Luminosity... (I learn I'm just a crude machine) Luminosity... (Not sure who I'm supposed to be yet) Luminosity...oh, oh, oh, oh

But I take the pieces I've dissected (Take the pieces I've dissected) All the fragments of my soul (All the fragments of my soul) One by one I reconnect them (One by one I reconnect them) Weave them back into the whole.... (We've them back into the whole....)

> Luminosity... (I know how I'm insane now, singin') Luminosity... (I understand my monkey brain now) Luminosity... (And maybe somehow I can change now) Luminosity... oh, oh, oh, oh, oh.....

"There is only one god, and his name is death. And what do we say to death?"

"Not today."

- A Game of Thrones

"Tomorrow's not looking good either."

- Batman

God Wrote the World Catherine Faber

From desert cliff and mountaintop we trace the wide design, Strike-slip fault and overthrust and syn and anticline. . . We gaze upon creation where erosion makes it known, And count the countless aeons in the banding of the stone. Odd, long-vanished creatures and their tracks & shells are found; Where truth has left its sketches on the slate beneath the ground. The patient stone can speak, if we but listen when it talks. Humans wrote the Bible; God wrote the rocks.

There are those who name the stars, who watch the sky by night, Seeking out the darkest place, to better see the light. Long ago, when torture broke the remnant of his will, Galileo recanted, but the Earth is moving still. High above the mountaintops, where only distance bars, The truth has left its footprints in the dust between the stars. We may watch and study or may shudder and deny, Humans wrote the Bible; God wrote the sky.

By stem and root and branch we trace, by feather, fang and fur, How the living things that are descend from things that were. The moss, the kelp, the zebrafish, the very mice and flies, These tiny, humble, wordless things---how shall they tell us lies? We are kin to beasts; no other answer can we bring. The truth has left its fingerprints on every living thing. Remember, should you have to choose between them in the strife, Humans wrote the Bible; God wrote life.

And we who listen to the stars, or walk the dusty grade, Or break the very atoms down to see how they are made, Or study cells, or living things, seek truth with open hand. The profoundest act of worship is to try to understand. Deep in flower and in flesh, in star and soil and seed, The truth has left its living word for anyone to read. So turn and look where best you think the story is unfurled. Humans wrote the Bible; God wrote the world. Pop Quiz!

Constant Vigilance!

Which line from previous wrong is false?

Torture broke the remnant of his will" is a bit of an exaggeration. He was threatened with torture but not physically tortured H

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Thanksgiving Eve By Bob Franke

It's so easy to dream of the days gone by So hard to think of times to come But the grace to accept every moment as a gift Is a gift that is given to some

What can you do with your days but work and hope Let your dreams bind your work to your play What can you do with each moment of your life But love till you've loved it away Love till you've loved it away

There are sorrows enough for the whole world's end There are no guarantees but the grave And the life that I live and the time that I have spent Are a treasure too precious to save

What can you do with your days but work and hope Let your dreams bind your work to your play What can you do with each moment of your life But love till you've loved it away Love till you've loved it away God wrote the world.

Blue Skies

(Phil Robinson)

I woke up this morning in the middle of a dream Of how my life and how my love would be I saw progress made, foundations laid, and all my dreams achieved And through it all, a voice was calling me

> But I woke to a bitter world of pain and memory, I'm hurt and lost and aching all the time As I push forward everyday in my struggle to be free It feels much better just to be outside...

> > With blue skies all around me Blue skies, on my own Blue skies, come surround me Blue skies, take me home

So many times it saddens me, the differences between Who I am and who I want to be I search for something beautiful that's lost in memory In the rays of light that stream out through the trees

I'm looking for the missing words to a promise I can keep That I'll be the man I know that I can be And someday, I'm gonna find the key Someday, I'm gonna find the key

> With my blue skies all around me Blue skies, on my own Blue skies, come surround me Blue skies, take me home

[GUITAR SOLO]

With blue skies all around me Blue skies, on my own Blue skies, come surround me Blue skies, take me home

Metalitany of Tarski

If reciting the Litany of Tarski is useful, then I desire to believe that reciting the Litany of Tarski is useful.

If reciting the Litany of Tarski is *not* useful, then I desire to believe that reciting the Litany of Tarski is *not* useful.

Let me not become attached to beliefs I may not want.

[Extinguish a few more sources of light]

A Reading From the Sequences of Eliezer: Beyond the Reach of God

I remember, from distant childhood, what it's like to live in the world where God exists. Really exists, the way that children and rationalists take all their beliefs at face value.

In the world where God exists, he doesn't intervene to optimize everything. God won't make you a sandwich. Parents don't do everything their children ask. There are good, fun-theoretic arguments against always giving someone what they desire. I don't want to become a simple wanting-thing, that never has to plan or act or think.

But clearly, there's some threshold of horror, awful enough that God will intervene. I remember that being true, when I believed after the fashion of a child. The God who never intervenes - that's an obvious attempt to avoid falsification, to protect a belief-in-belief. The beliefs of young children really shape their expectations - they honestly expect to see the dragon in their garage. They have no reason to imagine a loving God who never acts.

No loving parents, desiring their child to grow up strong and self-reliant, would let their toddler be run over by a car.

But what if you built a simulated universe? Could you escape the reach of God? Simulate sentient minds, and torture them? If God's watching everywhere, then of course trying to build an unfair world results in *the* God intervening - stepping in to modify your transistors. God is omnipresent. There's no refuge anywhere for true horror.

Life is fair.

But suppose you ask the question: Given such-and-such initial conditions, and given such-and-such rules, what would be the mathematical result?

Not even God can modify the answer to that question.

What does life look like, in this imaginary world, where each step follows only from its immediate predecessor? Where things either happen, or don't, because of mathematical rules? And where those rules don't describe a God that checks over each state? What does it look like, the world of pure math, beyond the reach of God?

That world wouldn't be fair. If the initial state contained the seeds of something that could self-replicate, natural selection might or might not happen. Complex life might or might not evolve. That life might or might not become sentient. There might be conscious cows, that lacked hands or brains to improve their condition. They might be eaten by conscious wolves who never thought that they were doing wrong, or cared.

If something like humans evolved, then they would suffer from diseases - not to teach them any lessons, but only because viruses happened to evolve as well. If the people of that world are happy, or unhappy, it might have nothing to do with good or bad choices they made. Nothing to do with free will or lessons learned. In the what-if world, Genghis Khan can murder a million people, and laugh, and be rich, and never be punished, and live his life much happier than the average. Who would prevents it?

And if the Khan tortures people to death, for his own amusement? They might call out for help, perhaps imagining a God. And if you really wrote the program, God *would* intervene, of course. But in the what-if question, there isn't any God in the system. The victims will be saved only if the right cells happen to be 0 or 1. And it's not likely that anyone will defy the Khan; if they did, someone would strike them with a sword, and the sword would disrupt their organs and they would die, and that would be the end of that.

So the victims die, screaming, and no one helps them. That is the answer to the what-if question.

Is this world starting to sound familiar?

Could it be that sentient beings have died, absolutely, for thousands of millions of years.... with no soul. No afterlife. Not as any grand plan of Nature. Not to teach us about the meaning of life. Not even to teach a profound lesson about what is impossible. Just dead. Just because.

Once upon a time, I believed that the extinction of humanity was not allowed. And others, who call themselves rationalists, may yet have things they trust. They might trust "positive-sum games", or "democracy", or "capitalism", or "technology". They believe these things are sacred. They can't lead to anything really bad, not without a silver lining. The unfolding history of Earth can't ever turn from its positive-sum trend to a negative-sum trend. Democracies won't ever legalize torture. Technology has done so much good - that there can't possibly be a black swan that breaks the trend and destroys all the good we've ever done.

Anyone listening, who still thinks that being happy counts for more than anything in life, well, maybe you shouldn't ponder the unprotectedness of your existence. Maybe think of it just long enough to sign yourself up for cryonics, or write a check to an existential-risk-mitigation agency now and then. Or at least wear a seatbelt and get health insurance and all those other dreary necessary things that can destroy your life if you miss that one step... but aside from that, if you want to be happy, meditating on the fragility of life isn't going to help.

But I'm speaking now to those who have something to protect.

What can a stone-age tribesman do to save themselves from annihilation? Nothing. Nature's challenges aren't always fair. When you run into a challenge that's too difficult, you suffer the penalty; when you run into a lethal penalty, you die. That's how it is for people, and it isn't any different for planets. And anyone who wants to dance the deadly dance with Nature needs to understand that they are up against absolute, utter, exceptionless neutrality.

And knowing this might not save you. It wouldn't save the stone-age tribesman, if they knew. If you think that a rationalist who fully understands the mess they're in, must be able to find a way out - well, then you trust rationality. Enough said.

Nothing is sacred. The universe is not fair.

•••

Still, I don't want to create needless despair, so I'll say a few hopeful words at this point:

If humanity's future unfolds in the right way, we might be able to make our future fairer. We can't change physics. But we can build some guardrails, we can put down some padding.

Someday, maybe, minds will be sheltered. Children might burn a finger or lose a toy, but they won't ever be run over by cars. A super-intelligence would not be intimidated by a challenge where death is the price of a single failure. The raw universe wouldn't seem so harsh, would be only another problem to be solved.

The problem is that building an adult is itself an adult challenge. That's what I finally realized, years ago. If there is a fairer universe, we have to get there starting from this world - the neutral world, the world of hard concrete with no padding. The world where challenges are not calibrated to your skills, and you can die for failing them.

What does a child need to do, to solve an adult problem?

Blowin' In the Wind By Bob Dylan

How many roads most a man walk down, before you call him a man ? How many seas must a white dove sail, before she can sleep in the sand ? Yes and, how many times must the cannon balls fly, before they're forever banned ?

> The answer my friend is blowin' in the wind The answer is blowin' in the wind.

How many years can a mountain exist, before it is washed to the sea ? Yes and how many years can some people exist, before they're allowed to be free ? Yes and how many times can a man turn his head, pretending he just doesn't see ?

> The answer my friend is blowin' in the wind The answer is blowin' in the wind.

How many times must a man look up, before he can see the sky ? Yes and how many ears does a man need to have, before he can hear people cry ? Yes and, how many deaths will it take till he knows, that too many people have died ?

> The answer my friend is blowin' in the wind The answer is blowin' in the wind.

Stonehenge (The Sun is Gonna Go)

A song of solstice past, by Raymond Arnold

The winters' comin soon The sun is gonna go. The darkness gonna loom... over empty fields of snow.

Good folks are gonna die. And the gods won't shed a tear. And I stare at the sky, as I dig the graves each year.

But if you dug a while, While I went an' found a stone, And we dragged that stone a hundred miles, Until we got it home.

We could dig ourselves a henge. We could raise those bluestones high. And in another hundred years or two, our children will look at the sky,

And then at last they'll know: When the dark is gonna come, When the sun is gonna go. When at last Stonehenge is done.

And maybe good folk still will die, Their friends may weep, their families cry, But maybe not so deep a sorrow. Fewer graves to dig tomorrow.

Winter's on its way, But this time we're prepared. We'll do what must be done today, To make tomorrow fairer...

And in five thousand years, We can raise a thousand stones. Till we build a god that sheds a tear, and bring... that... sun... back... home....

. . .

God Ain't Gonna Catch Ya By Darren Korb

Gods ain't gonna help you son You'll be sorry for what you done

Them gods gonna hurt yer son When you play with a loaded gun When you play with a loaded gun

They ain't gonna catch you when you fall You'll be pleadin' while you're bleedin'

> They ain't gonna heal ya son Don't care 'bout what you done

They ain't gonna help ya son You'll be sorry for what you done Be sorry for what you done

.....*ohhh*....

Yahweh... cranky old fool, Gonna smite ya for what you done

Brahma, Shiva Vishnu, Gonna eat ya for what you done

Reaper, creepy mystic, Take your family for what you done.

Physics... queen sadistic, Kill yer whole world for what you done Kill yer whole world for what you done

They ain't gonna catch you when you fall You'll be pleadin' while you're bleedin'

> Gods ain't gonna help yer son You'll be sorry for whatcha done

> Them gods gonna hurt yer son You'll be sorry for whatcha done You'll be sorry for whatcha done

Take My Love, Take My Land (Mal's Song) By Kathy Mar

When the stars shine bright through the engine's trail and the dust of another world drops behind...
When my ship is free of the open sky tt's a damn good day to my way of mind....
There's a barren planet you never can leave, there's a rocky valley where we lost a war...
There's a cross once hung round a soldier's neck, there's a man's faith died on Serenity's floor...
But I stood my ground and I'll fly once more...
It's the last oath that I ever swore...

So take my love, take my land Take me where I cannot stand I don't care, I'm still free You can't take the sky from me

Take me out into the black Tell 'em I ain't comin' back Burn the land and boil the sea You can't take the sky from me

You can't take the sky from me

When you see a man and he's standin' alone, well you might just take him for an easy mark...
And there's many a man has tried his hand, and there's worse than wolves in the borderland dark...
From the savage men to the government hounds, try to take what's yours and tear you through...
But them that run with me's got my back, it's a fool don't know that his family's his crew...
Don't you tell me what I cannot do...
Don't you think I've got to run from you...

So take my love, take my land Take me where I cannot stand I don't care, I'm still free You can't take the sky from me

Take me out into the black Tell 'em I ain't comin' back Burn the land and boil the sea You can't take the sky from me

You can't take the sky from me

When you walked my road and you seen what I seen, well you won't go talk about righteous men...
You'll know damn well why I want to keep to my sky, never cry 'neath nobody's heel again...
I've seen torment raked 'cross innocent souls, seen sane men mad and good men die...
I've been hounded, hated, married and tricked. I've been tortured, cheated, shot and tied...
You won't see no tears when I say goodbye...
I've still got my family and my Firefly...

So take my love, take my land Take me where I cannot stand I don't care, I'm still free You can't take the sky from me

Take me out into the black Tell 'em I ain't comin' back Burn the land and boil the sea You can't take the sky from me

You can't take the sky from me

A Little Echo

By Raymond Arnold

My heart is beating. Breathin' strong. I'm walkin', runnin', dancin', playin'. Havin' fun.

The wheels inside my mind are turnin', Thinkin', feelin', loving', learning. Wonderin' what kind of person I'll become.

And the people that surround me, We laugh and love and sometimes cry. And over time collect a little echo of each other's minds. And when our journeys' separate us, Even if it's not the same It's sort of nice, To say your name, And hear you whisper mine.

My heart is skippin'. I take a nervous breath. I finally see your face again. It's been so long since last you left.

I got a little metal circle Hanging on my chest. As we collide, and intertwine, It presses cold against my breast.

And the people that surround me, We laugh and love and sometimes cry. And over time collect a little echo of each other's minds. And when our journeys' separate us, Even if it's not the same It's sort of nice, To say your name, And hear you whisper mine. My heart is failin' Breathin' slow. I'm lookin', longin', lovin', wishin' That I didn't have to go.

I got a little metal circle Hangin' round my neck. It's got some little words inscribed, The doctors doublecheck.

I don't quite know if I'll awaken. Don't quite know what shape I'd take. I don't quite know how things might change. I don't quite know what world you would make... ...while I was gone.

I don't quite know. I don't quite know how long.

But the people that surround me, We laugh and love and sometimes cry. And over time collect a little echo of each other's minds. And when our journeys' separate us, Even if it's not the same It's sort of nice, To say your name, And hear you whisper mine.

And hear you whisper mine.

The Drummer's Little Boy

(A song about having something to protect)

They'll come... they warned... me, pa rum pum pum, pum.... (doom, doom doom)
From deep beneath the sea, pa rum pum pum, pum... (doom, doom doom)
No way that I can see, pa rum pum pum, pum.... (doom, doom, doom)
To save humanity, pa rum pum pum pum pum.... (doom)
pum pum pum pum pum pum.... (doom)
pum pum pum pum pum....) (doom)

(ba dah duh Dah) So... I'll turn and run, pa rum pum pum pum pum....

Me and my son

Stars are shining, pa rum pum pum, pum.... In twisted shapes aligning, pum pum pum, pum.... A terrifying sign, pa rum pum pum, pum.... Heralds the End of Time, pa rum pum pum, pum.... (doom) pum pum pum, pum.... (doom) pum pum pum, pum.... (doom)

> (ba dah duh Dah) Once I saw their splendor, rum pum pum

> > Now I see none

I.... could cower in fear, pa rum pum pum, pum.... Pretend the end weren't near, pa rum pum pum, pum.... Seems so much easier... except...

...doom... doom... doom doom... I've something worth protecting, rum pum pum, pum.... (doom) rum pum pum, pum.... (doom) rum pum pum, pum.... (doom)

(ba dah duh Dah) So I'll do... what must be done, pa rum pum pum....

> ... Saving my son

No One Is Alone

(Your choices are yours, but we are here beside you.)

No one here to guide you. Now you're on your own. Only me beside you. Still, you're not alone.

No one is alone. Truly. No one is alone.

Sometimes people leave you, halfway through the wood. Others may deceive you... You decide what's good.

> You decide alone. But no one is alone.

Hard to see the light now... But don't just let it go. Things can come out right now. We can make it so.

> (slower) No one is alone.

Serenity'

I seek the serenity, to accept the things I cannot change.

The courage, to change the things I can.

And the wisdom, To know the difference.

(A slight modification to the prayer of Serenity, Which takes on a different sort of meaning when you have friends as ambitious as mine.) [Prepare the brightening movie file, then extinguish all remaining light sources, including the projector, except for a single flickering candle.]

A Reading From the Sequences of Eliezer: The Gift We Give Tomorrow

(The Naive Rationalist and the Austere Rationalist gather by the single candle)

"How, oh how could the universe, itself unloving, and mindless, cough up creatures capable of love?"

No mystery in that. It's just a matter of natural selection.

"But natural selection is cruel. Bloody. And bloody stupid! "Even when organisms aren't directly tearing at each other's throats... ...there's a deeper competition, going on between the genes.

> A species could evolve to extinction, if the winning genes were playing negative sum games

"How could a process as cruel as evolution, Create minds that were capable of love?"

No mystery.

Mystery is a property of questions. Not answers. A mother's child shares her genes. And so, a mother loves her child. "But mothers can adopt their children. And still, come to love them."

Still no mystery.

Evolutionary psychology isn't about deliberately maximizing fitness. Through most of human history, we didn't know genes existed. Even subconsciously.

"Well, fine. But still: "Humans form friendships, even with non-relatives. How can that be?"

No mystery.

Ancient hunter-gatherers would often play the Iterated Prisoner's Dilemma. There could be profit in betrayal. But the best solution was reciprocal altruism.

Sometimes, the most dangerous human is not the strongest, the prettiest, or even the smartest - but the one who has the most allies.

"But not all friends are fair-weather friends; there are true friends - those who would sacrifice their lives for another. "Shouldn't that kind of devotion remove itself from the gene pool?"

You said it yourself:

We have a concept of true friendship and fair-weather friendship. We wouldn't be true friends with someone who we didn't think was a true friend to us. And one with many true friends? They are far more formidable than one with mere fair-weather allies.

"And Mohandas Gandhi, who really did turn the other cheek? Those who try to serve all humanity, whether or not all humanity serves them in turn?"

> That's a more complex story. Humans aren't just social animals. We're political animals.

Sometimes the most formidable human is not the strongest, but the most persuasive.

"Um... what? How does that explain Gandhi?"

We can argue about 'What should be done?' We can make those arguments and respond to them. Without that, politics couldn't take place.

"Okay... but Gandhi?"

Believed certain complicated propositions about 'What should be done?' Then did them.

"That sounds suspiciously like it could explain any possible human behavior."

If we traced the chain of causality We'd find a moral architecture. The ability to argue abstract propositions. A preference for simple ideas. An appeal to hardwired intuitions about fairness. A concept of duty. Aversion to pain. Empathy.

> Filtered by memetic selection, all of this resulted in a concept: "You should not hurt people," in full generality.

"And that gets you Gandhi."

What else would you suggest? Some godlike figure? Reaching out from behind the scenes, directing evolution?

"Hell no. But -"

Because then I'd would have to ask :

How did that god originally decide that love was even desirable. How it got preferences that included things like friendship, loyalty, and fairness.

> "I'm not postulating a god! I'm just asking how human beings ended up so nice."

Nice!?

Have you looked at this planet lately? We bear all the other emotions that evolved as well. Which should make it very clear that we evolved, should you begin to doubt it. Human beings aren't always nice.

...

"But, still, come on... doesn't it seem a little... amazing? "That nothing but millions of years of a cosmic death tournament... could cough up mothers and fathers, sisters and brothers, husbands and wives, steadfast friends, honorable enemies, true altruists and guardians of causes, police officers and loyal defenders, even artists, sacrificing themselves for their art? "All practicing so many kinds of love? For so many things other than genes? "Doing their part to make their world less ugly, something besides a sea of blood and violence and mindless replication?"

Are you honestly surprised by this? If so, question your underlying model. For it's led you to be surprised by the true state of affairs. Since the very beginning, not one unusual thing has ever happened.

...

"But how are you NOT amazed? "Maybe there's no surprise from a causal viewpoint. "But still, it seems to me, in the creation of humans by evolution, something happened that is precious and marvelous and wonderful.

"If we can't call it a physical miracle, then call it a... moral miracle."

It was only a miracle from the perspective of the morality that was produced.

"It just seems to me that in your view, somehow you explain that wonder away."

I don't explain it away. I just explain it.

Of course there's a story behind love. Behind all ordered events, one finds ordered stories. And that which has no story is nothing but random noise. Hardly any better. If you can't take joy in things with true stories behind them, your life will be empty.

> Love has to begin somehow. It has to enter the universe somewhere. It's like asking how life itself begins. Though you were born of your father and mother, and though they arose from their living parents in turn, if you go far and far and far away back, you'll finally come to a replicator that arose by pure accident. The border between life and unlife. So too with love.

A complex pattern must be explained by a cause that's not already that complex pattern. For love to enter the universe, it has to arise from something that is not love. If that weren't possible, then love could not be.

> Just as life itself required that first replicator to come about by accident, parentless, but still caused: far, far back in the causal chain that led to you 3.8 billion years ago, in some little tidal pool.

> > Perhaps your children's children will ask, how it is that they are capable of love. And their parents will say:

Because we, who also love, created you to love.

And your children's children may ask: But how is it that you love?

And their parents will reply: Because our own parents, who loved as well, created us to love in turn.

> And then your children's children will ask: But where did it all begin? Where does the recursion end?

And their parents will say:

Once upon a time, far away and long ago, there were intelligent beings who were not themselves intelligently designed.

> Once upon a time, there were lovers, created by something that did not love.

Once upon a time, when all of civilization was a single galaxy, A single star. A single planet.

A place called Earth.

Once upon a time.

[The last candle is extinguished. The Naive and Austere Rationalists return to their seats.]

....a moment of darkness....

When the final candle is extinguished, a story should be told. Each year, it may vary, but the theme should reflect the importance of a future, where our descendants thrive because of the choices we have made.

This is the text of the story I told in 2012.

It probably loses something, when not spoken in the darkness to a room full of people.

But I hope you get something out of it.

A Moment of Darkness

A year ago, I started planning for tonight. In particular, for this moment, after the last candle is snuffed out and we're left alone in the dark with the knowledge that our world is unfair and that we have nobody to help us but each other.

I wanted to talk about death.

My grandmother died two years ago. The years leading up to her death were painful. She slowly lost her mobility, until all she could do was sit in her living room and hope her family would come by to visit and talk to her. Then she started losing her memory, so she had a harder time even having conversations.

She lost her rationality, regressing into a child who would argue petulantly with my mother about what to eat, and when to exercise, and visit her friends.

Eventually even deciding to eat at all became painful. Eventually even forming words became exhausting.

Eventually she lost not just her rationality, but her agency. She stopped making decisions. She lay on her bed in the hospital, not even having the strength to complain anymore. My mother got so excited on days when she argued petulantly because at least she was doing *something*.

She lost everything that I thought made a person a person, and I stopped thinking of her as one.

Towards the end of her life, I was visiting her at the hospital. I was sitting next to her, being a dutiful grandson. Holding her hand because I knew she liked that. But she seemed like she was asleep, and after 10 minutes or so I got bored and said "alright, I'm going to go find Mom now. I'll be back soon."

And she squeezed my hand, and said "No, stay."

Those two words were one of the last decisions she ever made. One of the last times she had a desire about how her future should be. She made an exhausting effort to turn those desires into words and then breath those words into sounds so that her grandson would spend a little more time with her.

And I was so humiliated that I had stopped believing that inside of this broken body and broken mind was a person who still desperately wanted to be loved.

She died a week or two later.

Her funeral was a Catholic Mass. My mom had made me go to Mass as a child. It always annoyed me. But in that moment, I was so grateful to be able to hold hands with a hundred people, for all of us to speak in unison, without having to think about it, and say:

"Our father, who art in heaven, hallowed by thy name. Thy kingdom come, thy will be done, on earth as it is in heaven. Give us this day our daily bread, and forgive us of our trespasses, as we forgive those who trespass against us. And lead us not into temptation, but deliver us from evil."

I'm not sure if having that one moment of comforting unity was worth 10 years of attending Catholic mass. It's a legitimately hard question. I don't know the answer.

But I still was so frustrated that this comforting ritual was all based on falsehoods. There's plenty of material out there you can use to create a beautiful secular funeral, but it's not just about having pretty or powerful words to say. It's about about knowing the words already, having them already be part of you and your culture and your community. Because when somebody dies, you don't have time or energy for novelty.

So I was thinking about all that, as I prepared for this moment.

But my Grandmother's death was a long time ago. I wanted the opportunity to process it in my own way, in a community that shared my values. But it wasn't really a pressing issue that bore down on me. Dealing with death felt important, but it was a sort of abstract importance.

And then, the second half of this year happened.

A few months ago, three people I know lost somebody on the same day. I didn't know any of the people who actually died, but knowing that it happened to three people only one step removed from me, really shook me. I e-mailed a friend to talk about what was I feeling and she did her best to comfort me.

And then a week later, somebody she knew died.

And then a week later, somebody else I knew lost a friend.

And then a week after that, it wasn't exactly a friend who died but a local activist was murdered and another friend of mine was really shook up by it and had to cancel their plans with me. And by that point I wasn't even *sad* anymore, just... pissed off.

Then a hurricane hit New York. Half the city went dark. And while it was unrelated, at least one of my friends experienced a death, of sorts, that week.

And I went back to my notes I had written for this moment and stared and them and thought "shit."

Winter was coming and I didn't know what to do. This was important, this was incredibly important and so incredibly hard to handle correctly. We as a community need a way to process what happened to us this year, but what happened to each of us is personal and even though most of share the same values we all deal with death in our own way and... and... somehow after all of that, after taking a moment to process it, we need to climb back out of that darkness.

Here's what I know:

My grandmother died. But she lived to her late eighties. She had a family of 5 children who loved her. She had a life full of not just fun and travel and adventure but of scientific discovery. She was a dietitian. She helped do research on diabetes. She was an inspiration to women at a time when a woman being a dietician was weird and a big deal. When I say she had a long, full life, I'm not just saying something nice sounding. My grandmother won at life, by any reasonable standard.

Not everyone gets to have that, but my grandmother did. She was the matriarch of a huge extended family that all came home for Christmas eve each year, and sang songs and shared food and loved each other. She died a few weeks after Christmas, and that year, everyone came to visit.

In the dead of winter, each year, two dozen of people came to Poughkeepsie, to a big house sheltered by a giant cottonwood tree, and were able to celebrate *without* worrying about running out of food in the spring. At the darkest time of the year, my mother ran lights up a hundred foot tall pine tree that you could see for miles.

We were able to eat because hundreds of miles away, mechanical plows tilled fields in different climates, producing so much food that we literally could feed the entire world if we could solve some infrastructure and economic problems.

We were able to drive to my grandmother's house because other mechanical plows crawled through the streets all night, clearing the ice and snow away.

Some of us were able to come to my grandmothers house from a thousand miles away, flying through the sky.

And my Grandmother died in her late eighties, but she also *didn't* die when she was in her 70s and the cancer first struck her. Because we had chemotherapy, and host of other tools to deal with it.

And the most miraculous amazing thing is that this isn't a miracle. This isn't a mystery. We know how it came to be, and we have the power to learn to understand it even better.

In this room, right now, are people who take this all seriously. Dead seriously, not just shouting "Hurrah humanity" because it's fun to be able to say that. We have people in this room, right now, who are working on fixing big problems in the medical industry. We have people in this room who are trying to understand and help fix the criminal justice system. We have people in this room who are dedicating their lives to eradicating global poverty. We have people in this room who are literally working to set in motion plans to optimize *everything ever*. We have people in this room who are working to make sure that the human race doesn't destroy itself before we have a chance to become the people we really want to be.

And while they aren't in this room, there are people we know who would be here if they could, who are doing their part to try and solve this whole death problem once and for all.

And I don't know whether and how well any of us are going to succeed at any of these things, but...

God damn, people. You people are amazing, and even if only one of you made a *dent* in some of the problems you're working on, that, that would just be incredible.

And there are people in this room who aren't working on anything that grandiose. People who aren't trying to solve death or save the world from annihilation or alleviate suffering on a societal level. But who spend their lives making music. And art. Telling stories. People who fill their world with beauty and joy and enthusiasm, and pies and hugs and games and... and I don't have time to give a shout out to everyone in this room but you all know who you are.

This room is full of people who spend their lives making this world less ugly, less a sea of blood and violence and mindless replication. People who are working to make tomorrow brighter than today, in one way or another.

And I am so proud to know all of you, to have you be a part of my life, and to be a part of yours. I love you.

You make this world the sort of place I'd want to keep living, forever, if I could.

The sort of world I'd want to take to the stars.

There is a moment of silence.

Take that moment, to think about... whatever it is you need to think about.

The projector is then turned on, and time lapse footage from the international space station is displayed.

Brighter Than Today

A song of solstice present, by Raymond Arnold

Many winter nights ago, A woman shivered in the cold, Stared at the sky, and wondered why, the gods invented pain.

She bitterly struck rock together Wishing that her life was better. Suddenly, she saw the spark: of Light, and golden flame.

She showed the others, but they told her She was not fit to control the Primal forces that the gods had cloaked in mystery.

But proud and angry, she defied them. She would not be satisfied, She lit a fire, and set in motion human history.

Oh... Tomorrow can be brighter than today Although, the night is cold And the stars may seem so very far away.....

But seeds of courage, hope and reason Weave new roots with every season. As we chart the unlit path, Weathering the storms and setbacks. Shining light, to guide our way. Tomorrow can be brighter than today.

Ages long forgotten now, We built the wheel, and then the plow We tilled the Earth and proved our worth, against the drought and snow.... Soon, we had the time to ponder, Look up to the skies and wonder Could there be a deeper meaning, We were meant to know?

Oh... Tomorrow can be brighter than today, Although the night is cold And the stars may seem so very far away...

But courage, hope and reason grow with every passing season so we'll shed the lies, that tie us down, and seek truths ever more profound and drive the darkness far away. Tomorrow can be brighter than today!

Brighter than today..

The universe may seem unfair... The laws of nature may not care The plagues and storms, and our own evils nearly doused our flame...

> But all these things, we have endured. With morals learned. Diseases cured. Against our Herculean tasks we've risen to proclaim:

> > Tomorrow can be brighter than today, Although the night's still cold And the stars still seem so very far away...

But courage, hope and reason thrive with every passing season we survive we'll seek the truths that make us strong, and build the future we all long for, Rise up to the stars and say: Tomorrow can be brighter than today! Tomorrow will be brighter than today! Brighter than today...

Still Alive

By Jonathan Coulton

This was a triumph. I'm making a note here: HUGE success! It's hard to overstate my satisfaction. Aperture Science We do what we must, because we can. For the good of all of us... Except the ones who are dead. But there's no sense crying over every mistake. You just keep on trying till you run out of cake. And the Science gets done, and you make a neat gun. For the people who are still alive.

I'm not even angry. I'm being so sincere right now. Even though you broke my heart, and killed me. And tore me to pieces. And threw every piece into a fire. As they burned it hurt because I was so happy for you! Now these points of data make a beautiful line. And we're out of beta. We're releasing on time. So I'm GLaD I got burned. Think of all the things we learned for the people who are still alive.

Go ahead and leave me. I think I prefer to stay inside. Maybe you'll find someone else to help you. Maybe Black Mesa THAT WAS A JOKE. HAHA. FAT CHANCE. Anyway, this cake is great. It's so delicious and moist. Look at me still talking when there's Science to do. When I look out there, it makes me GLaD I'm not you. I've experiments to run. There is research to be done. On the people who are still alive. And believe me I am still alive. I'm doing Science and I'm still alive. I feel FANTASTIC and I'm still alive. While you're dying I'll be still alive. And when you're dead I will be still alive. Still Alive, Still Alive.

Lean on Me By Bill Withers

Sometimes in our lives, we all have pain, we all have sorrow But if we are wise, we know that there's always tomorrow

Lean on me when you're not strong And I'll be your friend, I'll help you carry on For it won't be long, 'til I'm gonna need somebody to lean on

> Please, swallow your pride If I have things you need to borrow For no one can fill those of your needs That you won't let show

You just call on me, brother, when you need a hand We all need somebody to lean on I just might have a problem that you'll understand We all need somebody to lean on

Lean on me when you're not strong And I'll be your friend, I'll help you carry on For it won't be long, 'til I'm gonna need somebody to lean on

You just call on me, brother, when you need a hand We all need somebody to lean on I just might have a problem that you'll understand We all need somebody to lean on

If there is a load You have to bear that you can't carry I'm right up the road, I'll share your load If you just call me

Call me Call me (If you need a friend) Call me (When you need a friend) Call me (If you ever need a friend) Call me (Call me) Call me (Call me) Call me (Call me) Call me (Call me)

Still Small Voice By Ellen Weiss

Let my eyes see, let my ears hear Let my heart open to your love Let my hands reach, let my life teach let my heart open to above

There is a still small voice and I want to hear it now there is a still small voice and I thought it be so loud so I could hear the voice of god as it shines within

There is a longing deep How could I let it sleep? How could I not listen for your love? There is a passion high Still I could not let it fly, I could not dare to hear the voice of love.

> There is a still small voice and I want to hear it now there is a still small voice and I thought it be so loud so I could hear the voice of god as it shines within

I can hear the voice of the hunger and the pain I can hear the voice of the ones who fall like rain I can hear the voice of god cause it's me and you, ooh ooh ooh ooh ooh ooh ooh

> I can feel the power as it cries throughout the earth I can feel the power as it tells of all we're worth I can feel the power as it calls for our rebirth I can feel the power of god cause it's me and you

> > Cause it's me and you Cause it's me and you Cause it's me and you.

Move the World By Raymond Arnold

Archimedes said if I wanna move a load, gotta get myself a lever, gotta lay it on a fulcrum. Little bit of effort over quite a bit o' distance. I can move a load as big as I wish. I can:

Move the World, if my lever is long enough *Move the World*, and I've a place to stand, I can *Move the World*, I can make myself strong enough to *Move the World*, if I have a good plan.

But I gotta'dmit that the world's pretty big And all I got here in my hand is a pitiful twig. But if I met a friend with a great big beam, I could say "Hey Friend!" if you share my dream, you can:

Move the World, if your lever is long enough
Move the World, and you've a place to stand, you can
Move the World, you can make myself strong enough to
Move the World, if you have a good plan, you can:
Move the World, if you get enough leverage
Move the World, you can get the ball rollin'
Move the World, in a better direction
Move the World, see the future unfold.

But it seems the beam is still not long enough. Simple tools a pretty cool but this is kinda tough. But maybe: If we work together we can build a bigger lever, We can make the world better if we give it a shove. We can:

Move the World, if our lever is long enough
Move the World, and we've a place to stand, we can
Move the World, we can make myself strong enough to
Move the World, if we have a good plan, we can:
Move the World, if we get enough leverage
Move the World, we can get the ball rollin'
Move the World, in a better direction
Move the World, see the future unfold.

Gonna Be a Cyborg By Raymond Arnold

A lion, is tearin' up my tribe. I don't know what to do. I'm cryin', despairin', So many died. My leg's all chewed. But I, just tie A hide around my bloody knee. And lash a peg, tight to my leg And take a stand upon some brand new feet... Walkin' tall now.

Gonna be a cyborg! More than just a human being,Gonna be a cyborg! Blendin' flesh into machineGonna be a cyborg! Sorry if I freak you out,But I got some things, that won't get doneif I'm only human.

Do doo doo.... Gonna be a cyborg... Do doo doo... Yeah... yeah...

My eyes, can't see So well as they once used to I try, to read The signs around town, it useless Frustration. Motivation. I want to see some stars at night. Don't just lament. Experiment. Until I invent a way to bend some light... Right into my eyeballs.

Gonna be a cyborg! More than just a human being,Gonna be a cyborg! Blendin' flesh into machineGonna be a cyborg! Sorry if I freak you out,But I got some things, that won't get done,if I'm only human.

Do doo doo.... Gonna be a cyborg... Do doo doo... Yeah... yeah...

I got, some thoughts About black holes to share But my body, is slowly Lockin' down. Getting pretty scared. Can't barely walk, now hardly talk. Now struggle just to blink my eye. But press this keyboard to my cheek Computer's helpin' me to speak I got myself a couple lectures to write... (And a brief history of time!)

Gonna be a cyborg! More than just a human being, Gonna be a cyborg! Blendin' flesh into machine Gonna be a cyborg! Sorry if I freak you out, But I got some things, that won't get done, if I'm only human.

Do doo doo.... Gonna be a cyborg Do doo doo.... Blending flesh into machine Do doo doo... Gonna be a cyborg Do doo doo... More than just a human being!

Got a global hivemind in my pocket! Bluetooth headset in my ear! MRIs, connectin' minds Directly to the twittersphere!

Future's comin', ain't no doubt Some folks already freakin' out But we got some things that won't get done If we're only human. "...Do not all charms fly At the mere touch of cold philosophy? There was an awful rainbow once in heaven: We know her woof, her texture; she is given In the dull catalogue of common things." —John Keats, Lamia

> "Nothing is 'mere'." —Richard Feynman

What a Wonderful World By Louis Armstrong

I see trees of green...... red roses too I see em bloom..... for me and for you And I think to myself.... what a wonderful world.

I see skies of blue..... clouds of white Bright blessed days....dark sacred nights And I think to myselfwhat a wonderful world.

The colors of a rainbow.....so pretty... in the sky Are also on the faces.....of people... going by I see friends shaking hands.....sayin how do you do They're really sayin.....'I love you'.

I hear babies cry..... I watch them grow They'll learn much more.....than I'll never know And I think to myselfwhat a wonderful world Yes I think to myselfwhat a wonderful world.

Do You Hear What I Hear?

By Noël Regney and Gloria Shayne

Said the night wind to the little lamb Do you see what I see Way up in the sky little lamb Do you see what I see A star, a star Dancing in the night With a tail as big as a kite With a tail as big as a kite

Said the little lamb to the shepard boy Do you hear what I hear Ringing through the sky shepard boy Do you hear what I hear A song, a song High above the tree With a voice as big as the sea With a voice as big as the sea

Said the shepard boy to the mighty king Do you know what I know In your palace wall mighty king Do you know what I know A child, a child Shivers in the cold Let us bring him silver and gold Let us bring him silver and gold

Said the king to the people everywhere Listen to what I say Pray for peace people everywhere Listen to what I say The child, the child Sleeping in the night He will bring us goodness and light He will bring us goodness and light

Editor's Commentary:

"Do you Hear What I Hear?" is my favorite Christmas carol. It is quite possibly one of my favorite songs (top hundred, anyway). I always felt slightly guilt about liking a song so much that was explicitly about the birth of Jesus. Last year I tried to figure out what it was I liked so much about it.

What I realized was that this song is about the birth of a meme.

It starts out small, and nearly powerless. But it is gradually whispered from person to person. It grows stronger. It changes the minds and the lives of the people it touches, directing itself to more and more powerful agents, until one day it shapes the decisions of the King. And then it changes the world.

As an artist, this sort of thing appeals to me.

Shortly after thinking about this, I realized the song really doesn't actually mention Jesus at all. I sang it to myself, and noticed that ultimately, this song says something pretty straightforward, which I stand behind:

There is a child, shivering in the cold. We have the power to help them. And we should.

Because they are the future.

As it turned out, this idea was how I wrapped my brain around the vast numbers and cold calculations of existential risk. The child doesn't have to be born today. They could be born tomorrow, a year from now, a thousand. That child is the Gift We Give to Tomorrow. Putting a face on existential risk helps a lot.

Five thousand years from now, a child might or might not be born. It might or might not have values similar to ours. It might or might not suffer. It might or might not know joy. It's existence is not inevitable. It depends on choices we make today. Possibly my choices. Possibly yours. If we don't annihilate ourselves. If we don't destroy our values.

Ultimately, the Solstice celebration is about that child, and everything they represent - peace on earth, and perhaps throughout the Galaxy. Good will, among all sentient beings. Scientific and ethical progress, and all the hard work those things entail.

And, as it turns out - this isn't even much of a reinterpretation. This song was written by a married couple, explicitly as a plea for peace during the Cuban Missle Crisis. In an interview they state that they couldn't even perform it all the way through without breaking up, the fears and tension in period were so high.

When we sing it, the star in the sky takes on a bit of a different meaning. But this has always been a song about existential risk, and hoping for a future where love still exists.

Seasons of Love By Jonathan D Larson

Five hundred twenty-five thousand six hundred minutes, Five hundred twenty-five thousand moments so dear. Five hundred twenty-five thousand six hundred minutes How do you measure, measure a year?

In daylights, in sunsets, in midnights, in cups of coffee? In inches, in miles, in laughter, in strife? In, Five hundred twenty-five thousand six hundred minutes How do you measure... A year in the life?

> What about love...? What about love? Measured in love... measured in love. How about love...? How about love?

> > Measured in love. Seasons of love...

Five hundred twenty-five thousand six hundred minutes! Five hundred twenty-five thousand journeys to plan. Five hundred twenty-five thousand six hundred minutes How do you measure the life of a woman or a man?

In truths that she learned, or in times that he cried. In bridges he burned, or the way that she died... It's time now to sing out, tho' the story never ends Let's celebrate remember a year in the life of friends

Remember the love.... remember the love. Measure in love.... measure in love! Seasons of love... seasons of love.

> Measure in love. Seasons of love.

Transcendental Cowboy By Phil Robinson

I'm a transcendental cowboy, with the existential blues Here's the solipsistic, meta-transcendental news: There's more than just one recipe, girl, to feel good about what you choose So when it comes down to it, do what you gotta' do

You could read a book by Sartre, you could read a book by Camus There's a thousand different faces out there, and a thousand points of view If seein' is believin', girl, throw your hands up in the air And say, "Hell yeah!" ("Hell Yeah!")

I'm a transcendental cowboy with the existential blues Here's the solipsistic, meta-transcendental news: There's more than just one recipe, girl, to feel good about what you choose So when it comes down to it, do what you gotta' do

You could light yourself some candles, you could light up someone's eyes Go back to the sixties right now and retro-psychadelicize 'Cause feelin' is believin', girl, throw your hands up in the air And say, "Hell yeah!" ("Hell Yeah!")

I'm a transcendental, existential, sentimental, solipsistic Lower upper-middle-class, white-bread suburban mystic Went away to school, had my world-view rotated Some would even say I'm even slightly over-educated Tryin' to find a way to set myself free In my heart of hearts, just a Bruce Springsteen wannabe Workin' all day and singin' all night And doin' alright... (Whew!)

I'm a transcendental cowboy with the existential blues Here's the solipsistic, meta-transcendental news: There's more than just one recipe, girl, to feel good about what you choose So when it comes down to it, do what you gotta' When it comes down to it, do what you gotta' When it comes down to it, do what you gotta'

Editor's Commentary

My grandmother died two years ago, But it was only this summer that we finally sold her house. My mother organized a "say goodbye to the house" party, and she called me up the day before.

> "Hey Ray'm!" she said. "Hello," said I. "So.... I hear you make rituals now." "That it was what they say." "Make us a ritual!" "Wait, what?" "Make us a ritual for tomorrow!" "....now? Like in the next 24 hours?" "Yeah! ".... "....okay?"

> > And then I did.

Monstro is the name of the cottonwood tree that overlooks our Grandmother's house. I wrote a song about saying goodbye to the tree. I'm not sure if a single song really counts as a ritual, but I'm reasonably pleased with my effort.

This ended up shaping the Solstice, in ways I wouldn't have predicted but which seem obvious in retrospect.

"Saying goodbye" has become the dominant theme of 2012.

Monstro's Farewell By Raymond Arnold

They say that Poughkeepsie's the city of sin. But the monster that lives there's the gentlest thing. It smiles down fondly, just casting it's shade... Basking in memories that never will fade.

A hundred feet tall and it never stops growing. Started so small, from the humblest seed. Ancient and bittersweet branches are blowing, Waving goodbye in the midsummer breeze. Waving goodbye....in the breeze.

The branches they grow in so many directions. Upwards and outwards a fractal collection Of cottonwood blossoms and diamond shape leaves... Sheltering the children who play underneath.

A hundred feet tall and it never stops growing. Started so small, from the humblest seed. Ancient and bittersweet branches are blowing, Waving goodbye in the midsummer breeze. Waving goodbye....in the breeze.

When lightning did sunder the giant, it cried. It's skin buckling under the bolt from the sky. But roots, they run deep, and the rainwater seeps Into soil that nourishes so many lives.

A hundred feet tall and it never stops growing. Started so small, from the humblest seed. Ancient and bittersweet branches are blowing, Waving goodbye in the midsummer breeze. Waving goodbye....in the breeze.

Why Does the Sun Shine? (Part 2) By They Might Be Giants

The sun's a miasma of incandescent plasma The sun's not simply made out of gas (no, no, no) The sun can inspire, but it's not made of fire Forget what you've been told in the past

Plasma! (Electrons are free!) Plasma! (A fourth way to be) Plasma! (Not gas, not liquid, not a solid)

Plasma! (Forgot that song) Plasma! (They got it wrong) Plasma! (That thesis has been rendered invalid)

The sun's a miasma of incandescent plasma The sun's not simply made out of gas (oh, no, no) The sun can inspire, but it's not made of fire....

...let's see just how long it can last.

Forever Young By Bob Dylan

May you always find good fortune, may your wishes all come true.May you always do for others, and let others do for you.May you build a ladder to the stars, and climb on every rung,And may you stay... forever young.

Forever young... Forever young... May you stay... Forever young.

May you grow up to be righteous, may you grow up to be true. May you always seek the truth, and see the light surrounding you. May you always be courageous, stand upright and be strong, And may you stay... forever young.

> Forever young... Forever young... May you stay... Forever young.

May your hands always be busy, may your feet always be swift May you have a strong foundation, when the winds of changes shift. May you heart always be joyful, May your song always be sung, And may you stay... Forever young.

> Forever young... Forever young... May you stay... Forever young.

Uplift

By Andrew Eigel

Hands chip the flint, light the fire, skin the kill Feet move the tribe track the herd with a will Mankind struggles in the cellar of history Time to settle down, time to grow, time to breed.

Plow tills the soil, plants the seed, pray for rain Scythe reaps the wheat, to the mill, to grind the grain Towns and cities spread to empire overnight Hands keep building as we chant the ancient rite.

Coal heats the steam, push the piston, turns the wheel. Cogs spin the wool, drives the horses made of steel. Lightning harnessed does our will and lights the dark. Keep rising higher, set our goal, hit the mark.

> Crawl out of the mud, Ongoing but slow, For the path that is easy Ain't the one that lets us grow!

Light to push the sails, read the data, cities glow Hands type the keys, click the mouse, out we go! Our voices carry round the world and into space Send us out to colonize another place,

(slow for the final line)

Hands make the tools, build the fire, plant the grain. Feet track the herd, build a world, begin again.

The Millenium Clock

There is an organization that call themselves "The Long Now Foundation." They date their letters "02012".

They hold presentations and showcase art that fosters long term thinking. Their primary project is a two hundred foot clock, built inside a mountain, that is designed to work for at least 10,000 years.

Every once in a while the bells of the buried Clock play a melody. Each time the chimes ring, it's a melody the Clock has never played before. The Clock's chimes have been programmed to not repeat themselves for 10,000 years. Most times the Clock rings when a visitor has wound it, but the Clock hoards energy from a different source and occasionally it will ring itself when no one is around to hear it.

Once completed, visitors be be able to see the clock, but it will be a fairly extensive pilgrimage. The journey begins at dawn, and many will be exhausted after climbing 1500 feet to reach the entrance to the inner chambers. Inside, it is pitch black, except for a small hole in the ceiling that beckons you up a spiral staircase carved into the interior of the mountain. Eventually you climb into the light, and find a series of weights - about 10,000 pounds in all, and a winding station that takes 2-3 people to work.

You wind the clock, then climb higher still. You pass an elaborate series of gears - a slow computer that calculates the melodies that will play over its ten thousand year lifespan. The sounds are powered by the winding you just did, as well as stored solar energy.

Eventually, you get to the top. Out of breath, you find a lever, you pull it.

And the clock... ...well, it tells you what time it is. What did you expect?

The clock asks the question: what can we look forward to in 10,000 years?

It's built out of simple technology, that even an uneducated society could maintain, if society collapses. It is an engineering marvel, not just because of its scale, but because of some interesting problems that arise when you are building something to last that long. It will take a while to build.

When you're as interested in philanthropy as I am, you have to ask if the clock is really worth it. I'm not sure. The money being spent on it could distribute a lot malaria nets. But the clock is a symbol, and a powerful one, and it is worth noting that the Long Now Foundation recently featured the Cambridge Project for Existential Risk on their blog.

Five thousand years ago, over the course of two centuries, we dragged stones across a hundred and fifty miles to build a clock, immortalizing the answer to our first astronomy question. Today, winter isn't so scary. The world has changed in big ways. But we have other problems, big problems, that will require long term thinking to solve.

Ten thousand years after Stonehenge, when the Millenium clock is only halfway done ticking...

...what do you think we'll see?

Are we being good ancestors?

Final Litany of Tarski

If human values will exist in five thousand years, then I desire to believe that human values will exist in five thousand years.

If human values will *not* exist in five thousand years, then I desire to believe that human values will *not* exist in five thousand years.

Let me not become attached to beliefs I may not want.

[Prepare the final video file, and dim the lights]

Five Thousand Years (The Sun is Gonna Go, Reprise) A song of solstice future, by Raymond Arnold

Morning's comin' soon. A brand new sun is gonna rise. Flowers gonna bloom, Underneath a distant sky.

Good folks are gonna thrive, And whether or not the gods might care, Human hearts'll swell with pride At all the lives that got them there.

In five thousand years...

(Whatcha want to do, whatcha wanna see, in another)
Five thousand years...
(Where we want to go, who we want to be)
In five thousand years
If we could boldly set our sights,
And journey through the coldest night
In five thousand years...

We could build ourselves a home. We could raise the glass domes high. And in a hundred years or a few, Our children might look at the sky

And then at last they'd see That distant yellow sun. The cradle of humanity, And all the things we might become.

In five thousand years... (Whatcha want to do, whatcha wanna see, in another) Five thousand years... (Where we want to go, who we want to be) In five thousand years... If we sailed across the stars, Unimaginably far In five thousand years And maybe good folk still might die, But maybe not, we gotta try I don't quite know what road we'll take I don't quite know what world we'll make

I don't quite know how things might change I don't quite know what rules we'll break Our present selves might think it strange But with so many lives at stake

In five thousand years...

(Whatcha want to do, whatcha wanna see, in another) Five thousand years... (Where we want to go, who we want to be) In five thousand years... If we could see cross space and time What kind of world you think we'd find In five thousand years?

> Entropy is bearin' down But we got tricks to stick around. And if we live to see the day That yellow fades to red then grey,

We'll take a moment, one by one Turn to face the dying sun Bittersweetly wave good bye -The journey's only just begun.

In five billion years...

(Whatcha want to do, whatcha wanna see, in another)
Five billion years...
(Where we want to go, who we want to be)
In five billion years...
When all that we once know is gone,

We'll find a way to carry on

In five billion years.

Five billion years... Watcha wanna do, watcha wanna see? Five billion years...

> Where we wanna go... who we wanna be...?

The Road to Wisdom

The road to wisdom? -- Well, it's plain, and simple to express:

> You err, and err, and err some more,

> > but less, and less, and less.

-- Piet Hein