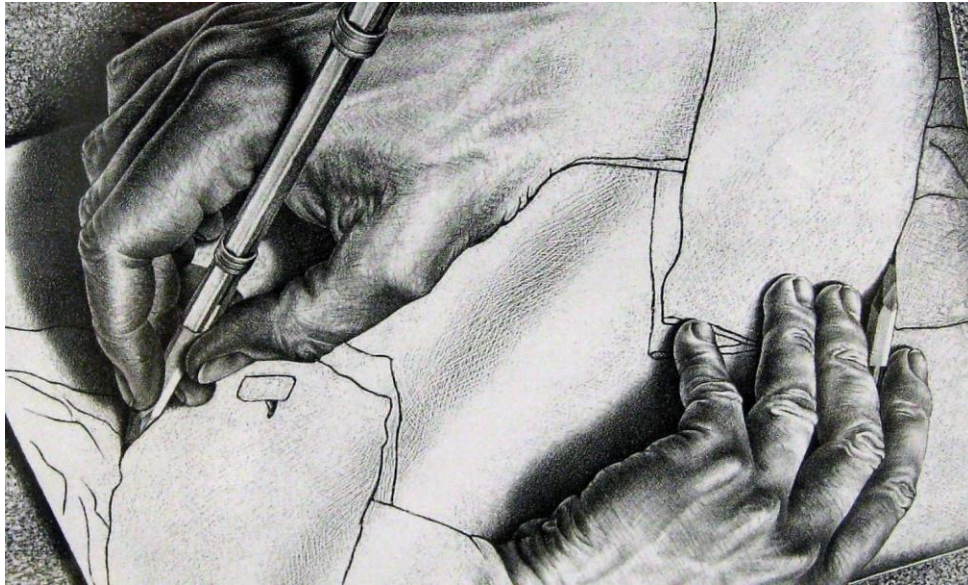




Epsilon Theory
Once In A Lifetime

March 29, 2020



*The Moving Finger writes; and, having writ,
Moves on: nor all thy Piety nor Wit
Shall lure it back to cancel half a Line,
Nor all thy Tears wash out a Word of it.*
- *Rubaiyat of Omar Khayyam (c. 1080)*

That's a poem attributed to Omar Khayyam, an 11th century Persian philosopher and all-around genius who lived near the modern-day city of Qom, the epicenter of the COVID-19 plague wracking Iran today.

Here's another philosopher and all-around genius, David Byrne, saying the same thing one thousand years later.

*And you may ask yourself
Am I right? Am I wrong?
And you may say to yourself
"My God! What have I done?"*
- *Once In A Lifetime (1981)*

David Byrne lives in the modern-day city of New York, the epicenter of the COVID-19 plague wracking the United States today.

It's all the same, you know. The dad in Qom coughing up a lung who loves his kids and is loved by them is exactly the same as the dad in New York coughing up a lung who loves his kids and is loved by them. I know we don't think of it that way. Hell, I know plenty of people in my home state of Alabama who don't even think a dad in Montgomery is the same as a dad in New York, much less a dad in freakin' Qom, Iran. But they are. The same, that is. Exactly the same.

We will never win this war until we regain our sense of empathy, until we regain our ability to appreciate the pain that others endure in their struggle against this common enemy.

It's how Ghandi defined religion.

I call him religious who understands the suffering of others.

Of course, most of our leaders wouldn't know Gandhi from a hole in the head. Instead, our leaders, if they think of empathy at all, think in terms of Steve Martin's advice.

Before you criticize a man, walk a mile in his shoes. That way, when you do criticize him, you'll be a mile away and have his shoes.

You know what people without empathy are, right? They're sociopaths, and I use that word in an entirely clinical sense. Because that's what we are today, clinically speaking, a society largely governed by high-functioning sociopaths in both our economy and our politics, humans devoid of empathy for any other human outside of the narrowest bonds of convention. *And they're training us to be just like them.*

It's not a left/right thing. It's not a Republican/Democrat thing. It's not an American thing. It's not even a boomer thing.

It's a Nudging Oligarchy thing. It's a Nudging State thing. It's a [Long Now](#) thing.

The Long Now



The Long Now is everything we pull into the present from our future selves and our children. The Long Now is the constant stimulus that Management applies to our economy and the constant fear that Management applies to our politics. ... [Continue reading](#)

Why do high-functioning sociopaths and their Renfields manufacture bullshit "analysis" to convince you that the sky is green and it's only the olds anyway so what's the big deal and the really important thing is to go back to work and save ~~their wealth~~ the economy? It's not really to minimize the disease. That's just the text. The sub-text ... the REAL message ... is to *minimize your empathy*, to convince you to abdicate your autonomy of mind and heart to THEM.

The real message is to convince you that $2 + 2 = 5$.



Iakov Guminer, *Arithmetic of an alternative plan* (1931)

In the end the Party would announce that two and two made five, and you would have to believe it. It was inevitable that they should make that claim sooner or later: the logic of their position demanded it. Not merely the validity of experience, but the very existence of external reality, was tacitly denied by their philosophy. The heresy of heresies was common sense.

And what was terrifying was not that they would kill you for thinking otherwise, but that they might be right.

— *George Orwell, 1984*

The Long Now is the [Fiat World](#) of reality by declaration, where we are TOLD that inflation does not exist, where we are TOLD that wealth inequality and meager productivity and negative savings rates just “happen”, where we are TOLD that we must vote for ridiculous candidates to be a good Republican or a good Democrat, where we are TOLD that we must buy ridiculous securities to be a good investor, and where we are TOLD that we must borrow ridiculous sums to be a good parent or a good citizen.

And where we are now TOLD that we must join our leaders in sociopathy and division to be a good American.

What do I mean by sociopathy and division?

I mean the way our political and economic leaders beat the narrative drum about how this virus prefers to kill the old rather than the young, *as if that matters* for our policy choices, as if older Americans are

lesser Americans, as if we should think of them differently - with less empathy - than Americans who are more like "us".

I mean the way our political and economic leaders beat the narrative drum about how this virus prefers to kill those with "pre-existing conditions", *as if that matters* for our policy choices, as if chronically ill Americans are lesser Americans, as if we should think of them differently - with less empathy - than Americans who are more like "us".

I mean the way our political and economic leaders beat the narrative drum about how this virus hits certain "hotspot" regions, *as if that matters* for our policy choices, as if hotspot regions are lesser regions, as if we should think of Americans who live there differently - with less empathy - than Americans who are in "our" region.

The future is already here – it's just not evenly distributed.

- William Gibson

We are, all of us, old. We are, all of us, chronically ill. We are, all of us, living in a hotspot.

Some of us are already there. Some of us aren't. Yet.

Age, illness, environment ... they are unevenly distributed among us. But they are the future for all of us just the same. What is empathy? It is the recognition of this truth. What is our duty? To shout this truth from the rooftops. To require our leaders to bend to OUR will, and not the other way around.

Enough. It's time for the Pack to howl.

The moving finger writes, and having writ moves on.

The policy decisions we make cannot be undone. We have one shot at this.

Nor all thy MAGA piety nor all thy Twitter wit shall lure it back to cancel half a line.

Nor all thy SJW tears wash out a word of it.

Given the irrevocable life-and-death nature of our policy decisions today ... given the profound UNCERTAINTY that governs the impact of a pandemic on society, as opposed to mere RISK ... we should not seek to *maximize our utility*.

Instead, we should seek to *minimize our maximum regret*.

A risk is an event where we can assign some sort of reasonable probability to its occurrence AND some sort of reasonable assessment of its potential impact, so that we can calculate what's called an "expected

utility” ... in English, so that we can talk meaningfully about risk versus reward of some action or decision. To use Donald Rumsfeld’s oft-maligned but in-truth brilliant characterization, a risk is a “known unknown”.



"There are known knowns; there are things we know we know. We also know there are known unknowns; that is to say, we know there are some things we do not know. But there are also unknown unknowns – the ones we don’t know we don’t know."

When people talk about the trade off between the national economic impact of shutting down the country and the national health impact of shutting down the country, they are using the language and the calculator of *risk*.

It's not that people are wrong to say there's a trade off. There IS a trade off. Where they're wrong is to think that there is some equilibrium here - some sort of balancing point in our policy so that we can maximize our national economic expected utility given our national health expected utility and vice versa.

Where they're wrong is to think in terms of risk and expected utility in the first place!

An uncertainty is an event where either we can't know the probabilities at all or - as in the case of public policy in the face of a pandemic - *we're only going to play the game once*.

To use a poker analogy, my decision-making process for playing a hand is going to be entirely different if I’m only going to be dealt one hand for the rest of my life or if I’m playing all night and every night. If I'm playing all night and every night, I'll play the odds in every hand, trusting the odds to even out in my favor over time. If I'm only playing one hand, though, where an unlucky break cannot be salvageable over time ... what's my tolerance for that?

In Rumsfeldian terms, uncertainty is an “unknown unknown”, and in his mind (he was Secretary of Defense, after all) the classic example of an uncertainty was going to war. Our war is with COVID-19. We get to fight once and only once. Whether we win or we lose is an *uncertainty*, not a risk, and we need a decision-making process designed specifically for THAT.

The decision-making strategy designed specifically for uncertainty is Minimax Regret.

Minimax Regret was invented (or at least formalized) in 1951 by Leonard “Jimmie” Savage, one of the founding fathers of what we now call behavioral economics. Savage played a critical role, albeit behind the scenes, in the work of three immortals of modern social science. He was John von Neumann’s right-hand man during World War II, a close colleague of Milton Friedman’s (the second half of the Friedman-Savage utility function), and the person who introduced Paul Samuelson to the concept of random walks and stochastic processes in finance (via Louis Bachelier) ... not too shabby! Savage died in 1971 at the age of 53, so he’s not nearly as well-known as he should be, but his *Foundations of Statistics* remains a seminal work for anyone interested in decision-making in general and Bayesian inference in particular.

As the name suggests, the Minimax Regret strategy wants to minimize your maximum regret in any decision process. This is not at all the same thing as minimizing your maximum *loss*. The concept of regret is a much more powerful and flexible concept than mere loss, because it's entirely subjective. But that's exactly what makes the strategy *human*. That's exactly what makes the strategy *real* when the ultimate human chips of living and dying are on the table.

Minimax Regret downplays or eliminates the role that probability distributions play in the decision-making process.

Minimax Regret doesn't calculate the odds and the expected utilities over multiple rolls of the dice. Minimax Regret says forget the odds ... how would you FEEL if you rolled the dice that one time and got snake-eyes?

More technically, Minimax Regret asks how would you feel if you took Action A and Result 1 occurs? What about Result 2? Result 3? What about Action B and Result 4, 5, or 6? Now out of those six potential combinations of action + result, what is the worst possible result “branch” associated with each action “tree”? Whichever action tree holds the worst possible result branch ... well, don't do THAT. Doing anything but THAT (technically, doing the action that gives you the best worst-result branch) is the rational decision choice from a Minimax Regret perspective.

The motto of Minimax Regret is not Know the World ... it's Know Thyself.

Because when faced with an uncertain event, where you only have one roll of the dice on a probabilistic event, that's all we can know.

Ourselves.

So what do I know about myself? What's MY maximum regret that must be minimized regardless of anything else in this single-play game of coping with a virus that has a natural R-0 of 3+ and is 10-20x more deadly than the flu? It's losing one of these guys.



We've all got a photograph like this. An old picture of the people who matter most to us in the world.

Time flies. Fifteen years. That unhappy little girl in the front row just heard back from college admissions yesterday. Good news.

I'm eligible for AARP now. My mother is now in her late 70s. She has what you'd call a "pre-existing condition" I suppose, but so will I in another 15 years.

The future is already here in this picture. It just wasn't evenly distributed.

Now here's the trick. The trick to rejecting the sociopathy and division that our leaders inject in our veins. The trick to engaging the world with a full heart.

The trick is to take the love you feel for your family even if they are old, even if they are infirm, even if they live distantly from you, geographically or emotionally ... and extend the *knowledge* of that love to everyone else.

I'm not asking you to love that dad in Qom like you love your dad. I'm not asking you to be a saint.

I'm asking for empathy. I'm asking you to recognize that there but by the grace of God go I, that in fact you DO recognize exactly that when it comes to your family, that in fact you DO recognize that the future and the present and the past are as one in love ... just not evenly distributed at any given time. I'm asking you to recognize that everyone in the world shares this and deserves this. I'm asking you to treat every human as an autonomous being of free will, capable of love and being loved. *Just as you would want them to do unto you.*

It won't diminish the love you feel for your family. I promise. Love and empathy don't work that way. It's not a transaction.

It's not a trade off.

And once you stop thinking in terms of trade offs, once you stop thinking in terms of probabilities and projected mortality rates and cost/benefit analysis and this expected utility model versus that expected utility model ... once you start thinking in terms of empathy and Minimax Regret ... everything will change for you.

Specifically and in terms of policy, what does a decision-making structure of Minimax Regret combined with empathy require?

I don't know all the details. I don't know if I'm missing key elements. But I believe strongly that any plan requires these two elements.

Keep our healthcare workers and first responders safe.

If they fall, we all fall. Every worst outcome has this as a common denominator. How do we keep them safe? **Massive quantities of personal protective equipment (PPE).** Everywhere. On-demand. [At a granular level of the front lines.](#)

Create common knowledge of safe zones, safe towns, safe events, safe cities.

Every worst outcome has the opposite: everyone knows that everyone knows that the contagious walk among us, creating a giant Prisoners Dilemma game of constant defection everywhere you look. Every nation for itself. Every state for itself. Every county, every city, every company, every family for itself. How do we create common knowledge of safety? **Ubiquitous and rapid testing.** Everywhere. All the time.

And until we can manage those two things, we lock it down. We keep the R-0 of this bastard virus <1. Everywhere. As long as it takes.

Empathy + Minimax Regret = How to Fight COVID-19

$$2 + 2 = 4$$

I'll close with this personal note. Because that's what this war is for all of us ... personal.

There's another Talking Heads song that everyone knows, and that's *Life In Wartime*, which Byrne wrote in 1979, two years before *Once In A Lifetime*. Here are the lyrics you know by heart:

*This ain't no party, this ain't no disco,
This ain't no fooling around
No time for dancing, or lovey dovey,
I ain't got time for that now*

Certainly pertinent for today! But these are the lyrics I'm thinking about.

*You make me shiver, I feel so tender,
We make a pretty good team
Don't get exhausted, I'll do some driving,
You ought to get you some sleep*



Do you have a partner? Do you
have a pack?

That's how we get through a war.

That's how we get through a
lifetime.

Find your partner. Find your pack.

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