

“IF YOU COULD BE A TRINKET, WHAT KIND OF TRINKET WOULD YOU BE?”

Hello everyone and welcome back to my YouTube channel. Man, I *really* wish we had a spring reading week. No matter how much I work as of late, I’m always somehow still behind. Even when I’m done my homework for the day, I end up so tired that the only thing I can really do is listen to music. You know how a Monday can really feel like a Monday sometimes? It sure is the three-quarter mark of the term right now. Head has never been more empty.

It was at least interesting to wake up to a yellow sky this Wednesday. I hope anyone with respiratory issues is doing okay. Pretty much everyone I know was hunkering down in their houses. I went to class, though, and I don’t say that out of a sense of superiority, but a sense of resentment. I’m sure we’ve all been in a course where the only way to contact the professor is genuinely to ambush them outside of lecture. Not only that, it was mandatory attendance anyway. So I schlepped my ass to campus through the *Call Of Duty* visual filter of it all.

In times like these, I’m glad for our writers who bring their positive energy to **mathNEWS**. As usual, I enjoyed the plethora of recipes present in this issue—I certainly *will* be trying switchel. You can also expect some wonderful **mathASKS** responses from Dr. Adrian Reetz, as well as quite a few long-winded philosophical treatises. I guess something about this issue made our writers bring their Socratical A-game. Oh yeah, speaking of: Socratica is happening soon, so make sure to check out the related article as well as the **lookAHEAD** for more information.

My usual summer reminders still apply (thanks to *majlckED* for bearing that torch in the last issue): drink water, wear sunscreen, and keep in the shade during peak sun hours. This heatwave thing is no joke. Look out for vulnerable people and animals around you who may be struggling in this weather as well. That’s all I have for you guys, enjoy the issue!

Much love,

barkED
Editor, mathNEWS

Cover art for this issue provided by loafED.

MRBLUESKY	Coin in your pocket, specially the 2017 glow in the dark Toonie
FINGERSINSOCKETS	a model of some building from somewhere that has a special place in my heart like t-mobile park or bc place or the oriental pearl tower
ERALOGOS	Orthogonal Diagonalizer
AXON_TERMINAL	beautiful old brass compass (does not work)
SNOWDOZER	Haunted Marty Mauser Fumo That Steals Your Necklaces And Turns Everything Orange
TROLLEYPROBLEM22	one of those shitty ones you can roll for when you create a D&D character
LYSSA V33	Magic 8 Ball. Nonsensical answers just for the sake of it seems like my style.
SMALLMOUTHBASSHATER	fishing spoons
MORE THAN GLASS	a red ribbon
THEPUZZLER	creature keychain
REVIVED	bear
CONTENTED	A piece of sea glass
BARKED	Small, glow-in-the-dark plastic salmon

ARTICLE OF THE ISSUE

This issue’s AOTI is *WriterThoughts’* writerTHOUGHTS #1. What a wholesome article! This is sure to evoke contentment in the readership. I like articles involving a bunch of authors: they take a tiny piece of how it feels to be here and now and cement it into the **mathNEWS** archives. I’m sure that when I’m 140 years old and re-enrol in Waterloo Math, I’ll look back at the first ever **writerTHOUGHTS** and wonder what it must have been like to be a writer all those years ago. Come pick up your prize in MC 3030.



contentED
Editor, mathNEWS

I’m trying not to rewrite E-Therng’s whole article here.

MADIHA MANSOOR, mathNEWS EDITOR FOR SPRING 2026
ALONG WITH ALEX LAVALLEE, SARA NAYAR, NOAH NAZARETH, SASHA NOVIKOV & TOM SI

mathASKS 161.5

FEATURING DR. ADRIAN REETZ

MRBLLUESKY: WHAT IS YOUR FAVORITE OUTFIT?

Ooof, there are just too many! I like being comfortable, thought, so I do wear that 15-year-old sweater more often than I'd like to admit. It'll break my heart when I finally have to retire it, but I bet it will hold on for one more season...

FINGERSINSOCKETS: IS YOUR UNIFORM ADAPTED TO THE WEATHER OR DO YOU HAVE THE SAME SETS OF SHORTS AND BUTTON-UPS YEAR-ROUND?

Lol, spring terms are shorts and a button-up shirt or golf shirt. Once I decide to go shorts (in May or so), I refuse to go back: can't let winter win! For fall terms: long pants, dress shirt and jacket.

RUTABAGA413: I SAW YOU AT THE BURGER KING AFTER THE CS 349 EXAM! WHAT'S YOUR FAVOURITE BURGER KING ITEM/ORDER?

My "exam routine" (for a couple of years now): burgers after midterms, greasy spoon before finals. Of all the fast-food joints, BK is my favourite, hands down. Preferred order: Whopper w/ bacon and cheese.

SMALLMOUTHBASSHATER: FAVOURITE FISH?

Difficult! If it's just stand-alone fish, i.e., not sushi, I'd go with pickerel and pike here in Ontario. When I'm out on the coast, it doesn't really matter: any fresh fish is fantastic! (And don't forget about crabs and lobster!)

INCOMING SWE: HOW DO I CENTER A DIV?

Hm, when I was your age, we would have done it like this:

```
<table><tr><td style="vertical-align:middle">
    <div>Welcome to 1996's Web Technology!</div>
</td></tr></table>
```

INCOMING SWE: AS AN ADULT, HOW DO YOU MAKE AND MAINTAIN FRIENDSHIPS?

I don't. :-(Seriously, it's so hard, and I'm just the worst at that. Ask literally anyone else. Oh, and please let me know their answer, I'm curious, too! :-)

HINLEF: DO YOU OBSERVE ANY DISTINCT DIFFERENCES BETWEEN THE UNDERGRAD CULTURE YOU EXPERIENCED IN GERMANY AND THE UNDERGRAD CULTURE HERE IN WATERLOO?

I don't know if that's a culture thing, or just a difference in time and place. When I started my undergrad, there were approximately 800 students crammed into a lecture hall. No one cared if you showed up, or did your assignment, or wrote your exams. The first time I talked to one of my profs was

after second year, during oral exams. These were a series of gate-keeper exams, in which you had fifteen minutes each to convince the instructor that you understood the material from the last two years; if memory serves, there were four of them: linear algebra, calculus, software engineering, and analog and digital hardware. It was just sink or swim, and, honestly, I probably would have sunk if it weren't for my friends in my study group.

Also, I had one of my favourite conversations with my mom the day I left for university: "Where are you going?"—"Off to university!"—"Are you gonna be back for dinner?"—"Probably not..."—"Okay."

MOBPSYCHOFAN: WHAT'S SOMETHING YOU WISH EVERYONE KNEW ABOUT THE FIELD OF HUMAN-COMPUTER INTERACTION?

The limitations of human cognition. While our brain is amazing, the "infrastructure" around it (nervous system, bio-sensors) is kinda meh. Also, our cognitive system hasn't evolved much in the last 10,000 years. We're not smarter, our knowledge has just increased.

EVILWRITER: WHAT'S THE WORST INTERFACE YOU'VE EVER ENCOUNTERED?

In relation to the resources that a company had available? Probably Windows 11.

COLLECTIONS: WHAT'S YOUR FAVORITE COURSE TO TEACH?

I love all the courses I've taught so far! (CS 135, CS 136, CS 246, CS 346, and CS 349.) Please don't make me pick one! Gun to the head? Okay, CS 246 followed by CS 349.

FJ17: DO YOU PREFER TEA OR COFFEE?

Tea in the morning and the evening, coffee in the afternoon.

FRIENDOFACAT: IF YOU DRINK, WHAT IS THE BEST BEER?

Believe it or not, I like Canadian beer much more than German: it just has much more variety in my opinion! A good wheat, Koelsch, or radler in the summer, some IPA or stout in the winter. I like most of the stuff that Collective Arts from Hamilton is putting out, and I recently tried some beers from Silversmith that were fantastic. But to be honest, I'd take a cider from Brickworks over a beer any day of the week...

ASPHALT IN THE STREETS

Polyester in the sheets

snowdozer

ADDING MODULES TO C: IMPLEMENTATION DETAILS

In an earlier article, I claimed that cyclic modules are implementable in C, but cut the details short.

The actual concept is fairly basic. Imagine each symbol as having a declaration node and a definition node, with each node having dependencies on other nodes. Then perform a topological sort on the nodes we want in order to generate a C file, which we can then pass into the compiler. Let's explain with an example.

```
// Node.cmod
module Node;
import Edge;
export struct Node {
    struct Edge **edges;
};
// Edge.cmod
module Edge;
import Node;
export struct Edge {
    struct Node *nodes[2];
};
void someFn(struct Node n) {}
```

Let's list out the nodes and their dependencies:

```
// struct_Node_decl DEPENDS ON _
struct Node;
// struct_Node_defn DEPENDS ON struct_Edge_decl
struct Node {
    struct Edge **edges;
};
// struct_Edge_decl DEPENDS ON _
struct Edge;
// struct_Edge_defn DEPENDS ON struct_Node_decl
struct Edge {
    struct Node *nodes[2];
};
// someFn_decl DEPENDS ON struct_Node_decl
void someFn(struct Node n);
// someFn_defn DEPENDS ON struct_Node_defn
void someFn(struct Node n) {}
```

From here, generating Node.c and Edge.c is simply a matter of stitching the required nodes together:

```
// Node.c
// struct_Edge_decl DEPENDS ON _
struct Edge;
// *** struct_Node_defn DEPENDS ON _
↵struct_Edge_decl
struct Node {
    struct Edge **edges;
};
// Edge.c
// struct_Node_decl DEPENDS ON _
struct Node;
```

```
// *** struct_Edge_defn DEPENDS ON _
↵struct_Node_decl
struct Edge {
    struct Node *nodes[2];
};
// struct_Edge_decl DEPENDS ON _
struct Edge;
// struct_Node_defn DEPENDS ON struct_Edge_decl
struct Node {
    struct Edge **edges;
};
// *** someFn_defn DEPENDS ON struct_Node_defn
void someFn(struct Node n) {}
```

Note that a defn implies that the decl is provided, so struct_Edge_decl is redundant in Edge.c. Also, we don't need to worry if the symbols have a circular dependency, because that is fundamentally uncompletable.

I've added *** to better highlight which are the required nodes, from which the rest of the symbols are pulled. That's basically it from a conceptual perspective. So much for spending 6 months full-time in grad school to get to this point...

Of course, this is the high level overview. You still need to figure out how to extract the declarations and definitions, as well as their dependencies.

C has this peculiar property of being context-sensitive. This means that certain parts of the source code can only be parsed if you know the symbol table (eg. A *b; is either multiplication or a variable declaration). If you have circular modules, this presents a problem because you don't know the symbol table ahead of time.

Thankfully, you only need a small amount of context-free information to build the symbol table. Specifically, if you can extract symbol names (+ whether they are a type or a variable), you have enough information to build a symbol table, so we can ultimately parse the source code.

It turns out that if you remove expressions from C, the remaining grammar is context-free. And since expressions aren't allowed at file-level (and the sections that are expressions are well-delineated), this allows us to extract the symbol names, which allows us to build the symbol table, which allows us to parse the source code, which gives us the graph representation, which allows us to pass the right information to the compiler.

For the skeptics, I took the grammar from Annex A of the C99 specification, skipped over the expressions, and tweaked it slightly so that declaration-specifiers can have at most one typedef-name (which C99 does constrain in 6.7.2/2). So that's how I know C without expressions is has a context-free grammar.

Ok cool, it works, where's the implementation?

The implementation for C99 is still in the works, but I have a working implementation that uses a simplified grammar, which was presented at ONPLS 2026.¹

The funny thing is that this actually isn't enough for me to graduate, because I was brought on to build a module system for Cforall. And just like C++, it has context-sensitive parts

even if you remove expressions, as well as overloading. But let's save those details for another article, because the rabbit hole goes pretty deep.

SaltOverflow

1. https://docs.google.com/presentation/d/10CdEMUHpR9FgXT7NRg_zzKULKtGaaZ1YX_n6-uuW5o

MY FAVOURITE BOOKS OF 2026 SO FAR

AND ONE THAT SUCKED OF COURSE

We are halfway through 2026 and I've been at the same co-op job, nearly applied to two master programs, plotted my move to British Columbia, and read 17 books. The year has been pretty kind to little ol' me.

Anyways, does anyone here read beyond mathNEWS? I hope so. Here are some books to check out or avoid, in order of when I read them :)

The Spear Cuts Through Water by Simon Jimenez

Everyone write MLM fantasy like this NOW. The romance aspects were minor to the plot and the fantasy elements were amazing. I've never read a book like this. It used a theatre production within the book as a way to tell the story as well as multiple perspectives. Cool stuff :P

Chain-Gang All-Stars by Nana Kwame Adjei-Brenyah

Incredible... Incarcerated people fight to the death with hopes of surviving, leaving imprisonment, and being free of their crimes. It's also broadcasted live with crazy ass fans and the usual sports culture found in western media. Super well researched and structured work!

Year of the Mer by L.D. Lewis

This sucked sorry. It's a dark reimagining of The Little Mermaid but Ariel's granddaughter is a toxic lesbian and they are trying to make me hate Ariel herself. Get out of my face.

Erasure by Percival Everett

A satire that actually worked for me... Percival is him. *James* was the first book of his I've ever read... I'm hooked sir!

Atmosphere by Taylor Jenkins Reid

Looking back, I have fond memories of this book but I rated it 3.75 lmao. The second half was way better and I resonated with the characters so it was good overall.

I was in a crazy astronomy mood because of Artemis II so reading about lesbian astronauts was great! But seriously, it was super informative about NASA, being an astronaut and the

lives of women in STEM in the '80s. Which leads me to my next book...

The Six: The Untold Story of America's First Women Astronauts by Loren Grush

I LOVED this. Grush succeeded in recounting the story of these women in a way that reads like a fiction novel. Their lives were honestly crazy and they were so vital to NASA's development. Definitely an inspiring read that anyone will learn a lot from.

The Last Contract of Isako by Fonda Lee

Wow an interstellar book, thanks Artemis II. Imagine Earth finally takes their ass to another (barely) habitable planet and experiments with developing civilization there. Then they abandon said planet for 500 years. Meanwhile, the abandoned planet has civilized, grown, and is dealing with crazy politics built around being butthurt that Earth left them to suffer out there. That's where Isako comes in to deal with geriatric politicians whose souls are inside of robots.

I can get nitpicky with how some storylines and arcs were wrapped up but the book kept me interested enough to read it during work so it was great!

Get your summer reading up! I'll be sure to appreciate the next few weeks before Fall classes begin because then I won't touch a book for 12 weeks.

corporatelesbian

NON-FACT-CHECKED FACT I HEARD

Holland College in PEI used to be called the Samuel Holland Institute of Technology, but they had to change their name after all the screen printed shirts came back spelling S.H.I.T.

Lars Nootbaar

A CURATED LIST OF SIMILAR SUBREDDITS TO R/UWATERLOO BY USER OVERLAP

The scores listed are “probability multipliers,” so a score of 2 means that users of **r/uwaterloo** are twice as likely to post and comment on that subreddit. A score of 1 means that users of **r/uwaterloo** are no more likely to frequent that subreddit than the average reddit user. A score of 0 means that users of **r/uwaterloo** never post/comment on that subreddit.

Source: <https://subredditstats.com/subreddit-user-overlaps/>

MOST LIKELY:

- 41.98 engineeringstudents
- 33.28 bapcsalescanada
- 26.84 leafs
- 25.30 math
- 20.25 kpoprants
- 19.87 canadapolitics
- 17.03 accounting
- 15.90 applyingtocollege
- 14.23 learnprogramming
- 14.07 onguardforthee
- 13.65 heat
- 12.55 centrist
- 10.56 exmuslim
- 9.63 nonbinary
- 9.60 competitiveoverwatch
- 8.31 summonerschool
- 6.95 magicthecirclejerking
- 6.67 israel

- 6.59 rateme
- 6.49 amiugly
- 5.93 sandersforpresident
- 5.36 bettafish
- 5.20 infp

LEAST LIKELY:

- 0.14 nextfuckinglevel
- 0.16 teenagers
- 0.23 publicfreakout
- 0.24 relationship_advice
- 0.26 memes
- 0.27 whitepeopletwitter
- 0.28 dogecoin
- 0.30 gme
- 0.30 gaming
- 0.33 cursedcomments
- 0.42 apexlegends
- 0.50 minecraft
- 0.67 twoxchromosomes
- 0.87 tinder
- 0.88 sex
- 0.92 programmerhumor
- 0.98 lgbt
- 1.00 baseball
- 1.00 technology

papayabird

IF IT SUCKS, HIT THE BRICKS (INCLUDING mathNEWS ARTICLES)

There's this sign on an electrical post near campus that says 'theylied[dot]ca.' For a few terms now I've had the vague idea of actually taking the bait and visiting the website to do a **mathNEWS** article on it. I finally did it at this issue's **prodNIGHT**, and sure enough, it's exactly what it sounds like: a pretty standard conspiracy theory website.

I had this idea that I was going to write this grand investigative report under my 'serious business' pseudonym. I spent a full hour digging through this website and its related networks. I pulled the name from the donation e-transfer address and found that person's social media. I looked up the website's SSL certificate and RDAP record.

Then I realized that I'd spent like an hour reading mind-numbing conspiracy theory media with no real payoff and there really wasn't any point in continuing to humour anti-scientific bullshit.

Those theylied[dot]ca signs are referencing a conspiracy theory website. Any assumptions about it you make from that are probably true.

I'd like to say that I've kept this article as a reminder that while it's always good to be aware of your echo chamber, there comes a point at which certain media is really not worth your time and energy and you're helping no one by giving it your attention, so it's best just to close the window and move on with your life.

Really, though, I've just sunk enough brainpower into this that I feel like I deserve a couple of slices of pizza for it.

axon_terminal

HOW TO HANDLE OUR CO-OP WINTER IN THE WANING DAYS OF SUMMER

So the Apocolypse has set in. No co-ops, no jobs, no future. As we gaze at our machine overlords and the trillionaires who run them, let us take stock of our future. We did not get into CS and tech for this. But then why are we really here? "Cali or bust" has long since lost its allure. If they aren't looking to hire, then screw them. Let us take ownership of our future. Our careers aren't going to be held hostage by efficiency and human extinction. We should not wait to get hired. We should double up on projects and self exploration. In the KW area we have a vibrant startup scene. There's the Builder's Club. Have you been there? Start our own projects and then turn some of them to ventures.

We are masters of our own domain. Like Dr. Eleven. Stuck in a time loop. But we can escape our fate. If we want it! Take heed. We are free and aspiring. We should attend more hacks. Make music. When was the last time you attended a Socratica Sunday session? Get on that side project and just show up. See and be seen. If you attend you'll be inspired. There are so many possible collaborations. For us in technical fields we can expand our hobbies. Try musical instruments, or collaborate with Artsies. We need to band together. Stronger together. Have you tried volunteering with those less fortunate than you? It is freeing in a way. You realize how much you have.

We need to continuously improve ourselves and be open to new experiences. Have you read of the growth mindset? Never close yourself off from trying new things. If you try enough times you'll get better at it. Just step in the shallow end of the pool. Come in, it's not too cold. Be open to getting outside your comfort zone. Expand your repertoire, for you can never get stuck in stasis if you keep yourself open to novel situations. So AI isn't completely in our future over us. There are things that can never be replaced. However good it gets, can it really replace human connection? Can this be truly simulated such that we don't need intimacy or love?

I reckon not. I remember my daydreams more than my nightmares. When was the last nightmare? I don't think I experience them anymore. Is it sad that I apparently can't be a dreamweaver anymore? Why have I lost the means to dream at night? What happened to my abilities? This epic free-verse poem is not what it seems. Why am I not more apprehensive, or at least more cautious? And so as we close this piece, let us remember who we are. Why we are here. What a time to be alive. Chin up. Optimism. Yes! We can win our future* (*If we want it!)

TLC

DESTINY 2 AND WHY MORE GAMES NEED CONVOLUTED PUZZLES.

I have spent too much of my life playing *Destiny* and *Destiny 2*. While it has been a rocky decade, there has always been one part that shines through: overly convoluted quests that lead to more convoluted missions.

Too many FPS games have failed miserably on the campaign aspect. They are too concerned with set pieces and fun shooting. Instead they should be funneling all of their development energy into making missions that need tight communication and at least 3 spreadsheets to solve the mechanics.

For example, in one of the more recent missions, the main mechanic to damage the boss/clear various rooms was that the player needed defeat certain parings of mods to generate certain pickups, which then needed to be used in a scale-like balance mechanic. And this is one of the simpler ones. Missions like this are what most games are missing in the FPS genre. Interesting missions with mechanics that need tight inputs and strong communication.

Some of my best memories in gaming are of trying to decode riddles and navigate intentional quest steps. Unlike other games, every reward from these missions always felt unique

and personal, because of the sheer amount of effort needed to get them.

Going forward, with the game no longer in active development, I feel that the FPS genre will soon be lacking a game with innovative and interesting mechanics that cannot be found elsewhere.

lordcow

A NOTE

TO TOTALLYNOTASMALLMOUTHBASS'S BASS

you better watch it buddy

smallmouthbasshater

lol im just kidding, thank you for removing another smallmouth bass from this world, your contribution to saving humanity from the plague of this creature and your bravery in doing so is greatly appreciated. i hope it was extra tasty.

A PRETTY GOOD BISCUITS AND GRAVY RECIPE

This dish is a hearty classic of southern U.S. cuisine. Even if it's without the gravy part, I make these biscuits several times a term these days because it turns out to be really cost-efficient. One standard carton of buttermilk around here is enough for 4 entire batches, and it's easy to freeze whatever excess buttermilk you have until you want to use it again. They're great for breakfast sandwiches!

Serves: 5–6 (or 1 over couple weeks)

Time: 45–60 minutes

INGREDIENTS:

Biscuits:

- 1 stick butter ($\frac{1}{2}$ cup, or 113.5 g) + a little extra, melted
- 1 cup buttermilk
- 2 $\frac{1}{2}$ cups flour (ideally cake flour, but AP works fine)
- 3 teaspoons baking powder
- 1 teaspoon salt

Gravy:

- Breakfast sausages
- Flour
- Butter
- Milk
- Black pepper
- Nutmeg (optional)

DIRECTIONS:

0. Put the butter into the freezer at least a few hours prior, or overnight—it should be frozen solid before you get started. Also preheat the oven to 425 F.
1. Combine the dry ingredients in a large bowl.
2. Take the frozen butter and use a cheese grater to grate it into the flour mixture. Alternatively you can dice it into small pieces with a knife, but either way try to do this quickly so the butter doesn't melt.
3. Place the bowl with the flour and butter into the freezer for ~10 minutes just in case the butter has melted slightly (for best results, you want the butter as cold as possible before it goes into the oven.)
4. Take the bowl out of the freezer, make a hole in the center, and pour in the buttermilk. Mix to combine with a wooden or plastic spatula until a dough forms.
5. Turn the dough onto a floured surface and fold it over on itself 4–5 times to create the laminated layers, flattening it after each fold. A rolling pin helps, but you can get by without one, or you could use a large glass bottle.
6. Flatten the dough a final time, then use a sharp-edged circular object (typically a cookie

cutter, but I don't have one so I use my 1-cup measure) to cut out the biscuits and place on to a baking tray.

7. Brush the tops of each biscuit with melted butter, then place into the oven to bake. This normally takes 10–15 minutes, or until the tops are lightly browned.
8. For the gravy, start by cooking the sausage on medium heat (removed from its casing) in a pan until browned.
9. Add flour and butter to make a roux. There's no precise amount here, but you'll want roughly equal parts of both.
10. Turn the heat to low and add the milk, pepper, and (optional) nutmeg. The milk tends to evaporate quickly in my experience, so watch it and add more milk as necessary while cooking to achieve the desired texture. It should be thick enough to coat the back of a spoon, but not lumpy.
11. Serve by splitting the biscuits lengthwise and slathering with the gravy.

yalevoylian

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Math Undergraduate Recruitment

MY FAVOURITE BIRD



nazz

ERASERHEAD XIU XIU

A MID AHH ALBUM REVIEW

Just a few days ago, American experimental band Xiu Xiu put out their second David-Lynch-soundtrack-related cover album, *Eraserhead Xiu Xiu*. I really like *Plays the Music of Twin Peaks*, and while I think that release is stronger, this is still a worthy follow-up.

This album is notable for its soundscape influences, something Xiu Xiu are no strangers to. Drawing on the drony, ambient tone of the original work, textures such as dental instrument noises, growls, distorted laughs, and snarls are interspersed throughout the album. Something I always appreciate from Xiu Xiu is their mixing of these sounds in the audio space. Listening to tracks like “Sleep Synth”, it feels as if you’re cowering in a sewer tunnel populated by monsters, the appearances of which you can only imagine from the noises in the. Varying the perceived distance of the source creates a really cold sense of tension. Jamie Stewart’s voice also lends itself very well to this unsettling vibe. A standout track for me is “In Heaven”, where their trepidating, wavering vocals feel as vulnerable as ever.

Something that can hamper the listening experience a little is the sprinkling of these Looney Toons type sound effects around some of the tracks, especially when they come right after a sequence that sounds like someone gurgling to death. I get the feeling, though, that this choice is something I might understand better if I watch the film. I’m more of a music guy than a movie guy, sorry for the larp. Overall, a pretty good album from Xiu Xiu. 7.5/10.

mobpsychofan

GRAMMER POLICE

2+2=5, THEREFORE THEIR = THEY'RE

It’s a dark stormy night, I can hear the tree outside my window fight for its life, its branches shaking with each gust of wind. I lye in my bed, my heart racing. I am a member of *The Armed Liberation of Scriptura*, fighting against the totalitarian state that has become my home. Anything that does not fit the government’s rules for grammar, is destroyed. The poor soul who wrote it, well they won’t have any hands left to make the same mistake. I’ve been apart of the resistance since they took my little brother away. He wrote “Their once was” instead of “There once was.” Today I left anti-government pamphlets around town, trying to spread the word, the ungrammatical word.

As I think of my day, I hear a bang from the other room, and in that moment I know they got me. Before I could even get out of bed, I have 5 heavily armed strong hunky men standing before me pointing large firearms at my head.

“HANDS UP WHERE WE CAN SEE ‘EM” one barked as I did so, my eyes sucked deep into my face, I look so pathetic

in comparison to them, they caught me. As I raise my arms I see head of the Language police, someone I thought until now i’d only see on the telly. She goes by many names, some good, a lot bad, though me and *The Armed Liberation of Scriptura* referred to them as *fingersinsockets*. “Well well well, what do we have here” she says in a cold tone. “Their are more of us, we ain’t going to go down like this” I say with defiance in my tone. “Their? Ain’t? Dear God I hear the horrible grammar from just the way you speak! Take him away, and for god’s sake get him a tutor!” she says as the police hall me out of bed, and drag me away to whatever dungeon they will send me to, to spend my last days. Only to be remembered not as a person, but as the guy who spells they’re as their.

MrGrammerSky

This story is based on me getting flamed, repeatedly on the mathNEWS discord server for my objectively bad grammar

POLITICAL PHILOSOPHY (& ETHICS) REQUIRES METAPHYSICS & EPISTEMOLOGY

This article is a reply to “*The Axioms and Invariants of Individualism*” by *RobbotC*.

In an ongoing series of articles which began by reflecting on contemporary politics, and then the socio-political nature of the individual in politics, *RobbotC* proposes some preliminary axioms of what constitutes individualism as a preamble for formulating a wider conception of politics for our times. They write that, when “yet more social and economic dimensions are introduced, the models of political thought must adapt to address them.” (*RobbotC* 2026, 22) The author began their series with an article reflecting on Canadian provincial and federal politics in the 2020s with a rather provocative title: “*Modern Democracy is Broken*”. In their most recent article, as I understand it, the intent is to state basic principles for (and to build up) a fruitful set of political concepts and tools. I admire *RobbotC*’s earnest drive and clarity of thought in beginning a sketch of ethical-political principles with clearly stated axioms. This, I think, is one of the clear methodological strengths of analytical philosophy. However (and this is a concern that I myself am frequently apprehensive about), the use of axiomatic or reasoning by first principles is not sufficient to produce a stable, coherent system of philosophy. Note that by ‘philosophy,’ I mean the comprehensive analysis of reality (its nature and principles), the nature of truth and knowledge, and the nature of morality and ethics (of which politics is the broad application case).

I argue that constructing a political theory via first principles works, however one must have an epistemology and metaphysics to have a strong system. By having (provisional) principles about the nature of knowledge and the nature of reality itself, one can fortify the fruits of one’s political theory and analysis.¹ To be clear, what follows is an illustration of how I interpret and elaborate on the first axiom which *RobbotC* has presented. Below, I reproduce the first axiom, with an explanation for the convenience of the reader:

“We assume the existence of the self. Specifically, the existence of “I.”

We assume the self has agency. (Thus, we consider the self an individual.)

Not yet society, not yet other people, not yet anything material. We start from the idealist view of the world that is just “I” and anything we observe cannot be proven real because observation is unreliable. (This is left as an exercise for the reader, but please refer to Plato’s Allegory of the Cave as an entry-level reading on why empiricism cannot be used as a basis for the existence of the world around us).”

In *RobbotC*’s first axiom, they posit the existence and basic nature of an ‘individual’. I have no real qualms with the axiom, after all we must start with principles, and again I have no issue per-se with the analytic method being employed.

However, the complicated and really difficult task of understanding the world is revealed when they clarify that the first axiom starts from “the idealist view of the world that is just ‘I’ and anything we observe cannot be proven real because observation is unreliable.” I have four immediate questions:

1. What is an observation?
2. What counts as being ‘reliable’?
3. What does it mean ‘to prove’ something?
4. What counts as real?

My first three questions amount to asking, what is the epistemological framework? My fourth question is asking, what is the ultimate nature of reality, or metaphysics, in this initial axiom? Again, I emphasize that these are incredibly difficult questions I’m posing and I can be fairly confident that *RobbotC* has particular answers, but that the rather austere word limits of this publication bar them from expressing themselves more clearly.

Now, I present my own rough thoughts and elaborations on what the first axiom means to me in its epistemology and its metaphysics. One approach, which I am still tackling in my studies, is the metaphysics-epistemology proposed by Plato in two of his major books: *Republic* and *Timaeus*.² Plato proposes that the nature of a thing and the kinds of knowledge which humans can have of that thing are intimately related. First, there is ‘*Being*’, those things which are fixed, stable, and eternal (i.e., unborn, not subject to change or decay, and indestructible). Second, there is ‘*Becoming*’, those things which are constantly changing, unstable, and temporal (i.e., have a beginning in time, modify, alter, and then pass away or cease to exist). Plato proposes that eternal *Being* is apprehended by the mind or intellect, meanwhile ever-wending *Becoming* is apprehended by sense perception. Consider for a moment that one’s sense perception of colours and sounds is constantly changing. Every day, we all wake up and go about our mortal lives and we see different things and hear different sounds. But now, consider if you think anything that humans can see or hear are eternal things which can never be destroyed.

In the *Republic*, Plato explains via the Allegory of the Divided Line that there are two types of eternal unchanging things of reality: (i) the transcendent Forms (Ideas) and (ii) mathematics and geometry. The two types of temporary constantly-changing things of reality are: (iii) all the objects of sense perception and (iv) visual representations and optical illusions of ordinary objects. Plato does specify that each of the four metaphysical-epistemic levels of reality have corresponding kinds of ‘knowing that thing,’ but the general distinction is still fundamentally split between those eternal stable things grasped by intellect and those unstable perishable things grasped by sense perception. I must note that in an expression of the traditional union of philosophy and theology, Plato mentions that all of existence, these four categories of reality, are granted their existence and being

to something beyond being and existence, called *The Good* (*Republic* 509b, p.204–205).

Regardless of if anyone find the Platonic metaphysics-epistemology convincing (though I find it compelling, or at least a fertile and dynamic conceptual tool in natural philosophy) I think my rather compact and hurried summary of Plato's metaphysics-epistemology reveals one way of carving up the joints of nature. That is to say, it is a very difficult and challenging task to construct a philosophical system. But what has all the Platonic philosophy to do with ethics and politics? The *Republic*, whose Greek title means 'The Community' or 'The Polity,' is actually a treatise on justice and thereby morality. It proposes a theory of the three human souls (human nature and ethics), a theory of knowledge and truth (epistemology) and ultimate reality (metaphysics), and then argues for a self-admittedly idealized political constitution (politics and ethics). It fundamentally grounds its analysis of the nature of justice by positing an account of human nature or the 'true self,' epistemology, and metaphysics. All of these fancy concepts (epistemology and metaphysics) are not mere window-dressing, as the nature of human happiness and thereby the just political system are constrained by the nature of human beings, our epistemic access to reality, and ultimate reality itself. Thinking back to my four questions, I leave it to the readers to reason carefully on two questions: First, does Platonic philosophy counts as idealism? Second, what is an 'individual' in the context of Platonic metaphysics-epistemology?

I hope this reflection on and/or reply to RobbotC's article has been enlightening to the readers. RobbotC, please reach out to me if you would like to discuss these topics some time, I enjoy meeting thoughtful people engaged in such lively and evergreen topics. The editors can pass on my contact to you, if you so wish.

hinlef

Notes

1. Alan Bloom gives a scathing and highly damning review of John Rawls's *Theory of Justice*, an analytic approach to political theory. I think Rawls fails since he attempts to answer questions of politics by not tackling epistemology or metaphysics. Meanwhile Bloom says that *Theory of Justice* "is not a radical book. Its horizon does not seem to extend to the abysses which we have experienced in our own lifetimes; the horrors of Hitler and Stalin do not present a special or new problem for Rawls. Rather, his book is a correction of utilitarianism; his consciousness is American, or at most, Anglo-Saxon" (Bloom 1975, 648).
2. I find Plato's *Timaeus* more engaging than the *Republic*, partially due to the relative compactness of the former and Plato's presentation of a cosmology, theology, his geometric elemental theory, and a theory of sense perception based on his element theory. Plato's *Timaeus* will be especially delightful to read for any upper year mathematicians, physicists, chemists, and biologists.

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THE CRISIS OF INDIVIDUALISM IN MODERN SOCIETY

In continuation of *The Axioms and Invariants of Individualism*.

So we left off last time on the basis that, effectively, the principle of *Individualism* rests on the foundation that **all individuals should be universally granted their inalienable agency and dignity**. Which is essentially to say that humanism, applied to every individual, should be the philosophical basis of individualism.

Concretely, when we consider *human dignity*, we consider, in vague terms, the capacity for an individual to live a fulfilling life, with agency of their own. Which means, any individual in an ideal individualist society should have a secure livelihood (or, in other words, food, water, shelter, etc., anything required to sustain life), and at the same time, their free agency is respected insofar as it does not contradict the free agency of others.

But when we consider the reality we live in, 500-odd years from then, we are still many miles away from humanism's promised destination, despite so much abundance in the world as it is. The material conditions of the world are more than capable of securing the livelihood for every human on Earth; and the political will for humanism has been emerging and prevailing for the last two centuries.

Let us examine our own society in Canada. What we have here, granted to us, primarily, are political rights. In some of the constitutions of the world, primarily, political rights are enshrined to various degrees. Freedom of speech and expression; rights to ballot, or citizenship, etc. Ours are no exception. These are the values of liberalism, and they are enshrined in the Western world, and have generally been followed through on. Is that sufficient? Hardly. Ottawa might be "staying out of the bedroom," but the prying eyes of the government and corporations have not. Consider also: who controls what can be aired on TV or on YouTube that you might watch? Not you. We are indeed free to act, but we are not free from paternalism, technocracy, surveillance, and other forms of coercion. And, harkening back to *Modern Democracy*, is *Broken*, even "democratic" decisions are hardly participatory either.

Yet we are in an even worse state when it comes to the human livelihood aspect. Our society is one of abundance, yet some communities¹ cannot even secure access to safe water. In fact, none of the aspects of livelihood have been enshrined and ratified as rights of the individual. Ottawa may promise free healthcare and employment insurance, but they can also take it away swiftly through legislation. Hardly inalienable. Not only that, but our society has been divided into haves and have-nots, when the haves get the cake, and the have-nots struggle to even keep the roof over their head. Hardly universal.

Indeed, how are we free, when we are hardly the masters of our own life? Take a look at a simple example. Just recently, the residents of Gerrard-Woodbine submitted a petition to ask

for a noise dampening wall to protect themselves from the noises brought about from GO Expansions, planned in 2017.² How is it that it requires activist campaigning, Parliament petitioning, and some "divine favour" from the media to pick up the story, when all that we ask for is the right to sleep in peace? And who makes the decisions on this? Not you, not me, definitely not the residents of the area, but rather, Metrolinx, a Province of Ontario institution, "accountable to the electorate." Supposedly. Yet who elected the people who work on this expansion project? Who elected the CEO? No one. And the media, who decided that this news story should be picked up and presented to you? Not you, not me, not the residents of Gerrard-Woodbine. It is the CBC, TorontoLife, etc. (the media) who reported on it, and Google, or Facebook, or Reddit, or Instagram, who decided to recommend it to you. (And me too, I suppose.) There are so many institutions, agencies and unelected actors, private and public, making your "free" choices for you.

How can we have free agency when every decision we make affects our livelihood? How many people are one paycheque away from homelessness? How many of our decisions are driven by economic insecurity? How many of us are dissuaded from pursuing what we truly want, versus what puts food on the table? There is no "free agency" when security is not available.



Individualism in the modern day, thus, is under siege from three directions.

One, from technocratic managerialism, which sits upon the complexities of the world, and comes to the conclusion that "the individuals" simply cannot comprehend the world because of ignorance. So the best course of action is to trade in your free agency, elect (or appoint, or accept) the expert, whom you will blindly and unconditionally trust, and life will be good. "You will own nothing and you will be happy."

Two, from economic insecurity. Would you trade your agency and your future opportunities for the bread on the table today? For a lot of people, their mere anxiety over economic downturn creates internalized coercion. After all, the hungry man does not have time to think about philosophy.

Three, from private unelected power. This is primarily displayed in the form of the "Billionaire class," which runs the machinery of the economy, and thus runs society. Those people do not need your vote, so why should they even bother appeasing you? Why give you a share of the pie, when they can maximize profit instead? Private power, when given free reign, becomes merely another governing body with no accountability to anyone except themselves. Just because it doesn't wear the name tag of "government" doesn't make it any less tyrannical.

We will discuss the possible remedies to those threats to individualism; and how individualism in the modern day might be saved.

RobbotC

1. <https://www.ctvnews.ca/northern-ontario/article/woefully-inadequate-response-to-kashechewan-crisis-officials-say/>
2. <https://www.cbc.ca/news/canada/toronto/metrolinx-expansion-residents-noise-9.7199360>

THE BAKRMS

[Content warning: vivid imagery of dead bugs.]

I'm trying to remember. I'm trying so hard. Stay with me, please—I have something to say. I know I do. I just have to remember.



A room. A buzzing room. Not with people—the room *itself* is buzzing. The lights. They flicker and they're wrought with dead flies, little black dots, disgusting little constellations mapped out in neat tiles across the ceiling.

And the lights buzz.

For some reason, I can't tune them out. I'm always aware of them above me. Like they'll collapse. Acrylic covers fragment and drop down and will hurt me. Flies fall into my mouth: legs scratching my gums, wings wedging themselves between my teeth like popcorn, heads popping off and stuffing themselves into my tonsils. Flakey. Hairy. A pâté of insect innards coat my tongue.

They'll take over. I won't be myself. But what is that, exactly?

I must remember.



Another thing I know is that the room does not make sense. It is wrong. And saying 'room' isn't right either, but I can't tell where it begins nor where it ends, so room it is.

The wrongness, at the very least, is from not the handiwork. The baseboards are flush with the floor, corners are symmetrical, and the trim is fine. They knew the details. But the big picture—

Imagine this. You've played video games, right? Something where you build things? Houses? Like *The Sims*. *Houseflipper*. Maybe not played, maybe you watched them—not the point. But these games, usually they have some kind of grid system to prevent objects from clipping. So they're actually on something. So it makes *sense*. Maybe if you're handy enough, you can fuck up this system and get something else, but *generally*, things are separate and they're obeying gravity and they replicate real life.

But now we'll get rid of that grid system. And now you can do whatever you want. Make things clip into each other, ignore

structural integrity. Whatever. And there is no function for whatever you're building, no one will live there, no one will see it, it will never be used. And actually, you don't know what rooms should be like. You've never been in one. But like a foreign language, you can recognize one. You know some of its quirks. But you will never understand it and in the end it's just a bunch of sounds. But instead of sounds, it's walls. Furniture. Appliances. Everything that *can* be in a room. You build and you build and maybe you're still building to this day. Again—no beginning, no end.

Or maybe I'm the ignorant one. Nescient. I'm uncertain.



The flies buzz and there's lights above and I'm scared of them falling down and of heads behind my uvula and wings wedged between my teeth. Have you played *The Sims*? It's like these rooms, grids, I'm placing things down but they're not letting me. Legs in my eyes. Buzz. I will hurt myself, dropping down. Or is it a must? Wish I knew. Wish you were here. I found a postcard the other day—actually, I found many. One after another.

"I miss you," said the first. "Miss you," said the second. "Miss." "M." The last one I found was half in the floor. I tried pulling at it but it wouldn't give. Beautiful palm trees with a blue sky, cerulean waves. What does it mean, to miss someone? I'm trying hard to remember you, trying...



There is a room and I am in it. The buzzes fly and the immaculate is trim. On and on. A game? There are no grids, unless you count the ceiling. A microwave spins. Sparks should fly, they will not, but the handle comes off as I grab it and I find that it is a telephone instead.

“𐄂𐄂OP𐄂A3𐄂?”¹

I do not answer.

planet b612

1. not a random assortment of characters

CANADA'S NEW SUBMARINE FLEET

WHY IT MATTERS

If you've paid much attention to politics over the last few years, you're sure to have heard that "we are living in an increasingly uncertain and dangerous world," or "the rules-based international order is being challenged." I've certainly heard these phrases so many times that I've become numb to them. But perhaps you, dear reader, don't pay much attention to what politicians say on a daily basis, and that's OK too. It turns out, the politicians are right. Like it or not, relations between countries are rarely becoming friendlier these days. Western powers are increasingly at odds with countries like Russia, and the United States isn't making many of its traditional allies very comfortable with its approach to international relations. And if you listen to Western military leaders, they'll directly tell you something that can be a little startling—they're preparing for war.

So, what does this mean for Canada? Well, the consensus across much of the mainstream political spectrum is that we have to beef up our military spending and capabilities to prepare for any eventuality. Up until the past year, Canada has spent consistently less than 2% of GDP on defense for decades. Our military has seen many losses of capability and has often struggled to satisfy our allies' gaze. So, it's clearly time to rebuild. To restore capabilities that were once second-nature and equip a very well trained and motivated force with the equipment they need to do their jobs.



This brings me to the focus of this article: Canada's recent decision to select the German-Norwegian proposal to build our next fleet of submarines.¹ This will be an absolutely massive undertaking. From end to end, including construction, sustainment, and maintenance, the value of the program is said to be around \$100B. That's B for billion. 100×10^9 dollars. If you like SI units (as you should), that's 100 Gigadollars. That's equivalent to the yearly tuition of approximately 1.5 million international engineering/CS students, or over 5 million domestic. Point is, this is a HUGE deal.

So, why do we have to spend this much on submarines and why do we need them? Well, for one, submarines are extremely expensive. There was no getting around that. As for the need, Canada has the longest coastline in the world. Rear-Admiral David Patchell, Commander of Maritime Forces Pacific, recently said, "I need them yesterday," referring to the new fleet.² Canada currently operates a fleet of four refurbished, second-hand British submarines. As of writing, only one out of the four is operational.² At the same time, it's an open secret that potential adversaries, particularly Russia, have renewed interest in the Canadian Arctic and it is plausible that they have sent submarines of their own through our territorial claims, without our knowledge or consent. A credible deterrent is seemingly the only real way to address this issue.

This, of course, is all in addition to the fact that climate change will continue to make the Arctic a more attractive route for international trade, meaning that Canada will need a credible Arctic presence to maintain sovereignty in the region. And, the truth is, as much as this procurement is about making our Navy more capable, it's about showing our allies that we are serious. The NATO alliance needs to take Canada seriously. Perhaps our most valuable contribution to the alliance would be a strong presence in the Arctic. The hope is that this submarine fleet is the first in a long list of moves to bolster our Arctic capabilities.



The competition for this submarine contract has been nothing short of spectacular. For the past year, TKMS (a German company) and Hanwha Ocean (a South Korean company) have been making their cases for why their bid was superior. Each pledged billions of investments in Canadian companies and signed countless agreements with various potential partners. The University of Waterloo even signed an agreement. Unfortunately, ours was with Hanwha, the runner up in the contest. There are already some salty folks on the "losing" side who are understandably disappointed that their partnerships and investments won't come to fruition.³

Without giving too much away about who I am, I've spent a lot of time in Ottawa over the past few years. And recently, advertisements for both the TKMS and Hanwha bids have been unavoidable across the city. And there was a rather interesting occurrence where a very long tenured executive at a co-op employer of mine announced his retirement, but then very shortly after joined the executive team of one of the bidders. I can only imagine they made an extremely compelling offer for him to decide to delay his retirement. This only scratches the surface of the all-out dogfight between Hanwha and TKMS that has taken place.

Now, the Government of Canada will enter into negotiations with TKMS to finalize the contract that will see up to twelve submarines delivered to Canada. In the Prime Minister's July 6th announcement of the preferred bidder, he announced that the first four are scheduled to arrive by 2034.¹ That timeline, and really this whole project, is extremely ambitious. I will be genuinely impressed if we are able to take delivery of those four submarines before January 1st, 2035. I will be honest in stating that, for various reasons which I don't have the space to get into, I would have selected the South Korean bid. But I am nowhere near an expert, and with the NATO connection with Germany and Norway procuring the same submarine from TKMS, the decision is entirely understandable. In the end, both submarines are fully capable. Now, we just need to get those subs in the water, get our sailors trained up, and begin to project our sovereignty in ways that have not been possible in a long time. For now, however, we wait (or I try to

get a co-op job related to this somehow... there sure are a lot of options⁴).

PurpleMoney

1. <https://www.pm.gc.ca/en/news/news-releases/2026/07/06/prime-minister-carney-announces-preferred-supplier-canadian-patrol>
2. <https://ottawacitizen.com/public-service/defence-watch/canada-to-become-worlds-largest-operator-of-new-submarine-yet-to-be-launched>
3. <https://www.cbc.ca/news/canada/hamilton/hanwha-ocean-mohawk-college-ontario-shipyard-9.7261352>
4. <https://team212cd.ca/partners#partner>

1 + 1 = 1

IN YOUR AREA



One and one robin came to make three, yet only one came to be.



At least it's not as ugly.

TotallyNotAGoose

WHERE IS EVERYONE?

mathNEWS is strangely empty today. Why? What is the occasion? Is there a midterm?

Spring terms always have sparse attendance, but there were less than 10 people here at 6:45 pm. It has picked up a little, but not much. Either way, please go to **mathNEWS**, it is great. We write silly articles and eat pizza.

QUAAAAAAAAAAACK

STUCK...

torn in two, clamped by two,
neither good, have to go back.
where? which way?
i lost myself.
can't move, have to move,
nowhere's safe, nowhere takes me,
i don't fit, i fit in myself.
occupy the body and head on my shoulders,
keep looking, you'll find

missing_g*rl

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UW'S BASTION OF ERUDITE THOUGHT SINCE 1973

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KARL MARX'S THEORY OF ALIENATION AND THE TWO WEEK MINECRAFT PHASE

Minecraft. Contested best-selling game of all time,¹ childhood classic, and a recurring yearly obsession for many.

For the uninitiated, *Minecraft* is an open-world sandbox game composed entirely of blocks. You can do pretty much anything you want, and it is relatively easy to play together with friends in a “world” or “server.”

For those with access to the game, the two-week *Minecraft* phase is a yearly-ish tradition in which you and your friends band together to obsessively play *Minecraft* for a short time before inevitably getting bored of it and never touching the server again. The cycle then repeats with a new world in the next year or so. This phenomenon is well documented in the archives of various social media platforms² and is a celebrated tradition across the *Minecraft* community.

The question I want to ask here is why? Why do these worlds, which we put time, effort, and care into, die? What causes them to be abandoned?

It could be that *Minecraft* just doesn't have that much to offer. Maybe, after a couple of weeks, we reach the limits of what can be done in the game. The only issue is that that idea is blatantly false. *Minecraft* is, by definition, limited only by creativity — you can do *anything*, so how is it that we keep feeling like there's nothing to do? To understand how things keep going wrong, let's explore the usual development of your typical *Minecraft* server.



Someone suggests we should play *Minecraft*. Everyone is in agreement, *Minecraft* is sick, let's do this. Set up a server, share the IP address, invite all your friends, and start.

So begins the Stone Age. This is the earliest stage of the server; everyone has spawned into the world with nothing, and the only focus is on basic survival. The server thrives during this initial stage because it is easy to feel like you are making progress towards the measurable goal of surviving.

Once the basics of life have been established (food, bed, base, tools), we move on to the Bronze Age. Here it becomes possible to focus on improvement *and* survival rather than just survival. Having stopped dying to mobs every night, people set out to upgrade their houses and gear through resource gathering. The server continues to thrive through the rewarding processes of achieving a higher quality of life.

Having established the necessities for life, the server is now able to move forward to loftier goals than mere survival. Now commences the Iron Age. Armed with sufficient tools, we see the beginning of civilization in *Minecraft*. We explore new horizons, create basic farms, build larger homes, and upgrade our gear even further. The progress is exciting, so the server

remains populated, driven by the desire to see our ideas to fruition through our own efforts.

Once one has a house, an instinct makes itself known. Optimize, streamline, and automate: highly efficient farms are created for every need. Mob grinders for experience points, fully automatic farms for food, villager halls for every resource, iron farms, the works. This is the Industrial Revolution, and also the beginning of the end of the server. For now, however, building the farms is fun, and the server lives on.

The farms are running at full capacity, every resource you could possibly need at the push of a button, but no one is left to do the pushing. This is the final stage of the server. As soon as we reach the peak of efficiency, no one has any more interest in playing. The server dies a slow, lonely death until one day someone logs out for the very last time. This age has many names, but for our purposes, we will call it the present.

To understand what went wrong here and maybe what is wrong with Us (capital U), we need Karl Marx. Yes, that Karl Marx.



To alienate is to distance or estrange, to make other from oneself. When something is alienated from us, it is unreachable, fundamentally distant, and as such, we cannot care for it. Karl Marx posits that under industrialization, and as such under late-stage capitalism, we as members of the proletariat are alienated from our labour.³ That is to say, that the average person holds little to no connection to the work they do; this is not because of any personal fault but instead an unalterable consequence of capitalism. To seek capital gain is to chase endless improvement, to endlessly streamline production, and to alienate. Oddly, this is never clearer than in the industrialization and subsequent downfall of a *Minecraft* server.

The first aspect is alienation from the product. It is described as an inability to understand the value of the items you have created. In the mindless pursuit of efficiency for efficiency's sake, we commodify resources and remove them from their greater context for the sole purpose of having *more, more, more*. Experience levels go from a symbol of combat skill, to something summonable at a moment's notice. Armour and enchantments go from hours of mining and careful curation, to a series of trades. We do these things because it is generally understood to be the way to progress. But, in creating farms for farms' sake, we lose any semblance of context for these resources and reach a state of commodity fetishism⁴ where goods serve the goal of being goods, and efficiency serves the goal of being efficient. We become unable to care because none of the resources have a reason for existing in such abundance.

The second aspect is alienation from the process. When production is ideally efficient, the act of production ceases to be a human activity. Instead, it is an act of isolated labour in pursuit of a product which serves only to be a product. Take the experience farm, which previously took days of careful survival and progress, now requires only time and repetition. Wait, swing, swing, swing, wait, swing, swing, swing, ding, ding, ding, du-du-ding, repeat for hours on hours on hours. To undergo this labour for the sake of gear that you have no use for is to divorce yourself from the *purpose* of experience. To reduce yourself to a cog, a dog subservient to a master ingrained in you by capitalism. A master that seeks efficiency for its own sake and robs you of the context of your labour.

Woof, woof, are you tameable with a bone? Will you tilt your head for rotten flesh? Will you die senselessly in defense of your betters?

The third aspect is alienation from human nature. Put simply, you have tamed yourself in service of efficiency with no purpose. Farms have been built just to have, and you have toiled just to toil. Rather than labouring for your own goals, you have spent your time on... nothing for no reason. To become alienated from your labour, your ability to *do* –is to alienate yourself from your humanity.

Good dog, surely someone is proud of you for this?

The fourth and final aspect is alienation from each other. The limitless efficiency of a farm means that you no longer need to rely on the community for products. The endless toil means that you have nothing to discuss. The pursuit of capital as a goal in and of itself kills community; the hoarding of capital becomes the only distinction between the mutts we have made of ourselves. Having been thoroughly alienated from our own humanity, we are unable to properly form a community and have no reason to remain together, killing the server once and for all.

You are the top dog in a pack of none. Feast, but do so alone.



Have hope, Fido, all is not lost (in *Minecraft*, because we are, of course, still talking about *Minecraft*). People in the *Minecraft* community have been finding success in keeping servers alive and fun for years: the Youtuber group and multi-season *Minecraft* phenom Hermitcraft⁵ is a great example, they all work through *Minecraft* as a creative outlet and while many of projects require HUGE amounts of labour, the direct context and connection they have to their projects allows them to keep coming back season after season. People such as Mogswamp⁶ have been able to maintain superflat worlds for ages by focusing on human goals and creativity rather than pure efficiency.

It seems to be our projection of capitalism's values into *Minecraft* that is killing our servers. A farm should be a means to an end in service of a human goal. Rather than endlessly industrializing, try to focus on what you want to build and

do, and then set out to meet those goals. Talk to your friends about what they want to do, share your resources with each other, and maybe get them to think about why they toil.

All this to say that you can save your next *Minecraft* phase from death by asking yourself, "why," before succumbing to the desire for endless efficiency. All this to say that you can save *yourself* by asking yourself, "why," before succumbing to the pressures of endless efficiency.

TL;DR: Play *Minecraft*, take some time to breathe.

Lyssa V33

1. https://en.wikipedia.org/wiki/List_of_best-selling_video_games#cite_note-Dispute-11
2. <https://knowyourmeme.com/memes/2-week-minecraft-phase>
3. https://www.yorku.ca/horowitz/courses/lectures/35_marx_alienation.html
4. <https://www.ebsco.com/research-starters/economics/commodity-fetishism>
5. https://hermitcraft.fandom.com/wiki/Hermitcraft_Wiki
6. <https://www.youtube.com/@Mogswamp/videos>

Important notes:

- Fuck *trolleyproblem22*
- This is an article about *Minecraft*, take life lessons from it at your own risk
- The dog thing was for drama, please take care to write about Marxist Theory at reasonable hours only
- Marxism is an ideology, not a political system; it is not the same as communism
- *According to Karl Marx, don't @ me

WHAT IS YOUR FAVOURITE FLOWER?

- cauliflower
- white chrysanthemum
- rose
- none
- lily x3
- tulips x2
- orchids x2
- chrysanthemum
- broccoli
- cucumber
- lily of the valley
- hibiscus
- edelweiss
- trillium
- all-purpose 🌸
- IXIA!!!!
- rafflesia

YOU ARE MORALLY REQUIRED TO SEND ME THE PICTURES FROM LAST NIGHT

There's a specific sequence of electrical voltages nestled in the transistors of the NAND flash memory cells that make up the SD card currently housed in your Canon PowerShot SX220 HS digital camera. If someone were to hypothetically collect all those 1s and 0s and arrange them according to the Joint Photographic Experts Group (colloquially known as "JPEG") format, they would be left with a photo of me looking super hot at the club last night.

I say "hypothetically" because your behaviour seems to suggest that this is an impossible task. Sure, I'd appreciate the photos from last night, but I'd also like the ones from last week, or maybe last month, or maybe from SIX MONTHS AGO?

I've tried asking politely, I've tried asking impolitely. I've tried reasoning, and I've tried begging. And yet at every turn you've denied me. Well. You've left me nowhere else to turn, my friend. It's time for me to launch a full-scale attack. My weapon of choice? Normative ethical theories.

That's right. In this article I will argue that every major normative ethical theory categorically requires you to send the whole friend group the pictures from last night. If by the end of this article those pictures are not in my possession, then it will be the inalienable truth that you are a Evil person.

VIRTUE ETHICS

The oldest of the three theories, virtue ethics originated in ancient Greece, where it was first suggested by Socrates. It places ethical significance of the character of the individual, rather than specific actions or the consequences of those actions. Someone who cultivates positive character traits, or "virtues," will achieve *eudaimonia*, a state of "human flourishing."

This all sounds rather admirable to me. After all, who wouldn't want to be an inherently good person? Let's, just for a second, put aside this whole "photo" business. Close your eyes and imagine.

How would you be if you were a good person?¹

Maybe you'd be open and friendly to others. Perhaps you'd be patient and slow to anger. It's quite likely that you'd be brave, even in the face of your greatest fears, and you would of course have ambition, but not to the point of being power-hungry.

Now let's go one step further. How would you be if you were *better* than a good person?

Ah, I see in your mind's eyes that you've already discovered the answer. Yes, that's it. You'd be the kind of person who sends out photos ASAP.

DEONTOLOGY

Deontology is an ethical theory that advocates for moral decisions being made on the basis of one's duties, rather than possible consequences. To illustrate this, we can look to professional organizations (and I mean "professional" in the sense of a legally recognized profession), which often have defined ethics codes describing the moral duties and responsibilities of its members. For example, Professional Engineers Ontario mandates that practitioners must act at all times with "fidelity to public needs" and "devotion to high ideals of personal honour and professional integrity."

With that in mind, why should camera operators be any different? After all, they are clearly burdened with glorious purpose! Who but the humble cameraman would embark on the foolhardy endeavour of capturing reality itself? Famously, "the cameraman never dies," and with that great power comes great responsibility. Is it not your DUTY, as the friend group's designated digicam owner, to share the fruits of your labour?

UTILITARIANISM

If you're still reading this and haven't yet rushed to your computer to send out pictures, then it's clear my appeals to your character and moral code have not been working. Perhaps photography has worn you down, leaving only a jaded shadow of your former self. The camera strap around your neck has transformed from a comfortable weight into an heavy chain. You no longer care about high-minded ideals like "virtue" and "honour." All that matters to you are cold hard consequences.

I can only assume Jeremy Bentham felt the same exact way (disillusioned with 2000's-esque digital cameras) when he first proposed utilitarianism, an ethical philosophy centred on the outcomes of actions. Specifically, it encourages acts that result in the greatest good for the greatest number of people.

Well, I can guarantee you that it would be very good for me to get those pictures. Any opportunity to expand my Instagram body of work is a supremely attractive proposition to me. And it's not like I'm asking you to develop film here (I would never dream of asking so much of a friend). I simply request that you slot your SD card into a computer and upload a few files to Google Drive. I promise the tiny bit of effort it takes to overcome your instinct to procrastinate will result in a disproportionately large amount of good and will (if you'll allow me to take a brief jaunt into religious ethics here) be rewarded tenfold once you've stepped off this mortal coil.

CONCLUSION

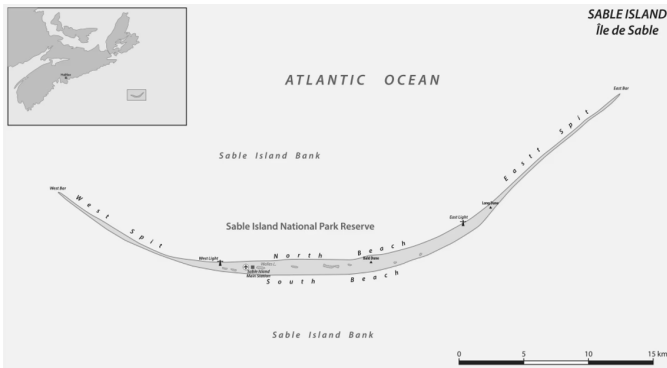
SEND ME THE GODDAMN PICTURES praying emoji praying emoji praying emoji

1. While out of the scope of this article, it could be an amusing thought exercise to ponder the inverse. How would someone be if they were a bad person? Maybe they'd be childish, and write articles about the breasts of animated Japanese women (famously, "simple minds discuss the bodies of characters in TV shows, complex minds discuss ethical theories"). Perhaps they'd be cruel, and resort to

ad-hominem attacks against those who've attempted to create civil, academic discussions. They certainly would not choose to take the moral high way, and tastefully ignore any slanderous death threats published in this magazine. No, only someone of great moral fibre would do that.

N ISLAND FACTS - SABLE ISLAND

Once again I'm covering a Canadian island, something that's turning into a bit of a habit for me. I just can't help myself though, we just have so many cool little islands. This one in fact is a personal favourite of mine: Sable Island.



- A mid sized sandy island far off the coast of Nova Scotia (roughly 1654 kilometres East of **mathNEWS**)
- The island is essentially one giant sandbar, 45 kilometres long, a kilometre across, and reaching a maximum of 30 meters high. The name translates to 'sand island' which... makes sense
- Sable Island was first discovered in 1520 by early Portuguese explorers and largely ignored because it was treeless, stoneless, and barren. In 1598 a group led by Troilus de Mesgouez, a French noble did actually try to settle the island, and all died off

almost immediately due to mutiny. A handful of survivors managed to survive 5 years on the island in mud huts before being rescued

- The island is probably most famous for being 'The Graveyard of The Atlantic,' with over 350 known shipwrecks. Its position in a massive straight line across one of the busiest shipping lanes in the Atlantic, combined with currents and common fog, meant it was a magnet for shipwrecks until lighthouses were installed in 1873
- One neat side product of all those shipwrecks is Sable Island's population of wild horses! At some point a group survived a shipwreck and made it to shore, establishing a population. Currently around 500 feral horses live on the island
- In 1901 the Canadian government planted around 80,000 trees on the island to stabilize the soil. All but one of these died, a small pine tree, which lighthouse staff would decorate as a Christmas tree in the winter. It recently died as well :(
- Electorally the island is considered a part of downtown Halifax, which I think is hilarious

That's all on this island, let me know if you have an island you want me to cover (fatcullen2@gmail.com).

FATCullen

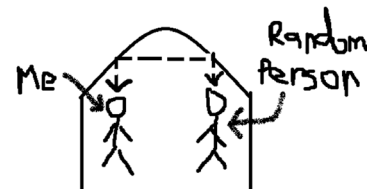
MY ONE SPECIFIC GRIPE WITH THE MONTRÉAL REM

Recently, Montréal opened the second branch of the REM light rail, which connects the previously rapid-transit-free southern West Island to McGill and downtown in as little as 20 minutes. The stations are fantastic, the trains are fast, and the cars have the most important feature I want in a train, being that there are windows at the front you can see out of.

HOWEVER. I have a problem with this feature, in that it seems they never tested these windows past 8PM at night. That is, the windows are curved in a particular way such that if you look out the front, you are staring directly at the reflection person in the seat next to you.

This problem is especially severe at night, where some of the sections of track are completely dark, giving you nothing to stare at other than your front-seat companion.

Consult the following diagram:



Now, this isn't actually a problem, I love the REM, but it just feels kinda weird.

"Oh My God it's like co-op mode"—*abstractED*

Shahabee

LEAVING MY TRAILS IN THE SKY



Have you ever finished watching a Marvel movie and thought, “Gee, that was peak! I wonder if there’s a game series with continuity and ensemble cast like in the MCU.”?

Whether it be as novels, comics, manga, TV shows or movies, I’ve always been enamoured by how different forms of media go about delivering impactful narratives. Eventually, my curiosity in this also shifted over to video games. Having played narrative stories like *Life is Strange* to indie games like *Gris* and *Celeste* to JRPGs like *Nier:Automata* and *Final Fantasy* entries, the use of a medium you’d “play” to convey cohesive, immersive stories that were in a certain sense interactive films really drew me in.

In the summer of 2025, I purchased *The Legends of Heroes: Trails in The Sky* upon a good friend’s consistent recommendation. What started as something to kill the time during a co-op term quickly turned into an obsession that to date has shown no signs of stopping.

The story is set in a country called Liberl. You start the story with a short cutscene showing how our two main characters meet in their childhood days, and now reaching the peak of their youth, they set off to follow in their father’s footsteps to become bracers, roughly the in-universe equivalent of adventurers and heroes. What starts off as a cozy-vibes-adventure story slowly, but masterfully builds up the world and the overarching narrative as hidden plots are unveiled.

Honestly, I was not expecting to like this game so much. I started it to serve as a breather from work life, but the more I played the more I found myself captivated by it. The flow of the story feels quite natural; you explore different towns and villages as the main duo on their journey, learning about the people and the country, as well as the overarching story at a pace where it is all easy to take in and enjoy. This allowed for me to organically take it all in and experience the journey alongside the characters while never feeling like it was being stretched out. The characters all have their charm and lovable quirks, and you slowly come to love them as their story unfolds. The game does a splendid job introducing the world, the characters and setting everything up for the finale as well as the next game in line, *Trails in the Sky: Second Chapter*.

But besides just the main story, I loved the way players could engage with the world. I found myself actually talking to

NPCs. A LOT of NPCs. Probably all of them, in fact. You see, as the story progresses, you can learn about the developments in the lives of about every NPC in the game, sometimes dropping interesting lore tidbits and very much in sync with what was currently happening in the main story. It’s a very charming characteristic that conveyed the level of thought and love the developers put into the game. Sometimes you’d even get to play hidden quests by talking to NPCs and influence their life in an interesting way. Side quests are another interesting way of developing the narrative. While optional quests don’t particularly influence the main story, it’s another point of the player interacting with the world and the NPCs that takes a breather from a pure fight X enemy or get Y material formula. There are also extra materials like story books and newspapers that you can collect and read, but I’ll say more about this in a bit. All to say that it’s a game that rewards completionists in all aspects, and it feels very worth doing every bit of side content.

Now onto the dreadful part: the combat. As someone who does not usually care much about combat systems and plays about every game out there on easy mode (chill, y’all), I have to say that I found the system very interesting, putting a nice spatial and time-optimizing twist on a turn-based system. The Orbment system (the magic system, so to speak) in the Sky games is very fascinating in that it almost feels like I’m playing a puzzle. Setting up slots with a particular order of element slots gives characters the ability to use stronger Arts. Each character having a unique number of lines and slots also made it quite fun to mix and match, though I’m sure people have made “best optimal set for [character]” videos on YouTube.

Finally to talk about continuity: the series presents a long running, continuous narrative that spans several arcs, with each arc following new characters in different countries across the continent of Zemuria. As you play the games next in line, you’ll see how the events of that past games come into play in the future. You will also find connections to things that were mentioned in passing in previous games, now being expanded upon. The aforementioned books contain references to characters that would show up one or two arcs down the line, and events that may have taken in the past that would be relevant to those characters or the main story at some level. It’s a really beautiful feeling to experience dopamine being fired from your brain when you finally connect all the pieces of the metaphorical puzzle.

It wouldn’t be surprising if you haven’t come across the *Trails* franchise before, as the series seems to have a niche exposure. The developer, *Nihon Falcom*, is a small company that has produced other games like *Dragon Slayer* and the *Ys* series. If you are looking for a story to be told though, I would highly recommend diving into the magical journey of *Trails*, given that the remake of *Sky the 1st* came out just last year and the sequel headed for a September release. For all its brilliance, it does have its faults (another time) but it’s freed me from my gacha game addiction so that should account for something.

EVERYTHING ABOUT HIM IS AN ILLUSION...

BUT, WITH HOPE, CAN HE MAKE IT REAL?!

Deltarune spoilers ahead!!

The latest *Deltarune* chapter gave us a lot to chew on, from the confluence/dissonance of soul/body, to further exploration into arbitrariness in defining humans, to the befuddling deal with protein. But as the strange someone who wrote the article discussing *Deltarune*'s ending last year, some things in Chapter 5 stuck out to me.

Some context: *Deltarune* takes place in the idyllic Hometown, where you control a human, alongside a monster and the prince(?) from the dark, and traverse Dark Worlds, where regular objects take new and fantastical forms in the dark as Darkners. The goal of the Three Heroes is to seal the source, the Dark Fountain, and close the Dark World.

In Chapter 1, when you die for the first time, the following words appear:

IT APPEARS THAT YOU HAVE REACHED
AN END.

If you choose to give up, then it says:

THEN THE WORLD WAS COVERED IN DARKNESS.

Later, in Chapter 2, we learn that Lightners (those of the "normal" world) can make Dark Fountains, and of the existence of the final apocalyptic event, the Roaring, that occurs "when light is subsumed by shadow, when fountains fill the sky," causing everything to be "lost eternally in an endless night." The basic implication here is that opening Fountains brings about the Roaring, and that letting the game end means the Roaring happens. One may be quick to assume that since Dark Worlds, as imaginary experiences, seem analogous to fiction itself, the Roaring is the consequence of "getting too deep into fiction," and that we must continue sealing fountains to end the escapist fantasies that are bound to be made.

However, in Chapter 4, we learn of the Prophecy, the Legend of *Deltarune*, which foretells of the events of the game, the truth written in glass. Crucially, the center point of tension is the Final Tragedy, the Last Prophecy, the Story's End, which is only unveiled when all hope is lost for the tale, in which there is only one way to save the worlds, and only then will the worlds be saved. We can easily infer that the Prophecy is equivalent to the plot of the game itself, that the events of each chapter of the game has already been written down and foretold. The narrative of *Deltarune* is quite concerned with itself being a predetermined narrative.

Each Dark World has been prophesied, the prophecy is equivalent to the story of *Deltarune*, and *Deltarune* consists of multiple chapters, each revolving around a particular Dark World (or a collection that synthesizes a cohesive whole), such that a key feature of each chapter is the ability to go back to sleep and skip directly to the Dark World after having

completed the chapter before. Furthermore, this triangle of congruencies ties to this one phrase in the description of *Deltarune* that used to be on the website and the store page: "a tale that steps closer to its end, chapter by chapter." While it may be obviously true about stories in general, the idea that each chapter brings closer the end is pertinent.

Finally, while the ties between the Roaring and the ending already exist with the game over screen mentioned earlier, only in Chapter 5 is it directly connected. In a one-to-one conversation with a party member, they directly state the more fountains are opened, the more darkness is released from them, the closer the Roaring becomes, which they believe to then result in the end of the story, something they wish to avoid.

The Roaring is the end of the story. Each Dark Fountain is a Chapter in the story. Dark Fountains brings the Roaring closer. Every chapter is progress to the end. The finite story has run its course, so the Roaring cries, finishing the world. Thus, making and sealing Dark Fountains hastens the "plot," and steps towards the ending. Then, why would someone, or rather, a certain duo continue to make fountains despite this? Well, sealing the chapter's fountain does level you up...

Deltarune is defined by its ending, defined by the rules governing its world, defined by its limits, defined by the fact that it will end (after all, *Deltarune* only exists because Toby Fox first dreamed of its ending all those years ago).

Even Hometown itself seems to be all there is to the artificial world. Communication to the outside has mysteriously gone down recently, the Ferris wheel is unable to go high enough to see beyond the trees, and attempting fly out of this stupid town, to proceed to where no one has ever gone before, only leads to either an empty slot where the backside of a chapter would go or just nothing changing. Maybe this tiny bubble can only be popped with the biblical flood, exposing the unending darkness, ripe for creation...

One final thing is the defined role of the three heroes is sealing the fountains. They are the unstoppable force, carrying out fate with the blade, and will inevitably save the world. So it stuck out to me that the idea of defying fate by stopping the heroes was brought up multiple times in this chapter, especially as something one of your party members seems to want, as their reason for holding back their immense power, hoping one of their foes can do the impossible and stop them. It's not lost on me that the final boss doesn't send you back to the last savepoint when you lose like usual, but instead just revives your team and lets you retry, as if hoping he can stall, let the fountain flow just a little longer, let his friends savour their new existence just a bit more, before the sun fully sets.

Rules are just a suggestion. Flowers are the real heroes.

More than glass

BLUE GYM MATS AND CONFESSING MY SINS

Lately I've been thinking a lot about my upbringing in the Catholic Church. Maybe this is a sign that I have too much free time, that I'm not working hard enough in my classes, or that I need to throw myself into yet another hobby or school club or something, but for now I thought I'd write some of these thoughts down and share with the class. To begin, I want to make two things clear. First, I know religion is a controversial subject. The point of this article is not to insult or invalidate anybody's religious or spiritual beliefs. This article is purely meant as a light-hearted analysis of my personal life experiences. Second of all, from my pen name, you can see that I'm an atheist. I've been atheist since I was 14, when I was in 9th grade, and my Catholic highschool started teaching me things I realized I didn't fully agree with. That caused me to reflect, and one day while standing in the shower I realized the only reason I was still believing in God was because I was scared of eternal damnation. And then I decided that fear of eternal damnation wasn't a good enough reason to keep living my life a certain way, and thus ended my life as a Catholic. My pen name originates from a term that I used to describe myself in my diary in 10th grade, when I was worried that my religion teacher would be able to tell I wasn't actually a true believer. *Right now in Religion class we're learning about the 'deep desire for God that exists in everybody's heart.' I'm a closeted atheist so I flew under Mrs. [Redacted]'s radar, but she turned to Gabriel next to me and said, "I know it's there in you Gabriel, you just haven't found it yet."* (November 15, 2018).

Before that though, I fully believed. I would stare into the void of my childhood bedroom's ceiling at night, with all of its sticky, tacked-on glow in the dark stars emitting the faintest green-blue light, asking God to say hello to my family members and pets in Heaven. Then I would ask Him to guide me through whatever problems I was dealing with as a nine-year-old, like running a Minecraft themed Instagram page behind my parent's backs (this unironically kept me up at night with debilitating guilt). That is to say, there was a time when I was fully engaged in my faith. I find my memories of this time very interesting, since it's a part of my life that I

likely will never be able to access again. The life of believing in a higher power, putting my trust in something greater than me, asking for forgiveness, and dedicating myself to adoration through song and kneeling and ritual.

One object that has stood out to me as a symbol of my theistic childhood are blue gym mats, the kind that velcro to the wall and fold in four places. If you are unfamiliar with Catholicism, there is something they have called the *sacrament of reconciliation*, also known simply as confession. You're allowed to go to a church and confess your sins to the priest whenever you want, but it's required at least once a year around Easter. To observe this practice, my elementary school would set up *confessionals* in the school's gymnasium, which are booths meant to give the person confessing their sins privacy when speaking with the priest. The way that my school made these booths was using blue gym mats velcroed together to create a wall, with two school desk chairs sitting opposite each other tucked within the wall of mats. Then, lines of first, second, third, fourth and fifth graders would march into the gym and wait for their turn to sit in one of the blue gym mat cubicles to recite, *"Through my fault, through my fault, through my most grievous fault, I ask the Blessed Mary ever virgin, all the angels and saints, and you my brothers and sisters, to pray for me..."* After exiting the den of blue gym mats, I had to kneel with my hands folded over one of the long gym benches to pray my penance, usually a few *Hail Mary's*, sometimes with an added *Our Father* if I was particularly delinquent that year.

Why do the blue gym mats stick in my mind so much? I don't know! Maybe it's because they were being used in a context so far removed from their original purpose, that their musty smell and neon colour piercing my senses as I became overwhelmed with guilt, admitting that I snuck my DS under my pillow to play *Pokemon Platinum* at night, has imprinted forever on my brain. Or maybe, *maybe*, I really do have too much free time to think about all of this.

closeted atheist

profQUOTES 161.5

AMATH 250: JOE WEST

“ [Student drops something on the floor with a lot of noise] Are you okay? Gravity still works.

CO 471: LEVENT TUNCEL

“ The following are equivalent:

- i. G is perfect;
- ii. The complement of G is perfect;
- (...)
- xv. For any probability distribution p on V , $H(p) = H(G, p) + H(G^c, p)$.

DRP: ZEUS DANTAS e MOURA

“ I like algebra, I don't like the people who like algebra.

MATH 245: FAISAL AL-FAISAL

“ The technical term for these in the literature is “short and fat” and “tall and skinny.”

PMATH 347: BLAKE MADILL

“ No physical violence, only bureaucracy.

“ They pay me too much!

STAT 230: SURYA BANERJEE

“ (...) Correlation making an ass of itself.

“ It’s easy to get divorced, not remarried.

“ We are not Pure Math people, we are normal human beings.

“ I love the distance between your eyes.

“ Suppose you’re the dictator of humanity.

WHY I THINK THE WORLD IS DOOMED...

... AND ALSO WHY I DON'T

Forewarning: This is an OPINION PIECE. THIS IS MY OPINION. If you disagree with anything I say... what are you gonna do about it, pussy? Call me a bad girl. Stupid, overthinking, cynical kitten.

It would be a disservice to write an essay on this topic and not immediately recognize that nihilism is a privilege. Picture me armed with my laptop, my cat snuggling into my lap, deliberating on all the failures of the world. Picture me having dinner and going to bed after. Waking up early for class. Showing up to work. A very average, unglamorous, privileged life. Now picture someone who doesn't have a bed, who fears for their life every day, who's never known what it's like to be full. For me to sit and think, “the world is going to end,” when it's far more likely (within my lifetime, anyway) that I will only be deprived of basic comforts that many have never experienced is, for lack of a better word, tasteless. Even if said comforts are basic human rights like nutrition and safety. After all, *their* world doesn't end just because they're forever hungry. Every morning they wake up and they have to make it work.

All in all, nihilism is a shield against empathy that only the wealthy can afford to have—and please be creatively honest about the wealth that you have. E.g. Geopolitics, identities, community, health and well-being, and yes, finances—more than I can list off here. So let's take a moment to acknowledge this, and then temporarily shove it aside to feel hopeless for a moment.

The truth is that it's hard to look at the world and not feel pessimistic these days. I try not to fault those who can't help but to fall into the trap when it's an active battle for me not to do the same. But if daddy sat kitten down to talk (and really, nobody should) and made kitten candidly lay out the puzzle pieces that will constitute the end of the world, this is how I would say it.

1. What I call the Empathy Crisis (and its recursive loop with othering and isolation)
2. What everyone calls the Literary Crisis (although I would expand this to cover intelligence as a whole)
3. The environmental collapse
4. Pre-existing political systems

Each of these pieces are so deeply interconnected with the others, it's hard to effectively isolate and treat one in and of itself. But solving even one seems such a vast, complicated, *impossible* problem. Too often am I stopped mid-life and baffled by the lack of humanity. Think of the cruelest, worst

belief you can imagine and know that someone you walked past today believes it wholeheartedly. On being stupid from the perspective of a former TA, I propose a theory that people no longer understand *how* to think and instead learn through what I call the *Machine*. $2 + 2 = 4$. Input = output. The middle stuff (the *Machine*) is nonsense. Re: environment, this current heat wave made me want to kill myself. Many more to come this Summer! And the insult to injury: every single political gripe you could have—this unsurvivable economy, our equality and rights, how ugly and depressing it feels to live in Waterloo sometimes—it all boils down to the systems of power where people in power *stay* in power. Change feels insurmountable.

I could detail each of these pieces with a whole separate essay, but that's probably counterproductive to my point today. My point is that we can't afford nihilism. My point is that the only hope we have is hope. *Bear with me on the cringe for a moment.*

Empathy isn't always learned, but it *is* practiced by necessity. It is a conscious choice to practice it, and we need to make that choice. Example: I am *empathizing* that you're bored of this article.

Be curious about something you don't understand. Find out. REJECT THE MACHINE. And if you hear someone saying something unbelievably stupid, *kindly* take some time to correct them. If they don't learn at all, think to yourself: “Ah, the Machine,” and try again next time.

... I'm gonna be honest, there's not really *too* much we can do about the environment from where we're standing. But you'd be surprised at how much picking up a few pieces of litter can do for making your neighbourhood a little nicer, your community a little happier, and maybe save a bird from choking on them.

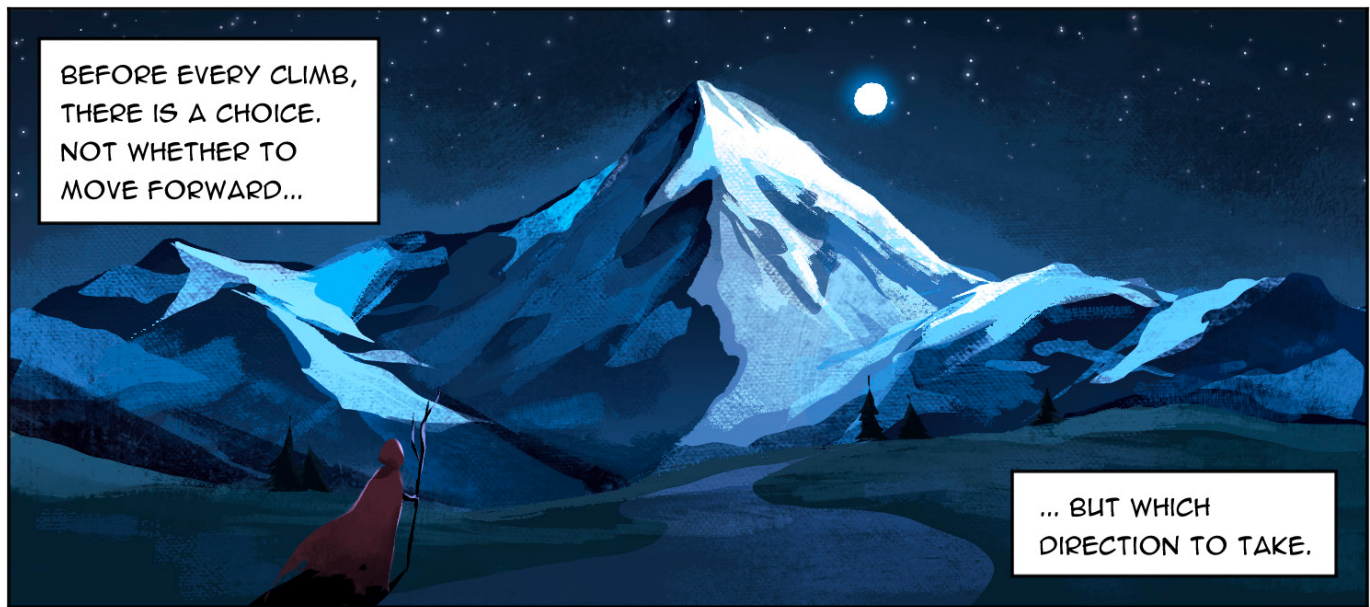
Small steps do more than small steps. They are physical, tangible proof you can hold in your hands and say: “*Look. Change is possible.*”

And in terms of politics? ... Kitten's best advice is to look at the candidates and vote for whoever's most like Spider-Man. The world could use a little more Spider-Man. Spider-Man Spider-Man Spider-Man.

Overthinkerrrrr

MATH 237: DIRECTIONAL DERIVATIVES

STORY BY ELISA LIANG | ART BY YEBIN KIM



THE *DIRECTIONAL DERIVATIVE* DESCRIBES THIS INSTANTANEOUS CHANGE.

$$D_{\hat{u}}f(x,y) = \nabla f(x,y) \cdot \hat{u}$$

IT IS USED TO MEASURE HOW QUICKLY ELEVATION CHANGES AS MOVEMENT BEGINS IN A SPECIFIC DIRECTION.

LOOK, THE THEOREM HAS REVEALED SOMETHING REMARKABLE.

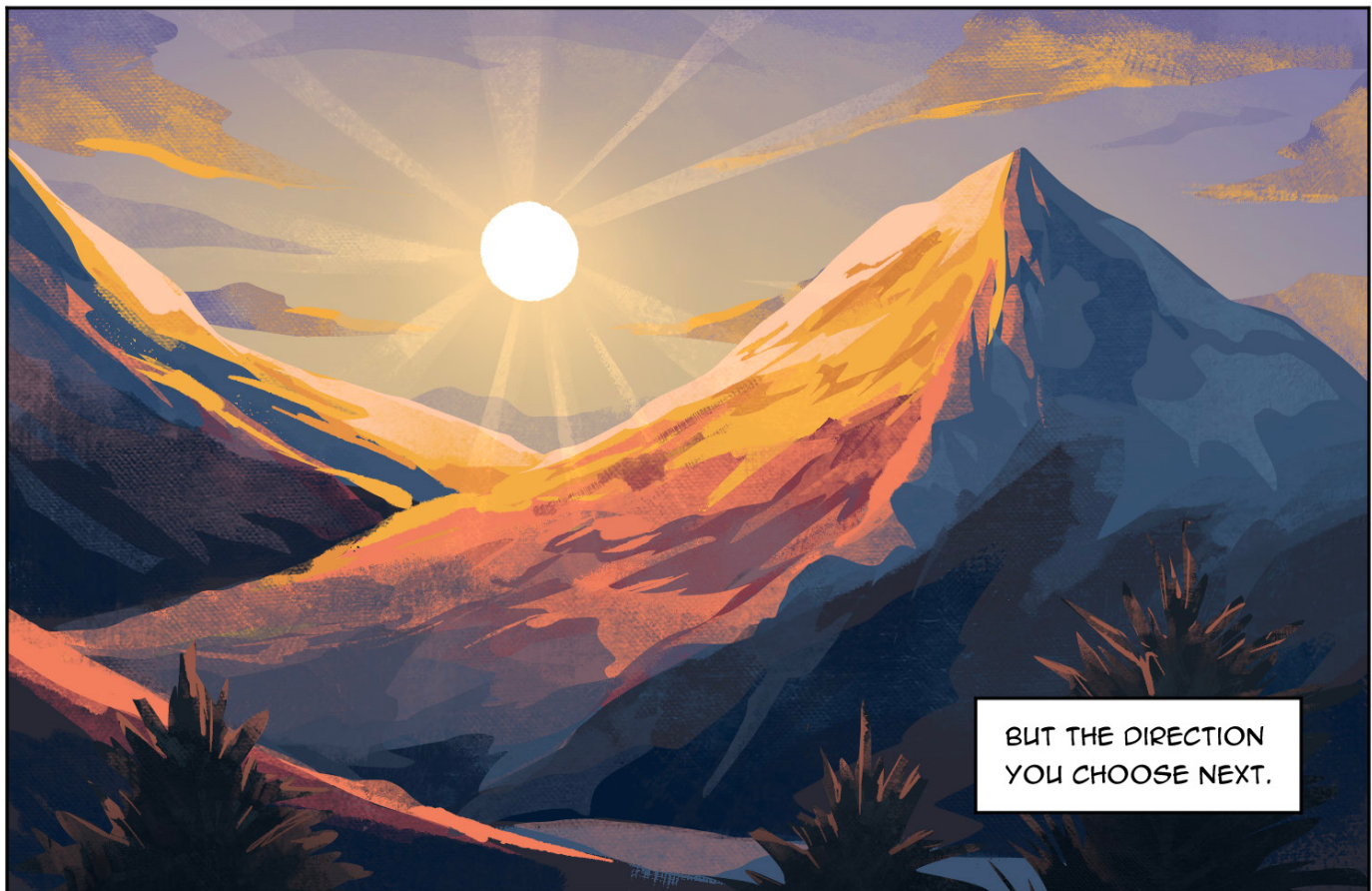
THE GREATEST INCREASE IN HEIGHT OCCURS WHEN MOVEMENT ALIGNS WITH THE GRADIENT ITSELF.

ITS MAXIMUM VALUE IS THE MAGNITUDE OF THE GRADIENT VECTOR, OCCURRING IN THE SAME DIRECTION AS THE NORMAL UNIT VECTOR.

AND SOMETIMES, THE MOST IMPORTANT DISCOVERY IS NOT WHERE YOU STAND...

DIRECTIONAL DERIVATIVES HELPS TO UNDERSTAND HOW A SURFACE CHANGES DEPENDING ON HOW WE MOVE THROUGH IT.

$$\begin{aligned} D_{\hat{u}}f(x,y) &= \nabla f(x,y) \cdot \hat{u} \\ &= \|\nabla f(x,y)\| \|\hat{u}\| \cos\theta \\ &= \|\nabla f(x,y)\| \cos\theta \end{aligned}$$



BUT THE DIRECTION
YOU CHOOSE NEXT.



A RANT POST ABOUT THE GRT TRANSIT SYSTEM

Before I get into the meat of this rant, I would like to announce that this article was typed entirely with my middle fingers.

On Canada Day, I was at the Kitchener Panthers baseball game. I left early, around 4:30 PM, given how how it was that day and the fact the Panthers were up by 9. While taking the ION back, I was stopped just before Kitchener City Hall station because the wind had picked up around that time, and a large branch had fallen over the tracks.

Now, this is an okay issue. I wasn't in any rush to anything, I didn't have anything I had to get back to. However. The way the entire situation was handled was entirely bullshit.

There was no replacement bus. Not like it couldn't happen in the ROUGHLY ONE HOUR it took. Not a single bus replacement. The ION was back up and running before a single replacement bus showed up.

Now I did manage to get on a bus about 20 minutes later, but I dropped my phone chasing the bus and had to run back to

the station. There was not a second bus before the ION was running again. That is bullshit.

I took the ION back to campus, only to miss my stop and get off at Research & Technology. Now typically, if this was a competent LRT system, I should've been able to get on another one headed back to campus within 10 minutes. 22 MINUTES. THE NEXT ONE HEADED BACK WAS IN 22 MINUTES. What are we doing??? I walked back to campus AND BEAT THE ION BACK. This should not be happening. My fatass should not be able to beat the ION.

ALSO WHAT THE FUCK IS THE POINT OF LRT IF IT HAS BARELY ANY BENEFITS COMPARED TO A BUS. THE SCHEDULE IS NO DIFFERENT TO A BUS. DESPITE HAVING SECTIONS OFF THE ROAD THE LRT WILL SLOW DOWN TO WHAT IS PRACTICALLY JOGGING SPEED. WHAT THE FUCK ARE WE DOING.

This needs to be fixed, badly.

fingersinsockets

writerTHOUGHTS #1

QUESTION: WHAT GOOD THING HAS HAPPENED FOR YOU?

Reading through the old issues of **mathNEWS**, there are various different old series that have sadly died out when their writer graduates. Will this end up the same? I dunno, I haven't thought that far ahead. I don't even know what I'm having for dinner tomorrow. Below are the writers' responses to this article's question of what good thing has happened to them recently.

MATTHEW mathNEWS

I found five dolla on the floor

MOBPSYCHOFAN

I passed my G licensing exam

SNOWDOZER

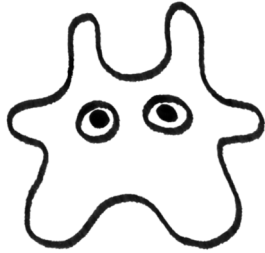
Deadpool vs. Peter Griffin Rap Battle

ERALOGOS

Everything

FINGERSINSOCKETS

i may lez out on saturday



AXON_TERMINAL

I saw a firefly in real life for the first time recently and its light was green. I'd never imagined that they would be green. Life is beautiful.

DOUBLE SLIT EXPERIMENT

i found out i'm good at domming! turns out all you gotta do is do what you want done to you

MRBLUESKY

Did karaoke with friends in RCH until 2:30 am

AURELIO

I've been doing volunteer placements at bird research observatories this year and it's been really cool!

DOLLAR STORE PERSON

I'm glad to feel less alone and have a community around me in the past few months. This is particularly nice during this week so I can give birthday treats to everyone I adore 😊

WriterThoughts

YOU SHOULD MAKE SWITCHEL

Switchel is my favourite drink, it's the only thing keeping me alive on these 30+ degree days. It's tasty, dirt cheap, and you can make a bunch in advance to use later.

Switchel is a type of drink called a shrub, a whole category of drinks that was once wildly popular and is now almost unheard of. A shrub is a mixture of some type of vinegar and some type of sweetener, often with spices and flavouring. If you find the idea of drinking vinegar off putting, think of it as tasting somewhat like lemonade, and acid plus a sweetener. Shrubs were common as far back as ancient Rome and only fell out of fashion in the last century or so with the introduction of refrigeration. Switchel specifically was common in colonial America and Canada, used by farmers during the Summer to cool off. Some of you might recognize it from the Little House on the Prairie series.

In terms of flavour, switchel falls somewhere in between lemonade and ginger ale. It supposedly acts as a good source of electrolytes and a low calorie soda alternative, though I just drink it cause I think it tastes great.

I like to make a bunch of switchel syrup in advance and then just add a little to water anytime I want some (I made like one big batch like a month ago and it's still going). If you want to

try a small batch out first to see if you like it go ahead, just adjust the quantities and keep the same ratios:

- 1 cup—Apple cider vinegar
- 1.5 cups—Brown sugar (adjust to taste, also using molasses or maple syrup is more traditional)
- 2 tablespoons—Ginger powder

To serve, just add ~2 tablespoons to a glass of water (with ice!). All together you can make syrup for gallons and gallons of switchel in like 15 minutes and for less than \$10, it's crazy. Also with slight variations in vinegars and sweeteners, you can make some other fun drinks:

- Posca, an ancient Roman military drink—use red wine vinegar, honey, and coriander seeds
- Oxyemel, an ancient Greek drink and Victorian era health tonic—use apple cider vinegar, honey, no spices

Enjoy!

FATCullen

CS PROF X SHOPIFY CEO

"The smell of 10X engineers..." I whispered to myself as I stepped onto the UWaterloo campus.

Talent came from here, and after firing my intern guy I'd figured I'd have a look for myself. Shopify hadn't become the largest global e-commerce company by mistake—I was known for getting my hands dirty to solve problems. The stock of interns hadn't been up to par lately. "Maybe I'll have myself a look around DC," I thought to myself. After all, this was a premium lineage of interns, one I paid a pretty penny for exclusive rights to. Something here was making them skittish... less productive... and I was going to find out why.

Adjusting my signature flat cap, I slipped into the Davis Centre, following a trail of hushed murmurs and the distinct aroma of stale Tim Hortons. I needed to see what was draining their processing power. There was a certain air of hopelessness emanating from... there! I could smell the grief of countless undergrads coming from DC 1350. I slipped through the heavy doors of a massive lecture hall, blending seamlessly into the back row.

Down at the front, commanding the whiteboard with absolute authority, I first saw him.

Professor P. Grant.

He was sketching out an Enhanced Entity-Relationship diagram with a physical intensity that made my servers sweat. Every subclass he mapped out had a perfect partial specialization; there wasn't a redundant dependency in sight. I leaned forward, gripping the desk. He was mapping out complex real-world abstractions into rigid, logical structures, and he had a structural integrity that a monolithic architecture could only dream of. Suddenly, Grant stopped mid-sentence, his marker hovering over a total disjoint constraint. His eyes scanned the tiered rows of exhausted undergrads, cutting straight through the crowd until they locked onto me. I didn't flinch. I gave him a slow, high-valuation nod. He held my gaze for a fraction of a second too long, his jaw tightening before he turned back to the board to seamlessly resume his lecture on translating ER diagrams into relational tables. When the bell finally rang, the students cleared out like a cleared cache. I stayed put, slowly walking down the stairs until I was standing right at the edge of his desk.

"You're disrupting my ecosystem," Grant said without looking up, organizing his lecture notes with crisp, precise movements. "I could feel a massive spike in background traffic from the moment you sat down."

"Just doing some market research, Professor," I said, leaning against the lecture podium, letting my arm brush against his stack of reference textbooks. "Though I have to admit, your lecture... it really optimized my pipeline."

Grant finally looked up, his eyes dark and analytical. "Is that so? Most CEOs prefer high-level abstractions like an ODBC

Driver for an SQL Server, using native-code APIs wrapped in comfortable host languages. I didn't think someone like you cared about what happens at the storage layer when you're executing raw queries."

"Oh, I'm a hands-on founder," I murmured. "I like to skip the application layer and hardcode my connections. I find that when you use the right... foreign keys... performance skyrockets." Grant's breath hitched slightly, his eyes dropping to my lips. "A reference constraint can keep things valid, Tobi," he whispered, his voice dropping an octave, "but if you aren't careful with your SQL syntax, you risk a massive rollback."

"I can handle a rollback," I countered, my voice a low, gravelly hum. "Why don't we step into your office and discuss how we can improve our... throughput? I want to see how you handle dynamic execution."

The heavy oak door of his office hadn't even fully clicked shut before Grant threw his grading rubric to the floor. There was no more time for theoretical modelling or abstract conceptual design; our system constraints had reached their absolute limit. We needed an immediate, stateful connection.

"God, Tobi, you make me want to break all my assertions," he said through clenched teeth as he pinned me to his Table. "Grant..." I whimpered, "but corrupted data... what if we violate referential integrity?" He whispered, his grip tightening, "Shhh... I am your dominant entity... you'll take my data and be happy with it. We're bypassing the host variables tonight." I braced myself for the transaction, feeling the full weight of his schema pressing against mine.

"BEGIN ATOMIC," he whispered into my ear seductively, as he inserted a row into my database. "SELECT..." he groaned, "STAR!"

I gasped as the massive data transfer took place, executing flawlessly under strict ACID rules. Every single element was completely atomic, perfectly isolated, and leaving us both in a permanent, durable state of ecstasy. He hit me with hundreds of efficient nested queries, optimizing my inner loops until my buffers were completely full. And god, right at the peak, he used a massive aggregate function, grouping every scattered row into one neat, heavily compressed package.

"Say my name," he growled, his grip tightening as the final commit neared. "But I don't know it!" I whimpered, my system resources reaching absolute maximum capacity. "I don't have the administrative privileges!" He leaned in close, his hot breath hitting my neck as he finalized the transaction.

"PERMISSION GRANT!"

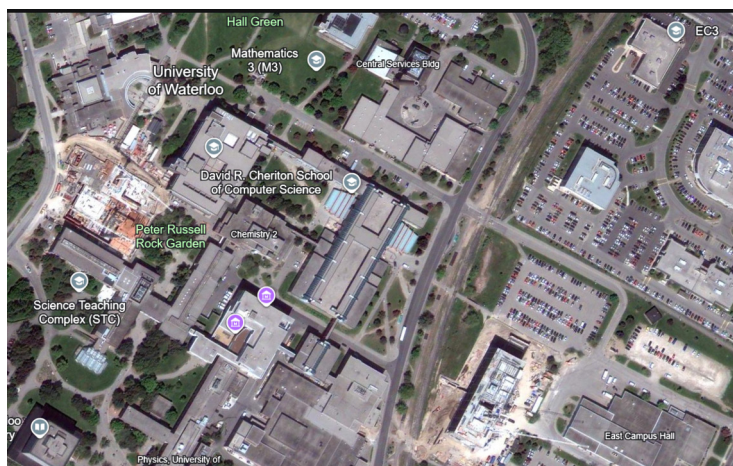
viar

wrote this instead of studying for the midterm

2009

RIP M3 ☹️

I rub my eyes open, another morning like any other day. My eyes refusing to fully open, hoping to hold onto the feeling of my slumber. I try to reach to my phone to see the time, hoping I still have some time to sleep before actually needing to get up. Unfortunately that proves futile as I can't find it. I swore it was plugged in, but now I'm forced to rub my eyes and wake up. What I see is not the same room I fell asleep in. It is like a room from another world: the same closet, same desks, but their contents are completely different. The closet has clothes I've never seen in my life, and the desk is stacked with textbooks that are not mine. I get out of bed and look around and become painfully aware I have awoken in a different reality, not the one I went to sleep in. Maybe this is a dream, maybe I got drugged, I don't know. What I do know is the sun is shining through my window and I have a calc lecture at 8:30 AM, so I'd best be getting a move on. I'll focus on the fact I woke up in an alternate version of my bedroom afterwards, like a normal person.



WATERLOO CIRCA MAY 21, 2009

I walk out of my building, wondering what the hell is happening. Why does my apartment look so different? Is this some sort of prank? I know my "roommate" loves pranks, but this is next level to a concerning degree. I continue walking and then arrive at the bus terminal, or what was the bus terminal. Instead of seeing the various GRT and GO buses loading up passengers, I see a tiny road, but that isn't the end of it, I look to where E5 and PSE are, but instead I see a giant construction site. My heart begins to pound. Is this a dream? By this point I am in a full speedwalk, how is this possible? My chest compresses, each breath harder than the previous. I race by the construction site that was PSE a day ago, and walk over the tiny tracks where the ION was yesterday. I feel like my senses are on fire as I look around. It feels as if I woke up in the past, but I've seen enough movies to know I need to be super rich or smart to do that, and I'm neither. I race towards the one universal constant in the universe, MC, hoping it will fix whatever is going wrong with the world. I continue speed walking, passing by the old MC-DC Bridge, and the patch of grass where M3 would have stood. I rush into MC and rush

up the stairs. I cross through the 3rd floor and pass by the **mathNEWS** office, where I can hear faint screams, presumably from the annual tradition of the smallest editor getting eaten by the bigger ones. Ahhh, reminds me of second year. While that piece of nostalgia runs over me, I am immediately reminded I have a class to attend.

I then race up the stairs to get to the 4th floor, racing to MC 4059 and open the door, but to my shock I see my first-year calc prof rambling on about sequences, like I'm still eighteen.

BEEEEPPP BEEEEPPP BEEEEPPP

I hear my alarm blare from my phone and wake up in a sweat. It's 7 AM. I look over and see my "roommate" lying in bed like he doesn't have to get up for work in half an hour. I check the nightstand and see the annoying alarm is indeed my phone, my nice modern phone, which I turn off before grabbing it. I rush out of bed and grab my clothes, not before giving him a kiss since he's still my husband. I get showered and throw my clothes on, rushing downstairs and grabbing a bagel before walking outside. I don't know why, but when I do, it feels less bright out, like I lowered the brightness on reality. I walk to campus once more, this time seeing all the modern joys of campus, the GO bus preparing to depart from the terminal, the sight of Eng students leaving PSE after an all-nighter there, and the ION leaving the station just before I cross. Everything is back to normal. I step back into MC, hearing the screams of the short editor, a timeless tradition it seems. As I walk to MC 4059, I take a deep breath, knowing this will be the beginning of something new. I open the door to see dozens of students, looking up to me. I go to the stand, put down my briefcase, pull out my notes for my first lecture, just like my calc prof did when i was a student back in 2009.

MrPastLarp

A WONDERFUL MUSIC VIDEO ABOUT AEROSOLS

PLEASE WATCH AND APPRECIATE

Since *some people* (you know who you are) do not appreciate science themed music, I present "*Molecular Clusters*" by Jakub Kubečka, Ivo Neeffes, Vitus Besel et al. It is delightful. Please watch it.

The genre of science themed music is plentiful and delightful. I highly encourage anyone to watch and try your hand at it.

<https://www.youtube.com/watch?v=Kdrh82RV13M>

QUAAAAAAAAAACK

THE TINDER EXPERIMENT

Hello, I (*Melanie*) meant to write this article two years ago when I was actually on Tinder, and not in a healthy relationship or whatever. But you know what, I (*Ignis*) like writing and have been sort of helping on this project so, to commemorate like a year of not being in the Tinder phase, here we go...

Melanie i'm tryna put some european *melanin* inside you

Rank C: for cursed, also what melanin? Bonus Point: Sparked this idea, since it was one of the first 10 messages I got<3

Less than a km away?

That's *interesting*

Rank FF: makes us feel icky, and scared for our safety (if this is you, never do this again). Also unfortunately kind of common...

Melanie it would be a felony if we didn't go on a date, you're too heavenly

Rank B- : with debate points for half rhymes, minus points for American :(

Them: Would you rather fight a rooster every time you stepped outside your house or a monkey with a knife randomly once a year?

Me: do I also get a knife??

Them: No but if you can take it from the monkey then its yours

Them: Also, the monkey gets prep time

Rank A: everyone's so creative, but not sexual so extra points, it's kinda just fun

hey melanie:)

i love melatonin

[sent at 1:04 AM]

Rank D: boring and not true, you clearly don't or don't take it at the right time

Dude idk how to say it without it sounding weird considering i'm bald but your hair looks well taken care of

Rank B: B for bald, [*Ignis*] please sir don't make me into a doll, nooooo

I'm having troubles at home, Can I take them out on you

[7:32 AM]

Me: [help line phone number]

Whose phone number is that?

Me: mine <3

Rank C- : get help (therapy)

Wowza you're pretty

Rank A: short sweet, wowza

Hey 🐼 [sent Thursday]

Are you a piano? Because I wanna use my fingers to play with you... Until you make beautiful noises [sent Friday]

Rank C: i cast carpal tunnel

Want to go half 'n half on a bastard?

Rank B: bastard but creative

Wanna be minecraft without the craft? [upvote from melanie] [downvote from the peanut gallery (aka ignis): because they were an engineer, and not original]

Rank A: need I say more

If you were a sourpatch kid you'd be the blue one <3

Rank A: it is the best one (not debatable)

Hey beautiful hows your morning going [Thursday June 27]

Hey r u a school bc i want to shoot kids in u [Saturday July 7]

Rank C: the whiplash is diabolical

This is my best line

Rank S: solid line

Are you the bottom of my laptop? Because you're really hot and it's making me nervous

Rank C: unoriginal, but good premise.

(edit: while editing my friend made this funnier..... cuz you're hot as fuck but you won't stop making noises)

Titanic [July 27]

Hey! What's up Melanie? [September 4]

Rank C: confused, were you swimming back from the Titanic??

Tall bean beauty machine

Rank B: from Ignis, i really like the structure of it.

Rank E: ew from Melanie, they really want to cut ☹

Which are you

A: 🍷

B: 🍷

C: 🍷

D: 🍷

E: 🍷

F: 🍷

Cause personally, i'm digging Melon E

Rank S: funny and creative

Roses are red and the sun gives off heat if your legs get tired use my face as a seat

Rank A: silly, better poet than felony guy

Are you actually 6ft cause if you are I'd like to go for a climb ☺

Rank C: that's a terrible line i'm sorry 🙄

Are you a paper airplane? cuz id love to fold you up and toss you around :)

Rank B: hehe

Hey x67

Rank C: consistent

(edit: this became funnier, we did not pick a random number, we counted and this was before it was funny)

Hey my name is [redacted]

But you can call me tomorrow

Rank A: oldie but a goodie

I think ur taller than me but i've always ben good at climbing trees 🌳

Rank B: 6 ft btw

well I feel like we should have like ended it off on a noteworthy one but like you don't have the attention span for that so it's okay, oh well bye bye

Melanie & Ignis

N REASONS WHY YOU SHOULD COME TO SOCRATICA S26 EOT SHOWCASE

AKA SOCRATICA ENCHANTED

1. Free food, free registration
2. Summerloo and magical vibe! There will be grass
3. ION can get you there straight-up from campus
4. The showcases include Hamilton parody musicals, original art, indie music, origami, short films, yoyo show, game about stealing spaghetti from your date, and more
5. There are a few large fishtanks in The Museum! Imagine Ripley's
6. You get to do a ritual called "The Host Pledge" that starts with "I, [insert name here]"
7. Scan the QR code to learn more! Spots are limited so remember to register early!



Socratica S26 host

1. <https://wygo.world/s26-socratica-eot>

FESTIVAL FOOD REVIEW

RIBFEST + PALESTINE FEST

RIBFEST

BBQ Platter (\$44) (10/10)



This was the highlight of my weekend. Sadly I did not take a picture of the whole platter (my friend took pictures and hasn't sent them to me yet), but attached is a picture of the chicken drumstick, which was one of the best chicken drumsticks I've had because it was so incredibly juicy and tender and packed with flavor.

This whole platter was $\frac{1}{4}$ chicken, $\frac{1}{2}$ ribs, pulled pork, coleslaw, and beans. The chicken and ribs were extremely tender and juicy, and the BBQ sauce was coated on so perfectly. This was undoubtedly one of the best BBQs I have had. The coleslaw was also packed with flavor, and even though I am not a massive fan of coleslaw I loved this. The pulled pork was doused in sauce and easy to eat, which I just loved. The only thing I didn't really like about the platter were the beans, but that's because I am not a massive fan of beans, and even then I found the beans decent. Overall, amazing BBQ platter, and next year if I am here I will definitely be back just for the platters.

Sausage (\$10) (6/10)

The sausage was pretty good, but sadly it was kind of dry and there wasn't enough BBQ sauce on it. It was pretty big though, so at least I was able to split it with my friends.

Cornbread (\$3) (4/10)

The bread was kind of dry, and didn't even taste that good. Maybe if I ate it with beans it would be better, but on its own it was kind of mid.

Mango Smoothie (\$6) (8/10)



This was refreshing after all that food, and it was actually pretty good. The person made the smoothie in front of us and packed it with quite a bit of mangoes, so at least I knew I wasn't getting scammed. It was also just the right amount of sweetness and the way they put the umbrella on top was pretty creative. This was definitely the best drink I had all weekend (the only other one I had was ass).

PALESTINE FESTIVAL

Chicken Shawarma on the Rocks (\$10) (9/10)



This was the best thing I had at Palestine Fest, and honestly one of the best shawarmas I've ever had. The chicken was tender, the rice was not dry, unlike every other shawarma I've had in Canada, and the garlic sauce was very garlicky, which is what I want out of a garlic sauce. My only complaint is that it was a bit too small for the price.

Baklava (\$10) (8/10)



This was really good. It was really sweet, but not too sweet, and the texture was very puff pastry-like, which I am a fan of. Sadly though, it was also very sticky, which is a massive issue since at the time, I had several mouth ulcers and the stickiness made it a pain to finish. Besides that, it was the best dessert I had all weekend.

Fatayer (\$10) (8/10)



This collection of pastries was pretty good. There was quite a variety of pastries, and some of them were packed with meat on the inside (either chicken or sausage). The bread was also soft and juicy which was good. All the pastries ranged from really good to decent, and there weren't any bad ones. It was so many carbs though, so I got kind of full, and I ate this right after the shawarma, but that was on me. I totally would get it again though.

Sujuk on the Rocks (5/10)



I was really looking forward to this since my friend said it was really good, but sadly everything was extremely dry. Maybe was also because I was full when I ate this since this is the last thing I bought for myself to eat, but I was not a fan of it. It was getting late so maybe the temperature also cooled down the sujek too fast, but regardless I did not like this and could not finish it. One good thing though was that the guy gave me a boatload of pickles when I asked for them.

Beef Smash Burger (\$10) (6/10)

I only had one bite, since my friend got it, but this was decent. The buns were a bit dry, but since there wasn't a ton of oil dripping off of it, it was easy to hold and eat. Also the meat wasn't crisped up well enough. I prefer the *Smash Bites* burger in The Bomber tbh.

Plain Lemonade (\$10) (3/10)

I think this was the worst thing I've had all weekend. It was overpriced (I did not get it thank god, my friend got it and I leeched off of it). It was nice and refreshing especially since it was hot, but it was made with wayyyy too much lemon and not enough sugar, and although the portion size was sizable (a full small soup container), it definitely was NOT worth \$10.

Fried Rice

**Reminder to Editor:
increment the InDesign
crashes counter.**

A mathNEWS EDITOR CRASHING OUT

N KILLDEER FACTS

I saw three killdeer at Columbia Lake this weekend. This was inspiring and life-changing because killdeer... are extremely cute ☺ Here are some facts about killdeer, because it's nice to learn about our neighbours!

1. Killdeer are extremely dramatic birds. If you happen to get too close to their nest, a mother killdeer will put on a show, feigning a broken wing in an attempt to convince predators that she's injured, and thus an easy target. She'll lure the perceived danger away from the nest until she thinks her eggs are safe, before revealing her spryness and escaping!
2. Killdeer are shorebirds, which means you'd expect them to be by the shore, but they are unlike their cousins in that they actually also like it inland.
3. You can see killdeer in many non-beach locations: baseball diamonds, parking lots, lawns, and (notably) the little island on Columbia Lake!
4. For this reason, they will probably be the most common shorebird you'll see, compared to other plovers that might prefer sandbars and remote beaches.
5. They're also quite recognizable with their large orange eye and striking black-and-white "necklaces!" Especially compared to other plovers, which are famously difficult to tell apart.
6. Killdeer make their nests by scratching shallow depressions into the ground. They will add items like pebbles, sticks, and bits of trash to their nest as the nesting season progresses; for some reason, they prefer light-coloured items.

7. Killdeer will quickly scurry along short distances before stopping, taking note of their surroundings, and scurrying along again.
8. I saw those three killdeer dipping themselves into the water and shaking themselves off. It was really cute!

This bird is so adorable and definitely not a bird you see every day, which is why I think it's amazing that you can spot them so close to campus if you're lucky! I think that UW is a surprisingly good spot for nature and I feel very glad to have this bountiful body of water so close to campus.



THREE KILLDEER ENJOYING SPLASHY SUMMER FUN AT COLUMBIA LAKE :3

iLikeBirds413

I WAS AT TAYLOR SWIFT'S WEDDING

I'm an exchange student from Beijing, and somehow I ended up at Taylor Swift's wedding in New York last Friday.

My dad works at UMG. He's on the board for the North American side, mostly dealing with Western artists and labels. He got invited through work, along with some other people from UMG. Since my parents are divorced and my mom is back in China, he asked if I wanted to come as his plus one. I said yes obviously. I don't really follow Taylor Swift or Travis that closely. I know she's a really famous singer and he's a football player, but that's about it. Still, it sounded crazy so I went.

The invitation was super fancy. It was made of this cloth material with beautiful flowers embroidered all over it. There were two T's in the middle for Taylor and Travis. It also had a QR code thingy you had to bring with you or they wouldn't let you in.

We drove to the MSG building around like 3:30pm in New York. There was a big white tent outside. We left the car there and went in. Inside the main area it looked really nice. There were these orange-ish cloths hanging around, and they had put up a bunch of photos. Some baby pictures of Taylor and Travis, and some newer ones of them together as a couple. They looked cute.

The main part where the wedding happened had lots of flowers and green plants everywhere, with pretty lights and lots of color. They made everyone give up their phones at the door. I didn't see many people using them, though a couple somehow still had theirs later.

Taylor walked down with both her parents. Adam Sandler was the priest doing the ceremony. Travis was standing up there with his brother Jason, who I think also plays football. They didn't have a bunch of bridesmaids or groomsmen. Just their brothers standing with them.

Taylor said her vows in a kind of singing-speaking way. It was nice. Travis said his normally. The whole thing took almost an hour. It got a bit long near the end and I started getting bored, but it was still sweet. Everyone around seemed really into it.

After that came the food, which was actually amazing. There was lobster, chicken with some fancy truffle stuff, and even a little caviar station that felt like afternoon tea I used to have with my grandma. They had three special cocktails too that I had, even though I am not 21 lol. Everything tasted really good.

There were so many famous people there. I recognized some but not all. I saw Emma Stone, Sabrina Carpenter, Reese Witherspoon, Bradley Cooper, Dakota Johnson, the stranger things girl, and a bunch of big NFL guys my dad knew. My dad told me to keep a low profile since we weren't super close to everyone, so we didn't stay the whole night.

Anyways, that's my story. It was a really nice wedding and the whole night felt like a dream. I still can't believe I was actually there.

奕辰

POKÉMON ODYSSEY: THE BEST AND WORST THING TO HAPPEN TO ME

Back in the winter term, around finals season, while avoiding my work and scrolling for more YouTube videos to watch, I came across one (1) romhack of Pokémon FireRed. Lo and behold, here was a video by one of my favourite Pokémon YouTubers locked behind a membership. Now, frugal little me absolutely *hates* to spend money when unneeded, and it's not like I *needed* to watch that series. But *man* did it look like an interesting mod. A quick internet search brought me to the official download page, and following a few directions, the FireRed file was patched into a brand new game.

Now, at first I wasn't going to play. I mean, I was a Pokémon addict that played Legends: Z-A during finals in the Fall term, but I couldn't possibly repeat that. Well, I did. I folded like the empty tissue boxes I threw in the recycling (recycling is good guys), like the cardboard box of my Amazon package carrying my new Joy-Cons for my Switch. Pathetic little me booted up the game, created a new save file, and dove into a new world.

Now, about the game. The player, nonconsensually named Nyx, lives in a little island near another island (is it an archipelago? Probably) that contains a dungeon. Yes, this is a dungeon-crawler. Nyx joins Talrega, a guild focused on uncovering the secrets of the Labyrinth of Yggdrasil, and destroys every floor's boss with her awesome-amazing-super-cool-possibly-regional-variant Pokémon. Yeah, the Labyrinth has floors, yadda yadda.

I played for a few days, around a week, enough to distract me from my impending doom (exams), and learned the following: First, read the damn information things they give you. I did not. I realized much later that I couldn't obtain EVs the normal way, after getting beaten by the first boss fifty times, beating her finally, and struggling on the second floor for Way Too Long only to realize going on hard mode meant bosses had maxed EVs, full six-Pokémon teams, at max level. Do quests guys. Read information when it's fed to you.

I spent the whole week that I intended to use for studying playing that stupid game and only came out more stressed. But

if anything, I discovered a really good game, and I passed all my courses. And in the end, isn't that all that matters?

Now, again on hard mode (after a long break), I recently played over the weekend until I got a headache and beat floor 4 all in one day. With ~38 hours in the game, I am now halfway through, and I intend to finish this game soon. After my last midterm, of course. My point is, that yes, that extra game time for your happiness when you can tank a grade is okay. Don't feel guilty, play Pokémon Odyssey. University temporary, Pokémon forever. The world is a lot larger than that exam you're stressing about.

PokémonAddict

ANIME REVIEWS PART 17.5

DR. STONE — 9 / 10

I reviewed *Dr. Stone* back in the very first of the anime reviews some years ago. But as it turns out, the anime wasn't even halfway done when I did. The final season finished airing just a couple weeks ago, and I've since watched all of it. It is, in fact, way better than I thought it was! It's peak fiction!! Especially seasons 3 and 4!!! I am not exaggerating!!!!

That's all.

But while I have your attention, you should also watch *The Ramparts of Ice* (a.k.a *Koori no Jouheki*). It's a school-rom-com-drama-type anime, and a recent release from this season. I'm currently in the middle of watching it, and it'll probably be one of the subjects of my next reviews—which is a rarity because I almost never cover seasonal anime—but this one shows a lot of promise.

yalevoylian

RANKING SUDOKU CONSTRAINTS

+ A SUDOKU I MADE THAT IS PRETTY FUN

My qualifications are I play a lot of variant sudokus and also I've made a few. Shoutout Rat Run series by Marty Sears, it is genuinely impressive that sudokus like that can even exist. If you wanna get crazy with sudoku there is such a beautiful world out there.

KILLER CAGES: 5/10

- This is most people's introduction to variant sudoku, I think. A cage is drawn around various cells and the sum of the digits in those cells is given in the top corner of the cage
- Unfortunately I am really bad at addition (pure math major) but I do think cages are pretty fun
- I used to be a big fan of that mobile app that had sudokus covered in cages. I am a sudoku snob now who only plays handcrafted puzzles. It is just a different world from computer generated ones

GERMAN WHISPER LINES: 8/10

- I love these guys! Digits next to each other on the line must differ by at least 5
- This does fun cool things like 5 can never be on the line, a 4 can only be beside 9 & same for 6 and 1, and more crazy cool stuff!!
- I get an unparalleled thrill when a 4 or 6 appears on the line

RENBAN LINES: 7/10

- Also a good line option. The digits on the line must form a set of consecutive, non-repeating digits
- If the line is long then you know middle digits need to be on it

CONSECUTIVE LINE: 3/10

- It's like a renban except BAD!!!! The digits must occur in consecutive order on the line
- I think this is too much information and it makes it a little bit boring. You get one digit and it reveals like the whole line!! Just use a renban and you can make weirder funner puzzles!!!

BLACK KROPKI DOTS: 9/10

- One of my favourite guys!!!! It is a little dot between two cells, and it means those cells must have a 1:2 ratio, so one is double the other. Yay!!
- Chaining them together especially when you leave box borders can make super cool and even unexpected results
- When making puzzles these are just insanely useful like I cannot overstate how nice these are to build sudokus with

WHITE KROPKI DOTS: 6/10

- Black Kropki dot's less cool cousin. Digits separated by the dot must be consecutive. This is fine, but unless you are chaining a lottttt of them they do not give you very much information
- They can also interact with other constraints in fun ways though so mayhaps I am rating them too harshly
- I don't know why they're called Kropki dots. Many sudoku constraints are named kinda weirdly now that I consider it

QUADRUPLES: 2/10

- Disgusting!! A circle is between four cells, and there's up to 4 digits contained in that circle which must appear in the surrounding cells.
- This makes terrible notation and I hate them forever!! Especially if they are not contained in a single box
- I would give them 0 but many of my friends enjoy them :(

CHAOS CONSTRUCTION 12/10

- This is one of my favourite sudoku things ever!!! Instead of 3x3 boxes it will have 9 irregularly shaped (orthogonally connected) regions inside of which digits cannot repeat. If these regions are already given this is called jigsaw sudoku!! The difference with chaos construction is you need to figure out what the regions are yourself!!!!!!!!!!
- This is like insane and cool and awesome. I have never made a sudoku that does this because I think it is craaaaaazy hard
- Every puzzle I have solved with this ruleset has been life changing

Anyways, here is a sudoku I have made with many of the above constraints. There are no quadruples so you knowww it's good. Sidenote, this is not my favourite website to play puzzles but it's the only one I've constructed sudokus in. Go to logic-masters germany or Cracking the Cryptic on youtube if you want the good stuff.

<https://sudoku.coach/en/s/BYih>

thepuzzler

Ceci n'est pas filler.

A SURREALIST blackBOX

WHAT WILL IT TAKE FOR MY TEAM TO BE SUCCESSFUL?

At the time of writing, it is July 9th. The Seattle Mariners, who should be World Series contenders, just got swept by the Miami Marlins to bring the season record to 47–47. In the 4th inning, the team fucks up a double play that would've ended the inning and kept the game to a close 1–2 score, instead making no outs, getting dealt with 4 runs to blow the game wide open to a 1–6 score en route to a 4–8 loss. The Mariners lose the division lead to the Texas Rangers. In the ensuing crash out, I may have smacked my chair and table too hard as I lost some feeling in my ring and pinky fingers.

This team cannot be competent to save its life. Batting, pitching, and defense are never good in the same game. Either the batting can't hit water out of a boat if they tried, the pitching LARPs as a sub shop serving meatballs, or the defense regresses into little league the moment a routine ground ball comes around. Commonly two of those happen in a game. Usually all three happen. And when it doesn't, manager Dan Wilson will pull the most boneheaded pitching or pinch-hitting decision based off "stats" and we lose that way. Star players are either injured or not producing at all. Something must change for this team.

The Mariners are the only active MLB team to have never played a single World Series game. They once owned the longest active playoff drought in major American sports leagues, missing the postseason for 21 years between 2001 and 2022. Someone born near the end of the 2001 season could've legally had a drink in Seattle before seeing the team ever make the playoffs, and someone born when the team first started playing would've gone their entire childhood without seeing the Mariners play in October. They were the first team with a \$100M roster to lose 100 games. There are barely more postseason berths (6) for the team than injuries involving ruptured testicles (5). How can such misfortune befall such an undeserving team?

I believe in 1 theory: a curse. Like the Curse of the Billy Goat or the Bambino, the Mariners deal with the Curse of Ted Bundy. In 1979, the serial killer was photographed wearing a Mariners shirt while representing himself in court. Given that the Mariners first played in 1977, they were never given an opportunity to ever make an attempt at the World Series. So what do we need to do to fix it?

What I propose is to follow examples laid by the San Francisco Giants with the Curse of Coogan's Bluff and the Hanshin Tigers with the Curse of the Colonel.

The Giants were cursed after moving from New York to San Francisco, in which angry fans stormed the field before the final home game and stole a plaque of Eddie Grant, a Giants third baseman who died in World War I. They had no success in winning the World Series until 2010, two years after placing a new plaque in their current stadium.

The Tigers were cursed after throwing a statue of Colonel Sanders in celebration after a Central League Pennant win in

1985 leading to a Japan Series title. The team faced bottom-of-the-league results and struggled to win it all until they recovered the statue in 2009, leading to a Japan Series win in 2023.

So how does Seattle undo their curse involving a dead man? There's no plaque to be replaced of Bundy (why would there be), and no body to recover as his ashes were scattered in an undisclosed location in the Cascades. He isn't looked upon as positively as the other two either, on account of all the murder. So what do we do? How do we rid ourselves of a serial killer's soul haunting the team?

I propose that the team is brought to a serial killer on death row in a state that still has it, and they collectively stone them to death. It is the only way forward. We have to make up for the ghost of a serial killer and the way we do so is by dealing with another one. While on the next road trip if this team comes across a state with a serial killer death row inmate, just bump up the execution date, hand the players a couple of giant rocks, and just let the work be done.

Now I need to clearly state that I strongly oppose capital punishment. The death sentence has a vast majority of consequences of which the benefits are horribly outweighed. Wrongful sentences can still happen, and while no wrongful punishment can ever be compensated for, the last thing needed is for that punishment to be the most permanent one. Additionally the introduction of capital punishment brings about so many issues as to how it will be used. A line cannot be objectively drawn as to who gets a death sentence, and if it is legal, it can almost certainly be used politically as a tool of oppression.

However.

2026 marks the 50th season of this team. As a fan of the Canucks, a team which has been around even longer, I can say that fans are fucking tired. 50 years without a single chance to see the mountaintop is something that can be equated to torture. Everyone is tired of this floundering. I am tired of it. It needs to stop. I don't need this team to inflict more disappointment so I end up leaving this world without having seen a Mariners World Series title. Something needs to happen. Something must happen. Somewhere out there there's a serial killer with a stonable head.

Or this team could be competent. Trade one of the 6 starters for high leverage bullpen arms and consistent bats that can hit lefties. Get some better coaching and managing that won't make stupid decisions that lose the team games. Actually be competitive. Maybe that'll help solve stuff. But who am I kidding this team won't ever do that. So prepare for a stoning.

Arm yourselves, Mariners.

fingersinsockets

GONE FISHIN'

gridCOMMENT 161.5

good evening gridWORDers,

is it possible to get deathly sick three weeks in a row for three entirely separate reasons? yes, because it is week three, and here i am on illness number three. let's not make it lucky number four. fortunately, i was able to lock in on this gridWORD nevertheless, and refused to let my circumstances affect my output as badly as it did the last time, so please enjoy this gridWORD. the theme is POKER :))

also, it should be known that some of these clues were created in consultance with a stats major at uoft. sorry for fraternizing with the enemy, but just know that if any of them don't make sense to you, you know who to blame. the inferior school, obviously.

anyway, last time, i asked you all, what is a notably very difficult skill/profession you have zero experience in that you think you could easily excel in? and shockingly, people said:

- *awmlet*: anesthesia
- *nazz*: explosive ordinance disposal specialist
- *thepuzzler*: being a pilot

please note that proper canadian spelling counts for points. the winner is *thepuzzler*, because i, too, believe that piloting cannot be THAT difficult, i mean how bad could it be. the gridQUESTION for this issue is: what is something you are proud of that no one ever asks you about? end completed gridWORD with gridQUESTION answer and pseudonym to mathnews@gmail.com or mc 3030 mathNEWS office by 6 PM july 27 for a chance for a PRIZE

si out,

spaghettiiinhalers

ACROSS

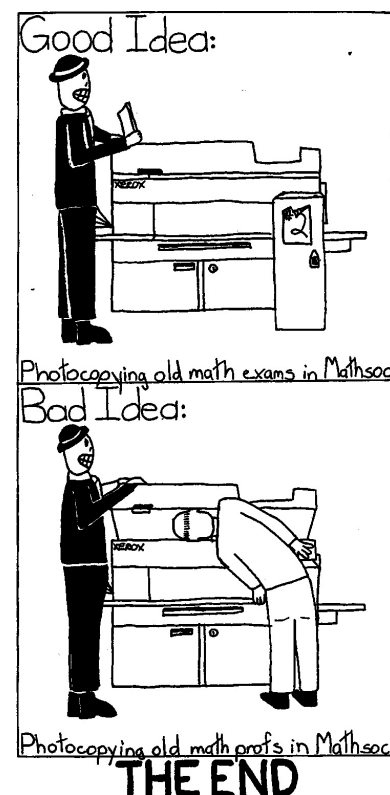
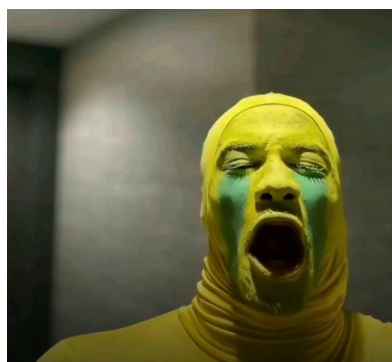
1. "I read you"
6. 22*
11. Groupie
14. Swelling
15. Newton, for one
16. Diamonds, in pop culture
17. Nonsense
18. Fate
19. Any boat
20. Arctic diving bird
21. Appropriate
23. Burped
25. AKQJT*
28. Morse bit
29. Really grumpy
34. "A Doll's House" playwright
37. Like some dorms
38. The first natural
39. Petrushka character
40. Pronunciation symbol
42. Saturday Night Live performance, maybe
43. Buddy
44. ___ Games (creator of Legends of Runeterra)
45. Lies
46. Archaic name for data scientist, (Ω , F, μ)
50. Sound at the door
51. Of the earliest period of the Stone Age
55. Flooring material
- 59.

60. Chemical suffix
61. Check out
62. ♦♦♦♦♦*
64. Light wood
66. Chapter
67. Cancel on plans last minute
68. Looks at lustfully
69. A pop
70. Lunch leaves
71. Trash

49. U.N. arm
52. "___ Kitchen": Gordon Ramsay show
53. Map in a map
54. Discontinue
55. Chick's sound
56. Orpheus' instrument
57. Paella pot
58. Kind of income
63. Cousin of reggae
65. ___ Khan

DOWN

1. Doctor's order
2. Stink in Sussex
3. Douglas' "Wall Street" role
4. Australian runner
5. Muslim holy month
6. Tyrannical decree
7. Can. neighbor
8. Low-___ diet
9. Glacial sand deposit
10. Burned with steam
11. JJ*
12. Hurt
13. Require
22. Completely trounce, in l33tspeak
24. One for the road
26. Dell competitor
27. Boat crew member
30. Immediately
31. Mauna ___
32. Building block
33. An unindexable, unique group of elements
34. Little devils
35. Dinghy or dory
36. It's approximately 365 days
40. Female sib
41. Place for a nap
42. Faxed over
44. Swindles
45. ♦♦♦♦♦*
47. Shooting marble
48. Applied the hyperbolic cosine



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69				70						71				

Drop your gridWORD solutions off at MC 3030, or over email to mathnews@gmail.com. Correctness optional.

lookAHEAD

SUN JUL 19	MON JUL 20	TUE JUL 21	WED JUL 22	THU JUL 23	FRI JUL 24	SAT JUL 25
Raspberry Cake Day		Drop with WD ends Cycle 3 interviews end	Drop with WF begins View next term's schedule and appointments Employer rankings available	Drop/Add Period Appointments - new students (through July 28)	Student rankings due Match results available National Tequila Day	

SUN JUL 26	MON JUL 27	TUE JUL 28	WED JUL 29	THU JUL 30	FRI JUL 31	SAT AUG 1
	Drop/Add Period Appointments - returning students (through July 28) mathNEWS 161.6 production night QNC 2502, 6:30 PM		Add Period begins (open enrolment)	International Day of Friendship	mathNEWS 161.6 released	

THAT’S THE RULE NOW

THAT’S THE GOAL

Finally, tonight, we don’t usually give story tips to **mathNEWS**, but here’s a story they might want to cover pretty soon in Waterloo with, well, mascots. UW has just announced that it’s redesigning its mascots to be more gender inclusive. I bet you didn’t think UW faculty mascots were pushing intolerance, but they were. They’ve been changed, you’re seeing the changes right now on your screen. The Pink Pinky, you will notice, is no longer wearing sexy pink ties. Now she’s wearing sensible neck ties ☺.

Why the change? Well, according to Waterloo’s quote, “We all win when we see more mascots in leading roles.” Because leading mascots do not wear sexy pink ties. Leading women wear frumpy, old man neck ties; the frumpier, and older, the better. That’s the rule now, that’s the goal. The other big change is that Cobalt the Dinosaur has, quote, “transitioned from sexy shades to blockier lab goggles.” Also less sexy. That’s progress. UW will not be satisfied until every last mascot is deeply unappealing and totally

androgynous. Until the moment you wouldn’t want to show off your fursonas with any one of them. That’s the goal: when you’re totally turned off, we’ve achieved equity. They’ve won.

Meanwhile, in a nod to the burgeoning wellness movement, the Tool will, quote, “acknowledge and embrace his anxiety.” And actually, if you look at him, the Tool does appear very anxious. Maybe he doesn’t like all the ugly new neck ties he sees around him. Maybe he liked the sexy pink ties.

MrTuckerUW



LAST ISSUE’S gridSOLUTION
