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VIEW POINT

Do You Need the Machine? Tipping in Canada Is Unconscious (Part II)

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Abstract While recovering from a major personal tipping point (see Part I), I was still able to keep on the lookout for Canadian mathematics education matters. After all, if Canadian mathematics education matters, Canadian mathematics education matters. In doing so, I ran into a number of other financial problems. Everywhere I turned was a financial problem: from tipping in the sharing (or platform) economy; to spending your way to savings with credit cards; the proliferation of sportsbooks and online casinos; trying to reconcile the Canadian cost of living with the seemingly high accepted standard level of consumption; and the outrageous fee to take $20 out of my very own bank account. Each taken on their own, I clearly have some financial problems. Taken together, I contend that 'Egan's Financial Problems', albeit unconventional, could, one day, be the impetus for financial education and literacy leaving math class and becoming a class of its own in Canadian schools. Until then, I guess we go with the School of Hard Knocks for our financial education.

Résumé Alors que je me remets d'avoir atteint un important point de bascule personnel (voir la première partie), je fus tout de même en mesure de rester à l'affût en ce qui a trait à l'enseignement des mathématiques au Canada. Après tout, si les questions entourant l'enseignement des mathématiques au pays comptent, elles importent vraiment. Ce faisant, j'ai rencontré un certain nombre de problèmes d'ordre financier qui sont autres. Partout où je me tournais se trouvait un enjeu financier : qu'il s'agisse de donner un pourboire au sein d'une économie collaborative (ou axée sur les plateformes) ; à la gestion de l'épargne par le biais des cartes de crédit ; la prolifération de sites de paris sportifs et de casinos en ligne ; essayer de concilier le coût de la vie au Canada avec le niveau de consommation acceptable apparemment élevé ; et les frais exorbitants imposés pour encaisser 20 $ de mon propre compte de banque. En abordant ces aspects chacun séparément, il est clair que je vis certains problèmes financiers. Je soutiens que pris dans leur ensemble, les « problèmes financiers d'Egan », bien que non conventionnels pourraient un jour donner lieu à une éducation et une littératie financière se distinguant des cours de

[Thank you for staying tuned for Part II].

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mathématiques pour devenir un cours unique en son genre dans les écoles canadiennes. D'ici là, je me résigne à aller avec l'école de l'adversité en ce qui concerne notre éducation financière.

Keywords Canadian mathematics education matters · Egan's Financial Problems · Mathematics education · Tipping · Sharing economy · Popularization · Gambling · Credit cards · Bank fees · Taxes

(Food) Delivery Services

Ahh, technology. For the record, I am not sure, in the grand scheme of things, that getting food delivered to your house was all that difficult before the advent of online delivery services. In the past, you would call the restaurant, order the food you wanted, then either pick it up or have it delivered to your house. If you picked up the food, that is, if you chose to put in the leg work (shovel the driveway, drive there, warm up the oven, etc.), whether or not you left a tip was your discretion. If the food was to be delivered, delivered by a driver sanctioned with the restaurant you called, then a tip was expected, but the amount often took into consideration whether or not the restaurant had a delivery fee. As for restaurants that did not deliver, well, you did not get food delivered from restaurants that did not have a delivery option, speaking of easy. If you wanted food from a restaurant that did not deliver, then you either drove, got a ride, took a bus, walked to the restaurant, or you just went without. Super easy. But, I get it, it is a new world order.

'The Machine' has officially gone through the looking glass. Take food delivery services, for example. Obviously, there are food delivery services from your multinational fast food corporations. McDonald's, Tim Horton's, KFC, Pizza Hut, Subway, Burger King and all the others have their own food delivery services, which "exist" as an app on your phone. Yes, you need an account, a username, a password that you will not remember (or will be so easy to remember that your account gets compromised). Perhaps you will also need to attach your banking details (like a credit card or your chequing account or something). Then answer a list of questions (that you will also forget the answers to if you do not write them down) for when and if the company gets breached and they politely ask everyone to update their passwords while reassuring everyone that their personal banking details are safe. If all goes well: Then! Then that hamburger or pizza or sub or cup of coffee or slurpee that you want so bad can be delivered to wherever you want with a few simple clicks. A few simple clicks, especially if you ignore all the time and effort associated with getting things set up.

Hold on… There must be a better way than going through the hassle of downloading and setting up accounts for each and every restaurant that you want to deliver food to your house. Just think of how all those apps will impact your icon setup on your phone!? And, what if you want to support the local Mom and Pop restaurant that went through tough times during the pandemic. Surely, you are not going to call the restaurant, place your order, drive to the restaurant, pick up the food, bring it home and eat it. That is flat out ridiculous in this day in age. There is a better, easier way: third-party food delivery services.

Skip The Dishes, Uber Eats, DoorDash (the three companies that have established themselves here in Canada) and others will all get that food you wanted so bad, the food that you could not go out and get yourself (for whatever good reason), delivered right to your door. Whether it is a hamburger from a multinational fast food corporation, something delicious from that Mom and Pop restaurant or popcorn from your favourite movie theatre, a third-party delivery service (just one app, account, username, password and set up), whichever one you decide to go with on your phone, all that food will be delivered right to your door. Quite a feat if you ask me. With that said, there are a bunch of people involved making this all happen.

For the record, I do not proclaim to be an expert in third-party delivery service fee structuring. (Fortunately, I do not have to be to make the argument I am about to make.) Full disclosure, I have once used a third-party delivery service. Interested in supporting a Mom and Pop restaurant during the pandemic, I called the restaurant to order some food for pick up and they told me that is not how it worked. I told them, most assuredly, that that is how it works. I was wrong. Perplexed, a bit stunned really, they said something about “Skip The Something-or-other”. I hung up the phone and began a long, interesting chat with my wife about the particular direction the world was headed. “Nope, we can’t do that anymore”, was how the conversation began.

While downloading the Skip The Something-or-other app on my phone, our conversation continued. “Beats me”, was my response to her question about why we needed Skip The Dishes if we’re picking up the food ourselves. “Beats me”, was my response to her question about where and how we paid. “Beats me”, over and over, was my response to all of her other questions, such as the following: how much more the food costs than normal?, how much Skip The Dishes makes on our order?, how much the restaurant makes on our order?, how much would a delivery driver make on our order?, and many more. Kristen, on her phone while I was providing answers to help “secure” my new account, asked more specific questions. “Not sure here, but I think we are doing a self-delivery or white-label delivery when we pick it up ourselves”, she began. For the record, we were not. “Ok, ok, I see the fee structure now, and you are not going to like it”, she continued. Delivery commissions on orders, white-label, self-delivery and customer pickup fees were just the beginning. We also talked about marketing fees, credit card processing fees, commissions and on and on. In the end, we were able to make an account, order the food, pick up the food, enjoy the food and then, for dessert, we promptly removed the app from my phone, never to be used ever again.

Just because our meal was over did not mean that our conversation ended there. Oh no. We had a great time discussing whether or not we had paid a 6% fee on our meal because we were forced into using an app and the customer pick up option. We came to the realization that the gentleman we kept seeing walking around Kitsilano last summer was a delivery walker (not driver) for Skip The Dishes or Uber Eats or DoorDash. We debated becoming Uber Walkers ourselves this next summer. We concluded that third-party food delivery services were costing everybody more money than before when they were not in existence. But the bulk of our (Skip) Skip The Dishes conversation focused on, you guessed it, the tip.

“Wait, if we left the tip in the app, but the person at the restaurant handed you the machine, were you not supposed to tip with the machine and not in the app?”. I responded to my wife with, “Never mind who we tipped, if I’m being honest, I do not even really know who we paid?!”. Our discussion turned to what used to happen in the old days with respect to restaurant takeout. “Takeout delivered meant you tipped the delivery driver, but not if you picked the food up from the restaurant yourself”, was how I began. “I mean you might have tipped when picking up, but not every time.”, was how she replied. She then, while looking at her phone, said, “This is probably not the best time to tell you, but I think you tipped twice…”.

As we took stock of what had just happened, for the first and last time (famous last words, yes), we quickly realized that the sharing economy, also known as the platform economy, was not restricted to food delivery. With Postmates, for example, it turns out you can have anything delivered these days! Beyond delivery, people are eschewing taxi cabs for Uber and Lyft and other companies trying to establish a presence in the ride sharing world. Move over motels and hotels, you can stay in someone’s basement if you like. In each instance of this new world order, we wondered who actually established the gratuity guidelines for these apps who have brought more intermediaries into the mix.

“One thing I know for sure is that you definitely have financial problems”, was how my wife jokingly put it, trying to get across, to me, that I was still spending too much time thinking about tipping in the platform economy and that she had moved on. Maybe it was the tone, where my head was at, I am not sure, but I immediately tried to make a joke back that involved German mathematician, David Hilbert. “Who is this guy, and what does he have to do with ‘Egan’s Financial Problems’? I still don’t get it", was how my wife replied to my protracted explanation about the importance of Hilbert's problems on the field of mathematics and my joke about 'Egan's Financial Problems'. "I still don't get the joke, but if the root of it is that you could drone on about 10–23 financial topics, remember when you ranted about credit cards and credit card commercials to our friends for 45 minutes the other day? Add that one to your little list", was how our discussion concluded.

Credit Cards

Credit card calculations are complicated. In conversation, I have found that many individuals, even those who spent much time successfully navigating topics like geometry, statistics and algebra in math class, prefer to adopt, what I will call, a head-in-the-sand approach to credit card calculations. This particular approach simply pays secondary attention to the numbers in the "New Balance" and "Credit Limit" boxes and primary attention to the "Minimum Payment" and "Payment Due Date" boxes. As for the rest of the relevant boxes, that is, "Annual Interest Rates" (which are high for purchases and even higher for cash advances), "Previous Account Balance" (key to any calculations), "Interest" (presented, for your convenience, in dollars), "Fees" and others, they simply exist for people, floating somewhere in the ether, as a hodgepodge of numbers and calculations that are being consistently and correctly calculated for them, as necessary, by and with full faith in a major credit card company, which, in Canada, is either Visa, MasterCard or American Express. With enough on our plates to deal with already when doing credit card calculations, making matters worse and more complicated, credit card companies threw various rewards programs into the mix.

For those of you that are still watching old school television, that is, network or cable television signals delivered to and from a dedicated box or antenna to a screen singularly committed to playing said signal, commercials for credit card rewards programs are relentless. The commercials are even more relentless during sporting events. As a person that pays particular attention to commercials, I have noticed that rewards programs have evolved (If you, too, love commercials then I would highly recommend *The Age of Persuasion* and *Under the Influence*, which are Canadian radio series, hosted by Terry O'Reilly, which aired and air on CBC Radio One. Enjoy!) In the past, credit card rewards programs took two forms. You could either get a cash percentage back of the money you spent or, through some points system, the amount of money you spent would translate to points that would equate to miles of travel on an airplane. These days, however, rewards programs are much more diverse.

Just name a reward you are interested in and I bet you could find a credit card to help you scratch that itch. Say, are you looking to use the everyday purchases you make on your credit card to help you get to the movie theatre more often? Good news, there is a credit card reward program out there to help you achieve your goal! Perhaps you are interested in helping someone, a friend or family member, make dinner in a more timely fashion by purchasing them an Instant Pot. How nice of you. Just keep incessantly making purchases on your credit card, keep checking in on the related, ever expanding rewards program merchandise catalogue and, once you have put enough money on your credit card (no matter how you intend to pay it off), the Instant Pot is now yours to gift! Thanks to rewards credit cards you can even save on your Star Trek and Hello Kitty purchases, donating to Ducks Unlimited, even reduce your latte factor by using a Starbucks Rewards Visa Card. Even more importantly, the shift in focus to rewards has helped us bury our heads in the sand even further.

Thanks to credit card rewards, whether they be cash back, points, miles or other, gone are the days of discussing the basic components of credit card calculations (e.g. annual interest rate). In instances where people identify their credit card, like placing it on a table at the end of a meal when the bill arrives, any discussion focuses on the rewards aspect of the card. No discussion of interest rates. Zero discussion of how long it would actually take and how much it would actually cost to pay off the meal if only minimum payments were made. Definitely no calculations are taking place. I must admit that, once or twice, I have heard discussion of the annual fee for the credit card. Quickly followed, of course, with a discussion of how “it is worth it” for all of the points or miles that are being accumulated. I get it, conversations about debt, high interest rates, paying things off, yes, are a bit of a buzz kill. I will also admit that finances, for some, are of a personal matter and should not be discussed. Yet, the ease with which a “finances are personal” person will spill the beans, proudly, about how many miles or points they have right now, yes, is a contradiction, but it is also a marker for how well the rewards angle to credit cards has shifted the conversation. According to a recent television commercial, a person in Saskatoon is hell bent on accumulating one million miles on a particular card over the next year. The lack of discussion on how one gets a mile, the money involved, interest paid and on and on cemented, for me, that we need to be discussing credit card rewards (points, miles, cash back, rewards, Hello Kitty purchases and others) as much as we need to be discussing credit card calculations.

Credit card commercials are taking things a step further, I contend. Sure, the horse has left the barn when it comes to discussing credit card rewards as opposed to credit card calculations. What the commercials are pushing, though, is a movement away from discussing the particulars of rewards (for example, how much money spent equates to a mile or a point) and into a larger message of travel, leisure, luxury, excessive purchases and more. The rate with which I see commercials where people are flying to exotic locations, staying at amazing hotels, eating amazing food, living their best life, essentially, all thanks to a rewards program from a credit card with an annual interest rate hovering around 20% has me worried. Gone are the days of the spend this amount of money and you will get this small percentage back if you are loyal to using this particular card commercial. Gone.

I contend that credit card companies are in the midst of pulling off something that would have previously been deemed incomprehensible, especially to those of earlier generations (e.g. parents of baby boomers who saved their whole lives). If I am watching credit card commercials correctly, and I think that I am, they are encouraging us to travel (and not the cattle on a bus version of travel), shop ‘til you drop, enjoy that concert or sporting event where the tickets are really hard to get, have dessert at the new restaurant that everyone is talking about, do that home renovation you have been putting off and on and on. After all, you deserve it. Credit card companies are on the path to convincing Canadians to spend their way to savings through credit card purchases. Although, with a class like financial education or financial literacy, there might be a way for young Canadians to learn about credit cards other than the school of hard knocks. You know what, I will add credit cards to my “little list”. With tipping and credit cards now officially a part of ‘Egan’s Financial Problems’, I started looking for more topics to add to the list.

(Online) Gambling

From Slahal to Sportsbooks, gambling is part of the fabric of our society. Despite moral objections, despite addiction, and despite a percentage of lives, marriages and relationships being destroyed, gambling persists. Given the long history, given the potential issues, and given the purported major goals of education in Canada, I see no reason that gambling should not be a part of schooling in Canada. “But it is part of schooling in Canada, Egan… they teach [insert game of chance here] in Grade [insert year here] in [and insert province here]”, I hear you say.

The teaching and learning of gambling, the kind that I wish not to be taught in math class, rather to be taught in a class, whether known as financial literacy or financial education, is because it is time to move beyond the cold calculations at the heart of games of chance. For the record, I am not, here, claiming to not teach calculations associated with games of chance. What I am claiming is that, in financial education class, stochastic calculations for games of chance are the bedrock, the foundation for the teaching and learning of gambling. No longer are “the chances” or “the odds” the endpoint, that is, nice calculations, lesson over. Once one has the odds, the teaching and learning of gambling can properly begin in school. Afterall, like with credit cards, the school of hard knocks should not be where Canadians learn about gambling.

At the time of this writing, I have been glued to the television watching the National Hockey League's Stanley Cup Playoffs. As is the case every year, for whatever reason, I pay particular attention to the commercials. And, each year, I notice things. One year, I am pretty sure that East Side Mario's, the restaurant chain, purchased nearly every available commercial spot — all I heard for months was "Hey Bada Boom Bada Bing!". I also remember that year when, oddly, Hockey Night in Canada was sponsored by Huawei. No matter the year, however, beer (and truck) commercials are a mainstay of the Stanley Cup Playoffs, but not this year. This year appears dedicated to the propagation of various Sportsbooks and online casinos.

When I visualize (my version of) the gambling landscape in Canada, it is not that complicated. Casinos, sure, are a part of that landscape, which were introduced in the late 1980s, early 1990s. If you were not interested in or did not want to gamble, you did not go to the casino. Simple (not simple). The same idea applied to other forms of gambling. If you did not go to the racetrack, then you avoided betting on "the ponies". Same thing for the Bingo Hall. Avoid the pub, you also avoided VLTs (Video Lottery Terminals), pull tabs and meat draws. Sure, raffles (usually set up in the middle of the mall where the cellular phone booths are now located) and the lottery (e.g. Lotto 6/49, Scratch'N Wins, Break Opens etc.) were more predominant, but you still had to go somewhere to engage. In other words, for a long time, gambling in Canada was place-based. Thanks to technology (and COVID-19), gambling is moving online.

I almost long for the days of a funny beer commercial when watching the Stanley Cup Playoffs, especially when I decode the core message coming from various sportsbooks and online casinos (and lotteries). You see, sportsbooks and online casinos, at the moment, are looking to establish legitimacy and their particular casino or sportsbook as the one to visit, as opposed to the plethora of others that are out there. As such, the message to consumers is simple and to the point. "Thanks to our app, a live bet on your favourite sport has never been easier" or "With live online, sports betting, you can bet on every play of live sports". Beer commercials used to be this way as well. "Enjoy the cool, crisp, refreshing taste of [insert name of beer company here]", used to be the message, for example. Then, after things were settled and the big beer companies were established, parody, humour, sarcasm and the like were used to sell beer. Smash cut to a day in the future here in Canada where, after years of battling it out, the big, corporate online casinos and sportsbooks have established their dominance. Cue the parody commercials because they will come. "Tired of flipping through magazines and newspapers during your morning constitution", I hear the commercial voice over begin and as a fully bearded overweight gentleman is filmed in the bathroom. As he nods, the voice continues, "With our new app, and with a few correct live bets for [insert obscure cricket or lacrosse league in some distant country here], you will be getting off your throne more befitting a King *this* morning." Now that I have my parody down on paper, I am even more worried than I was before about the future of online gambling.

Gone are the days of avoiding the meat draw by not heading to the pub in the afternoon. Right now, wherever you are, if you want, you can place a prop bet on whether the coin toss for the 2022 Grey Cup will land heads or tails, or the colour of the Gatorade that will shower the winning coach. I mean, sure, you must have an account and attach either you credit card or debit card to said account, but, once that is done, the world is your oyster! What a world! Live bets, prop bets, lines and odds are everywhere now if you start listening for them. In fact, Hockey Night in Canada, in between periods, has Ron MacLean throw the show, albeit briefly, over to two individuals who in their sports betting segment say things like, "The updated odds [after the first period] are minus 310 in favour of the Flames and plus 215 on the Oilers side – things just moving a bit here at DraftKings Sportsbook…" With curious, young, impressionable, phone-toting Canadians across the country watching hockey, basketball and the like, the teaching and learning of gambling, beyond the calculations (e.g. emotion, psychology, pitfalls, even the joys of responsible gambling), I think, should become part of 'Egan's Financial Problems', and part of financial education classes in Canadian schools.

The Canadian Cost of Living

"Wasn't it you that said, 'But we don't live in a world of needs, we live in a world of wants'", was how my friend justified to me his recent purchase of a new television. As our conversation turned to whether "upgrade" is the appropriate word to use when replacing a 60-inch television with a 65-inch television, I started to, mentally, try and piece together the current Canadian cost of living. It was not happening. There were too many things to take into consideration beyond inflation, high household debt and high home prices, which are three particular items dominating the news in Canada. After helping my friend set up his "upgrade", and listening to something about "deep" colours, I made my way home, pulled out a note pad, and tried to calculate the current cost of living for Canadians.

I decided to crunch some numbers for a hypothetical Canadian's cost of living, who I have decided to call CeCe (said like see-see). Let me tell you about CeCe who is, I think, a mental amalgamation of all the future math teachers that I have taught over the years. In particular, CeCe is just on the cusp of graduating from university and looking to begin their career as a math teacher living in Canada.

CeCe is fortunate, obviously. They were able to go to university and have just started in on their career! So, there is a bit a student loan debt. Now, they were unable to say "no" to the job they were offered, but public transit is not an option. Purchasing a car, whether new or used, not sure on gas or electric, is also coming in the near future. Renting is good for now, but a home, and, one day, maybe a family would be even better. Add saving for Canada's minimum down payment (5–20% depending on the purchase price), which gets harder and harder as housing prices continue to rise. CeCe's job has some sort of pension plan, which helps with "forced" savings . Unfortunately, for CeCe, there will be no major transfer of wealth from their boomer or silent generation parents, which sucks. CeCe's major life purchases will have to wait.

It is the little things that add up. Canada's notoriously high cell phone bills are causing a nice big dent every month. CeCe enjoys fashion, which is a big drain on the budget all of the time. Staying in good physical health is important, which equates to a gym membership or yoga classes or getting a bike or replacing running shoes. Going out is fun, sure, but it seems to be getting more and more costly, which raises the cost of tipping. Do not forget all of those fun recurring charges from whatever subscription-based business model CeCe signed up for (e.g. Netflix and many others). Starting a new career, CeCe is under a bit of stress. Do not worry, they went to the Doctor and all is ok (and CeCe does not have to pay for medical care as a Canadian), but the prescription ended up costing a little more than expected (as did their most recent visit to the dentist). Trying to make some chicken soup, CeCe noted that the price of meat has risen recently, as have all of the other groceries in the store. They then added a further dash of inflation, higher gas prices, rising interest rates, taxes, recreation, vacation, and household operations, furnishings and equipment and CeCe quickly realized that they needed to start saving (beyond their pension contributions), which was not part of their initial budget. All of a sudden, CeCe realized that they would be thinking about the cost of living here in Canada for the remainder of their adult lives. Welcome to the club, CeCe!

Even without any particular numbers, calculating the current cost of living for Canadians is no easy task. It also stirs up different emotions when people discuss or are asked if they are spending too much or not saving enough. You might not agree, but I would contend that CeCe should really focus on saving money. All kinds of savings. They should even be starting an Emergency Fund. Without a major transfer of wealth from their parents, some would argue that CeCe should not even bother with dreaming about home ownership and, instead, use the money they would have spent on major life purchases, like a car or a home, to build that emergency fund. In other words, as many people have said to me, the Canadian cost of living is simply too high, and personal and household debts are too much to save for an adequate Emergency Fund. Again, touchy issue. When I ask them, if they think the accepted standard level of consumption in Canada has gotten too high, and if that is what is, truly, the barrier to saving money, we usually shift to talking about the weather. Chalk it up to another of ‘Egan’s Financial Problems’, like bank fees.

Bank Fees

Predatory lending gets a bad rap. Hold on, let me explain! If you were watching television in Canada in the mid 1990s, you might remember the following: “Oh, it doesn’t cost that much, like 3 bucks on a ‘hun’, and it’s open late!”. If not, let me set the scene a little further.

Two Dudes (which nowadays would be called Bros), having just finished their construction job for the day, looking to party (of course), ran into the problem of having no cash because the banks in Canada were closed after work. One Dude is skeptical about the other Dude’s suggestion to go to this place called “Money Mart” to solve their no-cash-looking-to-party dilemma. The other Dude, while driving fast in his Jeep (with the top down), yells (because the top is down) the abovementioned phrase to the other Dude in the passenger seat. They head to Money Mart, where they experience no lines, super convenience, and, apparently, get their cash. I say apparently because, after extolling more virtues about the Money Mart experience, the final scene of the commercial is the two Dudes, accompanied with two young women, enjoying a game of pool in a pub or bar. For many young people in Canada in the 1990s, this was the introduction to financial services companies (that were not banks). The commercial caught people’s attention.

I know the commercial caught people’s attention because part of the sentence yelled in the Jeep became a catchphrase. People, even people you would not expect, would take any opportunity to drop the “It’s like 3 bucks on a ‘hun’!” into casual conversation. Friends asking to borrow a small amount of money from another friend for, say, lunch would have to endure, “Sure, but it’s like 3 bucks on a ‘hun’!”. At its peak, utterances of “It’s like 3 bucks on a ‘hun’!” would quickly be responded to with “And it’s open late!”. Looking back, none of it made sense, but that was the 1990s. What the commercial did do, though, was frame the cost of using Money Mart’s services for people. Now, sure, perhaps the phrase did not accurately capture the true costs and fees associated with using a financial services company, as opposed to the bank, maybe it did. Either way, it is time to get back to my crazy claim about predatory lending getting a bad rap.

Over time, Money Mart, whether rightfully or wrongfully (I am looking to not get sued here), has been subsumed into the category of predatory lenders. I argue, though, that predatory lenders, with their astronomical interest rates, high fees, and more, have stolen the everyday fee spotlight from banks. Case in point, let us consider the fee associated with taking money out of an Automated Teller Machine or ATM.

For as long as I can remember, it almost always cost money to use the ATM. No matter the amount of money that one took out, it would cost money. Unless, that is, I was using another bank’s ATM and then it would cost more money to take out money. And, when ATMs were no longer attached just to the sides or entrances of a bank, for example, once they became conveniently located in hotel lobbies, entrance ways to casinos, grocery stores, pubs, and pretty much everywhere, the fees for those machines were even higher. It having been a long, long time since I did not use a debit or credit card, or get cash from my bank (a bank I chose because I did not have to pay a fee for taking out money of the ATM that was at the bank), I decided to see what would happen if I just went to get some cash.

In a suburb of Saskatoon, standing in the well-lit lobby of one of Canada’s Big Five Banks, I was gobsmacked with the message that had just popped up on the screen of the ATM. I do not remember the exact words on the screen of the ATM, I had left my phone, which is also my camera, at home, but it was something like, “A fee of $3.50 will be charged to complete this transaction”. $3.50?! I was looking to take out $20! Fortunately, below the fee message, there was the “Do you wish to continue” and I must have pressed the “[Hell] No” option four or five times just to make sure. As I left the bank, processing that we had progressed from a fee of $3 associated with obtaining $100 in 1995 to a fee of $3.50 to obtain $20 in 2022 (which is almost 30 years later), I realized that bank fees need to be added to the list of ‘Egan’s Financial Problems’.

At home, back with my precious cell phone, I texted an old friend of mine. I asked him if he remembered the “It’s like 3 bucks on a ‘hun’!” phrase to which, I kid you not, he replied, “And it’s open late!”. I told him that I had a new phrase based on having just tried to get cash out of an ATM. He said he would indulge me (but did not have time for one of my rants). I sent him, “It’s like three-fifty on a Queen Sheet!”. Knowing that my phrase does not have the same ring to it, I expected some version of “Nice try” or something like that. What he sent back was even worse: “Yeah, but if you just took out more money, like $200, then the fee would not be as bad”. With that text, from a well-educated, well-respected member of our Canadian society, I removed any doubt that financial education needed to be a more integral part of schooling here in Canada. Then I started to truly tally up ‘Egan’s Financial Problems’.

Egan’s Financial Problems

As I mentioned, the moment my wife said, “You have financial problems”, I immediately thought of David Hilbert. As you are probably aware, ‘Hilbert’s problems’ is comprised of 23 problems, unsolved at the time, in mathematics. The Top Ten (if you will) were the ones that were presented at the International Congress of Mathematicians. As you are also probably aware, these problems were rather influential on the field of mathematics. All of which got me thinking, as an exercise, how close I could get to paralleling Hilbert’s problems in mathematics to Egan’s Financial Problems in a future financial education and literacy course in Canadian schools. With only five items on my list, I wondered how many more financial problems I could find.

To get ‘Egan’s Financial Problems’ to a total of 23, I would definitely have to rely on some classic topics (budgeting), and some topics that are already taught in schools in Canada in math class (interest). For example, here are some topics that, I argue, could help form the basis for a financial education and literacy course in the future: *the classics* (e.g. saving, spending, budgeting, managing credit and debt); *taxes* (all of them); *inflation*; *financial services* (e.g. banks, estate planning); *insurance* (all of them); *student loans* (of course); *career salaries*; *interest* (compound and otherwise); *retirement* (e.g. pensions); *transfer of wealth*; *mortgage mathematics*; *scams and frauds*; *risk*; *long term planning*; and the *financial landscape*. At the same time, I want there to be something different about ‘Egan’s Financial Problems’. As such, I tried to get 10.

As seen in Table 1, Egan’s Financial Problems are an attempt to move finance education and literacy beyond calculations. After all, this class that I have in my head is in the future. In this future class, we will properly be using our technological prowess to expertly model credit card debt, or mortgage payments or interest or whatever topic. (Should you wish to start with hand calculations, as opposed to embracing technology, fine. As long as the results of the calculations, however obtained, are deemed the starting point.) With a handle on the numbers (and the calculations), financial education and literacy can truly flourish (I think).

I see projects and presentations from students as the main currency for this class that is existing in my head. Having a student attend to the societal implications for abolishing tipping in Canada might make for a nice, cross-curricular project with, say, history class or civics. Attempting to establish the absolute best time to make the switch from a gas vehicle to an electric vehicle historically, mathematically and

Table 1 [Authors]'s Financial Problems

Egan's Financial Problems	**A brief description**
1. *Tipping*	As we move further into the sharing (or platform economy), traditional gratuity guidelines must be revisited and established.
2. *Credit cards*	We must eradicate the message that one can spend their way to savings.
3. *Gambling*	Props, odds, spreads, moneylines, parlays and the like, since they are now a television mainstay, must be understood (at a minimum).
4. *Canadian cost of living*	The accepted standard level of consumption in Canada has become too much for just one person to bear, arguably (of course).
5. *Bank fees*	A charge of $3.50 to remove $20 from my bank account borders on predatory lender numbers, but banks get a pass?!
6. *Crypto*	Apple Co-founder, Steve Wozniak once said, "Bitcoin is mathematics, mathematical purity."
7. *Emergency funds*	COVID-19 has, I hope, taught the importance of financial resilience, and the importance of setting up and maintaining an emergency fund.
8. *Predatory lending*	Classes of young students should be writing letters to their respective elected officials showing off their calculation skills for these outrageous rates.
9. *Climate incentives*	If possible, please tie in the decline and extinction of species (past, present and future) to this topic. Thanks!
10. *Teaching financial education*	I suspect the affective domain will be a fruitful area for researchers in the field of financial education!

financially would be something I would like to see as a student presentation. I picture having a student explain whether it is better, environmentally, to trade or mine for cryptocurrency (all the while I am secretly learning about crypto for the first time). Like I mentioned in Table 1, having the story of a class of students writing to the Premier about the egregiousness of predatory lending might not end the need for predatory lenders, unfortunately, but might have an impact of the loan rate. Having students simulate the stock market, sportsbooks, credit cards, and online casinos will give them a chance to experience the importance of saving up for an Emergency Fund if they hit simulated rock bottom. To hear a debate, from students, over the accepted standard level of consumption in Canada would be fascinating and telling. Having the financial education and literacy class, the one I have in my head, as part of math class would not be ideal; but everything has to start somewhere, which brings me back to the financial literacy strand that was recently added in Ontario.

Math Ed Matters in Ontario: Revisited

As I mentioned early, early on in this article, I fully support the introduction of a financial literary strand to the mathematics curriculum; however, I do get worried for a "Damn kids these days can't even make change without a calculator" implementation of the strand. Making change, being able to calculate the unit price, I agree, is important, but that is not where things are supposed to stop, rather, that is where things should begin. We need to recognize the importance of being able to calculate the unit price, whether by hand or with a calculator, but let us not kid ourselves because the grocery stores are now calculating unit prices for us and hanging those prices up in the aisles as part of the description of the item they want you to buy. The old joke about bringing a calculator to the restaurant to calculate the tip is still funny, but we also need to realize that all you need to calculate the tip is to touch the screen and place a credit card anywhere near the machine. Maybe I just worry too much. Maybe the discussion of credit card rewards and incentives found in financial literacy class will, one day, discuss the idea of spending your way to savings and other tricky, emotional topics like what it truly means to live within your means or gambling or others.

I guess the main saving grace for me is that finances can still be of a personal matter while teaching personal finance education and literacy in schools in Canada. Whether I tip my skate sharpener (who, let us be real, is an artist) or gas attendant, and how much, is my business. Whether we abolish tipping in Canada is a good question, which should be discussed in Canadian schools. In the end, my financial problems are my financial problems. Who knows, though, maybe 'Egan's Financial Problems' — like recognizing tipping is a habit, spending your way to saving, the proliferation of online gambling, thinking about the accepted standard level of consumption in Canada, questioning bank fees and predatory lending, saving for an emergency fund, crypto and otherwise (e.g. risk) — albeit unconventional, for sure, could be the impetus for change regarding the teaching and learning of financial education in Canadian schools. Making matters more difficult, the list is not static. Turns out that "Buy Now, Pay Later" is now a thing. I am told it is not layaway, which means I better learn about it. Step 1, of course, download Afterpay, PayBright, Sezzle, Affirm, Klarna and others onto my phone. Actually, maybe NOMI did that for me already.