52 Mondays

2018

BY KAREN WEBSTER

A YEAR OF CONVERSATION ABOUT PAYMENTS IN 2018

PYMNTS.com

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Introduction

Hi everyone!

Astrologists say that people born on Mondays have the psychic ability to understand others – making them better able to see what's next.

Executive coaches say that Mondays are the most productive day of the week – since it represents a fresh start and an opportunity to set and achieve new goals.

Scientists have offered seven reasons why the "Monday Blues" might be a real thing – using data to back up the claim held by many that Monday is the most dreaded day of the week.

I wasn't born on a Monday nor do I think that it's the worst day of the week – well, most of the time, anyway. But I do think it's the right day to reflect on the week that we just left behind as a way to move, clear-eyed, into the week that's yet to come.

That's why I've chosen Mondays to publish my weekly perspective on all things payments and commerce: To start a conversation about the moves – and the movers and shakers making them – and the transformation that is unfolding right before our very eyes.

52 Mondays 2018 is the second annual edition of those columns, which offer a play-by-play perspective on the developments in the most dynamic ecosystem in the world. They are presented in the order published, giving you, more or less, a mini payments and commerce time capsule for 2018.

I am pleased to share this collection with you – and hope you enjoy the look back, as we all prepare to look ahead to what's next in 2019.

Until next Monday,

Karen L. Webster

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#52Mondays

Payments 2018:
Think This — Not That

In 800 B.C., when people wanted to know the answer to "what's next" about their personal futures, they flocked to Delphi and asked Pythia, the Oracle of Delphi.

It was a bit of an ordeal.

Only after engaging in a variety of rituals, including drinking holy water, burning laurel leaves, bathing in a specific body of water near her cave, sacrificing a goat and eating a pie offered by the answer-seeker, would she speak. This whole process took a day or more, plus the time required to trek to the cave. It was said that her highly valued pronouncements were often incoherent, mostly because, experts speculate, the gasses inside her cave made her delusional.

The Oracle of Delphi wasn't always right.

Croesus, the king of Lydia and one of her most ardent supporters, asked her advice about waging war against the Persian king Cyrus the Great, which she advised him to do. The decision to take that advice led to the fall of the Lydian Empire.

It's a very good thing that happened after the king introduced the world's first general purpose payment method, the Lydian Stater — the official coin of the Lydian Empire — otherwise, who knows what we'd all be doing today.

Thousands of years later, people the world over still look for answers about the future, particularly at the start of a new year. Fortunately, getting those answers no longer involves animal sacrifice or asking delusional people living in caves for answers.

Since PYMNTS was founded more than eight years ago to answer that very question about payments, commerce and retail, I'm going to share my thoughts on what 2018 has in store for us. Those thoughts reflect a few big themes organized around a couple of frameworks that I hope give you food for thought about what it means for you, your organization and the future of payments and commerce over the next twelve months.

And you didn't even have to bring me a pie <wink>.

POWER BROKERS BOOST THEIR POWER

OK, you say, but hasn't it always been that way? It has, but 2018 puts a different spin on who those power brokers are and how they will influence the future of payments.

Connected devices, and the access to consumers they make possible, now shorten the distance between the consumer and what they want to buy — at the same time they increase the distance between the business the consumer once bought from and the brand of the payment method with which they may use to pay.

That's shifting the balance of power in payments — and not necessarily to those who make connected devices.

In fact, it's quite the contrary.

The power brokers of 2018 and beyond are the players that control access to those devices through the commerce and payments platforms that consumers use — across any device, any platform and any operating system — when they want to buy something, using whatever interface that consumer wants to utilize to enable those purchases: type, click, text, voice, click, blink or swipe.

That also means the criteria for making that power broker list has changed: The names on the list today are quite different from those who might have appeared even a couple of years ago.

Here's why.

Think commerce first, not connected devices. That means think Amazon, not Apple.

When the iPhone and Android devices were introduced about a decade ago, the pundits told the world to make way for the new power brokers in payments: Apple and Google. A decade later, it hasn't turned out that way. While their operating systems and devices have enabled consumers to shop anytime and anywhere using smartphones, their respective attempts to control access to the consumer via their "Pays" have failed to gain traction — on and offline.

Think about what has.

Merchants from the smallest Mom-and-Pop store to the biggest brands like Nike and Gap can be found on Amazon and accessed via any device across any platform consumers want to use.

Ironically, the largest merchant app in Apple's ecosystem, Amazon, has built a Prime customer base that it's now taken to any device, increasingly giving a multitude of other connected devices access to those consumers via its voice-activated assistant, Alexa. She (Alexa) and Amazon can direct any consumer purchase on or off Amazon, using Amazon Pay to complete a payment.

Alexa, the voice-activated assistant, is now in everything from glasses to thermostats to washers to lights to bathroom fixtures to cars, in its own Echo devices as well as hundreds of others, and can enable commerce anywhere the consumer wants to take her.

Device-independent but very much Amazon payments-dependent.

Device-centric players, like Apple, are at risk of losing ground — and control — over the customer, since there are now so many different ways consumers and commerce and payments can connect without it, including other smartphone brands. Commerce-centric players can make a thousand connected devices bloom and influence how and where consumers shop and buy and how they pay.

Device-centric players with closed ecosystems remain at the mercy of producing smash hits that enough consumers want to buy and use and keep buying and using. Year in and year out.

It's why Apple and Siri struggle while Amazon and Alexa prosper. It's why the HomePod remains a question mark and Apple Pay's power as a payment method will continue to sputter. It's why even if Apple would buy a car OEM, like a Tesla, it would remain just another one-trick hardware play, like the iPhone.

Connected devices enable commerce, but only if there is a commerce ecosystem for them to tap. Hardware alone doesn't control access to the customer anymore.

Think intent, not content. That means think Google, not Facebook.

Google, the search engine, is the consumer gateway to search. It's why Google is investing heavily in commerce enhancements through its shopping carousel, capturing online travel sales via its newly launched travel bookings site and enabling those capabilities via a Chrome app that can also be found on Android and iOS devices. Its Chrome browser form-fills store payments credentials for use when checking out for those who've opted in. Its suite of smart speakers is a way for Google to create its own commerce ecosystem of participating retailers who want in on the voice-activated shopping game, including Walmart and Target, who want an alternative to their rival's Alexa.

And since queries via search reflect an intent to buy, Google is hoping devices that can "ask Google" will bring consumers back into the habit of "asking Google" — and not Amazon — when they're looking for something specific to purchase.

Facebook's been trying for years to parlay the massive amount of consumer time spent inside its walled gardens into a big-time commerce play. Despite more opportunities to shop via its News Feed and on Instagram, the launch of Marketplace as a challenger to Craigslist, and the ability for users to buy tickets to movies and concerts on Facebook, commerce inside the company's walled garden seems more like an asterisk to its main business — mobile advertising — than a serious entrance into the world of payments and commerce.

It's yet to be proven that consumers, trolling through their social networks, want to use that time or those platforms to buy — and whether Facebook and its related properties are serious about using that precious inventory to encourage that behavior when they can rake in boatloads more dough selling ad space to brands.

Context is important, and contextual commerce opportunities represent an emerging opportunity for many players.

But context and content, without a consumer's intent to buy or without prompting an opportunity to buy, is an experiment — possibly an expensive one — in changing the behavior of a consumer who isn't in the mindset to take the bait.

Think ubiquity, not niche. That means think card networks, not niche alt pay plays.

As the world of commerce moves ever more digital, so does the consumer's expectation to use the same method of payment everywhere she wants to shop and with every device she wants to access to enable those purchases.

Today, in the digital world, just like the physical world, that means using network-branded card products that run across the ubiquitous global rails they operate — worldwide. And the more that connected devices add more commerce waypoints on those consumer's digital shopping journeys, the more difficult it will become for any small, alt payment brand to get enough scale to enable those consumer-buying preferences.

Eliminating friction is what those who today have and control access to the consumer are working hard to do. That means eliminating decisions, steps and obstacles on the way to a purchase. That means, among other things, delivering ubiquity. Niche alt pay plays, even before the explosion of digital and connected devices, have struggled for that reason.

The riches may be in the niches in many areas, but payment acceptance isn't one of them.

Think Tencent and Alipay. Period.

U.S. regulators may have put the kibosh on the ambitions of Chinese players from buying some businesses in the U.S., based on supposed national security concerns, but they won't stop them from taking stakes in or forming partnerships with key players the world over — ones that can help them scale outside China, including here in the U.S.

It's what Alipay has done already with First Data and Verifone, and in places like India and South Asia, where it's taken stakes in digital payments players such as Paytm and GCash. It's what Tencent has done by investing more than $3 billion over the last seven years to take stakes in 40 U.S. companies, like Snap, and global players like Spotify.

Ecosystems that control access to more than 1 billion users of its payments

method are too big for anyone to ignore — nor are their moves to create easier on-ramps to establish payments acceptance or build interoperable mobile-first payments networks. Acquisition is but one of the many arrows in the quiver of these players that bring the trust and the spending power of billions of digital consumers with them to many with complementary offerings.

Now, with this as a framework, think about how these power brokers — and others like them who control access to massive numbers of consumers — will change the future of payments and commerce.

Consumers aren't going to ask Alexa to help them shop on Facebook.

Nor are they going to start their shopping journey based on where they can use [fill in the blank payment method] – even though they may abandon a sale if they get to checkout and can't use the method of payment they want to use.

Nor will they organize all their shopping around a single connected device.

If we thought that mobile introduced a new set of expectations about how consumers shop and pay and the frictions they would no longer tolerate while doing so, the proliferation of connected devices — cars, wearables, smart speakers, appliances, televisions — will only amplify those expectations.

So, think commerce — and enabling it first — and devices second. Ask who is leveraging environments where consumers have or could express an intent to buy. Ask who recognizes that scale is about achieving ubiquity and who may have gigantic user bases and focused on eliminating obstacles on the way to the sale.

Then line up who today connects those dots, or enables those dots to be connected, given their ability to control access to the consumer.

And then make your own list.

Those are the power brokers of 2018.

REMOTE PAYMENTS KILL THE PHYSICAL POS

Think remote (via the cloud), not contactless (via the terminal).

The disappointment of the digital wallet as a method of payment in-store has been well-documented on these pages for more than three years. So, too, has the myth about NFC (near-field communication) payments being the salvo for moving payments, mobile and digital, at the physical point of sale (POS).

For every data point about Australia and its success is a countervailing data point about its highly concentrated merchant and banking bases, which make getting the entire ecosystem, including its 21 million consumers, on board a much easier lift.

And how the success of NFC contactless in the U.K. is driven almost entirely by its transit use case in the densely populated city of London.

So, those who say that 2018 is the year contactless payments, defined as NFC payments in the U.S., will ignite, since merchants will have more NFC-enabled terminals, are simply wrong.

The lowly QR code is used by a billion-plus Chinese consumers in China for making payments in store — to taxi drivers, to panhandlers and for just about everything else. It's also the interface for many payments schemes in developing countries, like India, and for emerging mobile payments schemes in the U.S., like Chase Pay.

But that's a distraction and also not what's next.

That moniker is reserved for "order ahead" – the remote payments plays that are the ultimate in contactless payments technology, since they require no touchpoint at all with a merchant in a physical store.

Today, those use cases are more typically associated with QSRs (quick-service restaurants) and coffee shop use cases, using smartphones and apps. For Starbucks, order ahead represents 20-plus percent of Starbucks' transactions — in just three years. This particular category of retailer, the fast food/QSR operator, would rather invest in this technology than the integrations associated with enabling NFC at the point

of sale since the long term payoff for them is much more than just "checkout."

Sure, using tap and pay, in theory, can make lines go faster, but so can quick, chip-enabled EMV terminals. Order ahead skips the line completely — and that saves consumers many, many minutes, not nanoseconds.

While giving merchants the opportunity to drive more incremental spend and frequency at their establishments.

Remote payments also reduce the need for those restaurant operators to pay cashiers and/or gives them the chance to redeploy them in back-of-house areas preparing products that consumers have ordered.

But it's not just QSRs for which remote payment has great appeal – and potential.

Consumers are ordering groceries ahead and picking them up curbside. Throughout the holiday season, merchants were practically begging online shoppers to pick things up in store to avoid incurring shipping charges. The data proves that when consumers pick things up in the store, more of them tend to add more products to their tabs.

And multi-tasking consumers, including commuters, are increasing the frequency by which they order groceries online before leaving the office and picking them up on the way home.

Given the favorable economics associated with those transactions, expect merchants to offer more and more incentives for consumers to do that. And with the ability for consumers to hop into an Uber or a Lyft or rent a Zipcar for a few hours or swing by the store on their way home from work, expect more and more consumers to take them up on those offers to avoid delivery charges and get what they ordered the same day.

Over time — but not over such a long time — that will marginalize POS checkouts in stores, as well as how consumers use them.

Stores will become showrooms and fulfillment centers. The shopping experience will evolve to become a reserve-ahead experience, where consumers will be able to come in and inspect, try on and then buy online what they want to keep. This behavior will accelerate the shift to digital versus physical store sales, even if those purchases happen while consumers are standing right inside those same physical stores.

INNOVATION WILL HAPPEN AT THE EDGES

Think incremental, not big bang.

If you buy into the fact that the big guys, with scale, will only get bigger, then that means there are only two possible outcomes for the smaller guys: to disappear or to leverage the assets made available to them by the power brokers as they seek innovators with fresh ideas to drive innovation.

2018 is the year (at least I hope) in which the notion of pinning one's hopes — and investment dollars — on creating "the next big thing" that guts the existing payments and commerce ecosystem in exchange for something revolutionary just withers and shrivels into oblivion. Not only is the innovation highway littered with lots of those dead bodies already, such an approach requires too much time and capital to build, then ignite.

If we've learned anything about innovation's prospects over the last decade, it's that time is a currency that works against as many innovators as it may advantage. And no one, including investors, has the appetite for an expensive, decades-long build that is likely to collapse under its own weight long before it could ever ignite.

Instead, what we will see in 2018 is a further doubling down of the commerce and payments power brokers exposing APIs and creating SDKs for innovators to tap and use to enhance payments and commerce ecosystems and infrastructure that exist today — and that consumers already use.

The enormous opportunity, in 2018 and beyond, is for power brokers to harness the creativity of innovators to enhance what exists in order to further differentiate their strengths and capitalize on market opportunity — for all parties.

FASTER PAYMENTS GET FASTER BY USING EXISTING RAILS

Think smarter, not just faster.

Faster payments has been a recurring theme in payments ever since the Federal Reserve assembled its Faster Payments Task Force to study the issue back in May of 2015. Some three years later, the result of that effort is a massive tome for making payments faster. And a pilot with a handful of banks that sent a couple of transactions across its rails.

Meanwhile, payments are moving faster than ever.

Existing rails — network debit rails and ACH — are zipping payments back and forth between people and businesses like there's no tomorrow — safely and securely. Same Day ACH for credits and debits is ubiquitous, and faster payments schemes are using technology and debit cards to push funds into consumer bank accounts in real time. At the same time, they are enabling new use cases, like the instant deposit of loan proceeds, insurance claims, airline voucher payments, payroll for hourly workers and sales payouts for small businesses (SMBs).

On the B2B side of the house, blockchain technology running over existing, global, compliant network rails is facilitating the real-time movement and settlement of digitized assets, including data, between banks and across borders.

Banks, who need to all be on board for any of this to work as advertised — see my earlier point about ubiquity — aren't exactly complaining about the state of faster payments affairs. What they're using today is a business model for enabling (close to) real-time (or quick enough) payments — and it doesn't come with a billion-dollar price tag to build something new that will then take years to become ubiquitous enough to be very useful.

And, as it's always been, banks and networks that wish to enable instant payouts today to anyone can do that. All that's needed is a business model to support it — and that is something that they can decide and control based on their use cases and customer base.

Of course, no one disputes the fact that core banking systems should be modernized, and building new real-time settlement rails is something we'd do if we had enough money and time to do it. But the world isn't perfect, and payments — on a global scale — is a complicated beast. No one has all the money in the world to do it, and no one really wants to wait.

2018 is the year that will shift the conversation from faster payments tomorrow to smarter and faster payments right now.

SKILLS TAKE ON APPS

Think access, not apps.

Apps have plateaued. As App Annie data shows, the average person downloads zero new apps and uses about 30 a month. Those mobile apps are mostly centered around a few categories: social networking, messaging, utilities, tools like weather and ridesharing and productivity apps like search and email.

App Annie also reports that consumers spend a whole 50 minutes a month on shopping apps. That's less than two minutes of the five hours that consumers spend on their mobile phones every day. Of course, they're using their browsers to go to websites instead.

Most of the time they spend online with their smartphones — about three hours a day in the U.S. — is spent on a few key apps, with Amazon and Walmart.com occupying the number one and two spots, respectively. That's because accessing those two apps gives consumers access to millions of SKUs, which is a whole lot faster and more productive than popping from app to app to find and buy what they want.

If consumers aren't going to the App Store and searching for what's new and downloading and using new apps, developers aren't being asked to create them.

Now, compare that to voice commerce and the skills ecosystems that are emerging around it.

Voice commerce puts products or services before stores. Skills in a voice ecosystem build bridges from the digital

environments that exist today to the connected devices that consumers use to access that ecosystem and buy something — and on-ramps for brands that want a direct relationship with the consumer but found it difficult to achieve in the past.

Voice ecosystems become the new power centers, shifting control from app stores and retailers to the consumer, her voice and the skills that connect her requests for what to buy with the brands in that ecosystem that can fulfill those requests.

CRYPTO WILL REMAIN INEXPLICABLE

Think irrational.

Have you ever tried to explain bitcoin to an 82-year-old man who used to run his own business and is reasonably savvy on investments?

I had that pleasure over the holidays when trying to describe bitcoin to my dad, who wondered why it was all over the news and what you actually bought – was it like a stock and a share in a company, or an investment in something tangible, like gold?

And why, if it was so crazy, were respectable players like Goldman Sachs getting in on it and the government hadn't yet regulated it?

He left before I had to answer why just about every country in the world but the U.S. has taken — or is close to taking — steps to ban initial coin offerings (ICOs).

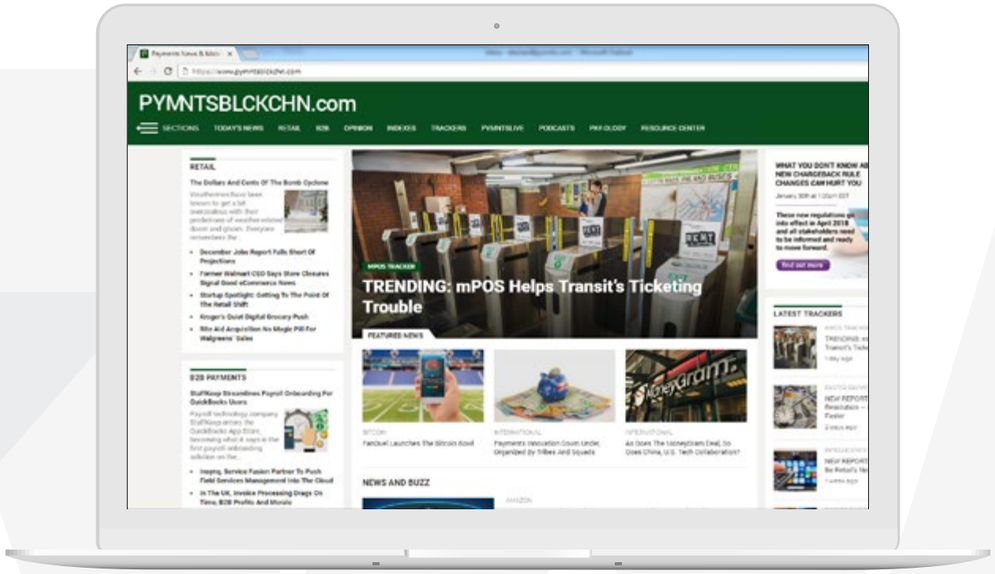
Why some company that changed its name from Long Island Iced Tea Company to Long Blockchain Corp. saw its value increase by something like 7,000 percent.

And why some guy who created a crypto token that banks don't use and that only 100 banks (out of tens of thousands in the world) have signed on to run pilots is now worth almost as much as the founder of Facebook, which has billions of people glued to it daily and is the second largest ad firm in the world.

There's not much more to say than this: It's a bubble, baby, and there are two things we know about bubbles. They burst — but no one knows when. Some people will get fantastically rich, some will lose everything.

And one day we'll wake up and all the news won't be about payment methods that hardly anyone actually uses — for legitimate purposes, anyway.

[By the way, have I mentioned that PYMNTS has been renamed PYMNTSBLCKCHN.com?]



In 2018, maybe I'll be richer than Warren Buffett.

Or not.

As I said, think irrational.

So, that's a wrap.

Happy 2018 to all. I can't wait to see how each of you makes "what's next" happen this year.

What Payments Innovators Can Learn **From Monkeys**

About 30 days from now, most of you reading this who made a New Year's resolution will have broken it.

Don't feel too bad – you won't be alone.

By the middle of February, 80 percent of people promising to change their behavior at the start of the new year will have nothing more than six weeks of self-imposed misery to show for it.

At least, that's what leading psychologists say the data shows.

There are many reasons people have a tough time keeping their New Year's resolutions, starting with the tendency for them to set unrealistic goals that are broken out of the sheer frustration that comes from climbing the very steep hills required to keep them.

More fundamental is that most resolutions require that people break old habits – and form new ones.

And that takes time – particularly when the habits that people set out to break are typically well-ingrained over a period of years.

There's data on that, too.

Researchers at University College London say that getting a consumer to change habits, on average, takes about 66 consecutive days of doing that new behavior – with a range of between 18 and 254 days, depending on the degree to which old dogs really do have to learn new tricks to make them stick.

It explains why many fitness trackers, gym memberships, home exercise equipment, or books or apps on physical and financial self-improvement bought at the start of the year begin to collect dust right around Valentine's Day – just in time for a big romantic dinner.

People simply haven't invested enough time in learning these new behaviors for them to become the new routine.

And, they haven't seen enough of a reward to commit to continuing.

It also explains why some innovations in payments have been met with open arms

by consumers and others given the cold shoulder. And why advances in the field of voice and visual, particularly when applied to authentication, are poised to become such a disruptive force across the payments and commerce landscape. And why those who enable it will be among 2018's power brokers.

In fact, we're seeing it happen in a variety of retail, banking and broader commerce pilots and prototypes today.

Here's why.

WHAT DOES IT TAKE FOR A NEW HABIT TO STICK?

In 2010, two researchers at MIT's McGovern Institute for Brain Research published a paper that shed new light on how the brain makes decisions to stick with or change routine behaviors. Their work was credited as the first to explain, scientifically, why routine behaviors – aka habits – are more or less on autopilot for humans.

Their study concluded that routines are shaped by how the brain's neurons process information about the cost and benefit of switching things up – or not, and sticking with the status quo.

What was unusual about their work was the "real world" environment they created to run the experiment. So to do that, they used monkeys who are a lot easier (and cheaper?) to recruit than MIT kids.

But here's the real trick. Rather than first training those monkeys to perform a specific task and then introducing change, the researchers introduced the monkeys to a series of experiences that mimicked the complexity of decision-making that humans encounter every day when going about their day-to-day routines. This method, they believed, was the best way to understand not only how habits were formed, but also what it would take to change them.

The monkeys were exposed to a sea of white and green dots, and rewarded when they looked at one of the green dots in the grid. Over the course of the experiment, through a series of 1,000 daily tasks, the researchers changed how the white and green dots were presented to the monkeys.

They observed that the monkeys changed their behavior – in this case, looking at the green dots – when the cost of doing so was minimal. In this experiment, the cost was measured as the time and distance required of the monkeys to move their eyes to find a green dot and receive a reward. Shorter distances to a green dot drove a consistent change in the monkey's routine deviating from their previously acquired habit of going to other green or white dots.

In 2015, these two researchers went back into the lab to dive deeper.

What they found not only supported their initial findings – that the shortest distance between two points resulted in a change in behavior – but that rewards would not change that behavior if the brain's neurons imputed that the cost of the change was too high.

In other words, big rewards don't produce lasting changes – or even any change – if the behavior change was too great — even when the monkeys were offered a reward if they did made such a change.

The researchers concluded that brains make real time judgements about tradeoffs where changing habits isn't the result of dangling a big reward in front of, in this case, the monkey. The application to the human brain? That money or rewards or the offer of free stuff may not be enough to persuade someone to change a habit.

The bigger the change required of a person, the more likely that considerations related to time, convenience and other intrinsic benefits will weigh more heavily on their decision to switch or stand firm.

And where decisions about routines and habits are already hard-wired and made reflexively without people thinking too deeply about making – or changing – them.

WHY CHANGING CONSUMERS' HABITS ISN'T ABOUT CHANGING THEM

Of course, we've seen evidence of this hard-wired behavior play out in our own payments and commerce stomping grounds over the years.

For 50 years, consumers have been trained to produce a plastic card of some kind at the point of sale to pay for something. They know they can do that anywhere they shop – the biggest of the big stores and the smallest of the mom-and-pop shops – and that their card will be accepted and will work.

It's why they might have grumbled at first about dipping and not swiping when EMV was first introduced, but two and a half years later still produce a card at checkout in the store. That's despite an inconsistent checkout experience at the in-store point of sale – where dipping can be a short or long wait, and where swiping and not dipping may still be the checkout protocol.

And it's why mobile wallets – except for a few noteworthy examples such as Walmart and Starbucks, that each have ubiquity across all of its stores – have struggled to get any meaningful traction despite this inconsistent EMV checkout experience.

The switch – that uncertainty about whether the merchant has or doesn't have NFC at the point of sale – comes at too much of a cost, at least now. It requires too much of a shift in consumer behavior.

What's consistent is that the consumer produces the same plastic card that has worked year in and year out for more than five decades.

That's also why investments are being made to improve the form factor of a physical card — whether it is introducing contactless capabilities or creating cards with biometric IDs — and are being piloted by the card networks and issuers. And why innovations that introduce more intelligence into the digital versions of those accounts that require little to no change of the consumer are highly valued by consumers, merchants and issuers.

It's also why mobile order ahead has seen such speedy growth.

Over the last five or so years, consumers have increasingly used their mobile devices and apps to discover and buy things. Mobile order ahead eliminates the pain of standing in line at the coffee shop, fast food joint or sandwich, salad or pizza place, and rewards the consumer at a minimal cost. By ordering ahead using their phones, customers are simply applying their online shopping behavior to a new, and very habituated, use case.

It's why I believe that remote payments will ultimately change the in-store point of sale experience. Making that shift delivers a reward that's much bigger for the customer, without requiring a wholesale shift in consumer behavior to achieve those gains. It's just another use case for digital order ahead.

It's why consumers default to Amazon when they buy online, and why the eCommerce giant now owns north of 40 percent of all online spend, based on Q3 2017 retail sales data. It's easy to start and finish on Amazon, as consumers have been trained that they generally find what they need when they visit.

It's also why consumers are increasingly comfortable using their voice to "ask Alexa" to help them buy things – in their cars, on their phones, at the office, in the kitchen, in the laundry room and even in the bathroom. It's easy and convenient, uses an interface that is ubiquitous — their voice, and with Echo Show, visual — and comes to them from a trusted commerce intermediary.

It's what Google is hoping Google Home and "Ask Google" will do for them.

In 2016, consumers "asked Google" to perform at least two trillion searches every year. This year, Google reported that 15 percent of those searches were for brand-new search terms, but down from the 20 to 25 percent they claimed in 2007.

Consumers have other places now to "ask" for things – including social networks and Amazon for commerce. Research that we did in 2015 on this topic then reported that nearly 60 percent of all searches related to commerce started in Amazon. It wouldn't surprise me if that number was well into the 60 percent range today.

But, like Amazon and Alexa, Google – with Google Home – is allowing third-party hardware and solutions providers to leverage its voice commerce ecosystem – and is courting merchants who have an interest in competing with their biggest retail rival.

THIS IS THE HUMAN BRAIN ON HABITS

Today, voice technology is being used mostly to remove friction from routine tasks – asking Alexa (mostly) or Google Home to turn lights on or off, lock and unlock doors, play music, find out how many cups in a quart while cooking, adding items to a shopping list, turn washing machines on or off and now, um, even flushing the toilet. It's a way for consumers to use what they all know how to use – their voices – to do a series of things that they'd perhaps use their voices to ask someone to do for them, anyway. Instead of asking Mom to turn on the lights or Dad to turn off the television, Alexa or Google Home can just make it happen.

But what if instead of producing a key to lock and unlock the front door, a peephole in that front door was a camera that used iris scanning to allow access only after the owner or other authorized users presented themselves? And used voice biometrics to confirm that the request to lock or unlock the door was coming from an authenticated user? And if that front door authentication was integrated with the various commerce use cases associated with the variety of connected devices inside that smart home?

We'll have to wait and see what Amazon has in store for Blink, the Boston-based outdoor security camera company it bought last year. And Echo Show, the device with a screen and television, now that Prime and Alexa are available through Apple TV.

Or if, as we saw at CES last week, rearview mirrors in cars were used to authenticate consumers via iris scans when they sat down in the driver's seat, and preauthorized them to make purchases at the places they might want to buy things on their digital drives – gas stations, QSRs, parking garages.

Or, if as the folks at Amazon are fond of saying, check-in does, in fact, become the new checkout at retail. And the combination of voice and visual in stores becomes how consumers are authenticated when they enter the store, or at some point in their shopping journey before checkout. In each of these hypothetical use cases, authenticating the consumer, staging her for a secure, digital commerce transaction, was done in the normal and ordinary course of her day-to-day routine.

Locking and unlocking the front door.

Looking into a car rearview mirror.

Talking to someone in a store.

Looking at a screen.

Now think about the endless number of use cases where consumers today speak to or look at something in the course of enabling a commerce transaction – and how innovations in authentication, digital commerce, and tokenization could eliminate checkout friction by, well, making checkout part of check-in.

By triggering secure ways to pay digitally into doing what comes naturally to consumers.

Looking. Talking. Asking a question.

Voice and visual biometrics have the great potential to build on that idea and make commerce a secure, contextualized experience for consumers wherever there's a connected device and an opportunity to do business. And not just in a retail setting. Smart people have been working on adapting very complicated technology to use cases in banking, healthcare, insurance and government, to name but a few.

The beauty is that in each case, they build on old habits – not new ones – to provide significant gains across the ecosystem.

It's been proven that's good enough to get monkeys in the lab to change their habits.

My guess is that it's going to be good enough for their more evolved and smarter primate cousins, too.

Why Innovation Is Nothing **Without Distribution**

Charles Babbage is considered "the father of the computer." But it was Lord Byron's daughter, the mathematician Ada Lovelace, who wrote the first algorithm that made computing machines more than just fancy calculators.

Sir Edmund Hillary is the first person to have reached the top of Mt. Everest, and was knighted for that achievement. But it was his Sherpa, Tenzing Norgay, who carried the equipment, prepared the route and took the risks to make sure that Hillary reached the summit alive.

Winston Churchill said that Alan Turing's ability to crack the Enigma code during World War II enabled the Allied Forces to win the war — and years sooner than it might have happened. But the significance of Turing's role was kept secret until the 1970s, two-plus decades after his suicide following his arrest, conviction and forced chemical castration in the U.K. for being a homosexual.

These unsung heroes remained largely out of sight and, therefore, out of mind for decades. More important, perhaps, than the innovations they made on behalf of their more famous lead players, was how their contributions accelerated those innovations' time to market.

Innovation in payments and commerce has an unsung hero, too. But it's not a person so much as it is a concept.

Distribution.

In an ecosystem in which success is defined by scale and time to market, it's no longer good enough to have a great product, a well-known brand or a compelling technology. Success is now defined by the ability to reach a critical mass of users — consumers or businesses — efficiently and effectively … where time is an important currency, as is the ability to influence and/or control that end user experience.

It's why I wrote at the start of 2018 that the year's power brokers will be those who can use their scale, reach and momentum to drive innovation forward. And who will influence how innovation happens.

And it's why, when I read last week that General Mills was rumored to have an

interest in investing in and/or acquiring Boxed, I wondered whether the motivation might be distribution and controlling more of it.

Who's to know whether they do have an interest – or whether, if they do, they'll be successful at winning the bid? There are some other serious, motivated players courting Boxed, including Kroger, who's said to be the frontrunner.

Regardless, it's an interesting data point for why the country's oldest (and one of the world's largest) CPGs — with a market cap of $34 billion — might be willing to wager at least some part of its future on a five-year-old company with $100 million in sales that sells bulk food online.

FROM BETTY CROCKER TO BOXED

Chances are you have a bunch of General Mills products in your pantry, and that you probably grew up eating many of them.

From its start as a flour mill in 1866, General Mills is now the brand behind Gold Medal Flour, Cheerios, Haagen Dazs, Nature Valley, Yoplait, Pillsbury, Progresso, Annie's, Chex, Cascadian Farm, El Paso, Larabar and Jeno's frozen pizza — to name but a few.

Its iconic brand personality, Betty Crocker, was created by General Mills' PR department in 1921 as a way to sell flour by having "her" promote recipes that required it as an ingredient. In 1945, Betty Crocker was the second-most famous woman in the United States, behind Eleanor Roosevelt.

An amazing achievement for someone who wasn't really a someone.

Speaking of someones who aren't really someones: Alexa isn't the first woman to read a recipe aloud to cooks from an electronic device and be regarded as a trusted "kitchen confidante." That was Betty Crocker in 1924, when General Mills introduced Recipes by Radio. More recently, Alexa and Betty have become BFFs — there's now an ASK Betty skill on Alexa.

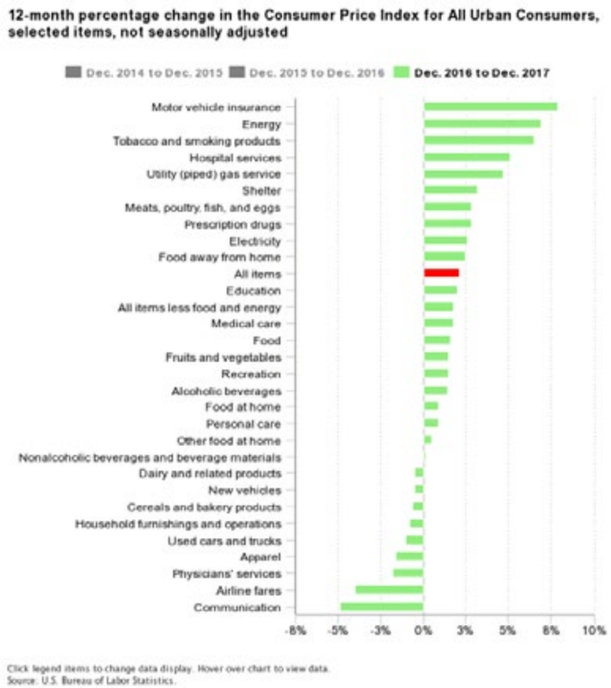
The typical grocery store carries between 500 and 600 General Mills products. In a 2012 interview, then-CEO Ken Powell reported that one in four trips to the grocery store included the purchase of at least one of its products.

That was then.

Grocery shopping and eating habits have since changed. Consumers now opt for healthier food options and are shifting their spending accordingly. For instance, General Mills' decades-long grip on the yogurt category, with Yoplait, has been loosened by "Greek" yogurt brands like Chobani, which boast less sugar and fewer calories. More recently, General Mills has introduced gluten-free varieties of its stalwart favorites, like Cheerios and Bisquick, and acquired organic brands like Larabar, Cascadian Farm and Annie's.

At the same time, General Foods' more recent "innovations," like all-marshmallow Lucky Charms and Reese's Cocoa Puffs, are selling like hotcakes. Go figure. Let's hope, at least, they're being eaten with organic 2 percent milk and some fruit.

But, I digress.



The grocery wars led by Amazon and Walmart have forced grocery prices way down. For brands like General Mills, that's a good news/bad news story.

On the good news front, the cost of food eaten at home is well below the 2017 Consumer Price Index, and well below the cost of eating out. That's a boon for consumers who see their grocery dollars buy more — and are buying more food to eat at home.

Or at their desks during their lunch hour.

In 2016, NPD reported that restaurants lost more than three billion dollars in sales from lunches that never were — reportedly the lowest dip in lunchtime sales in more than 40 years. Higher restaurant labor costs, which forced higher menu prices, were to blame.

But so were two other things.

Employees at work don't want to spend the time it takes to go out to a restaurant to eat — say hello, mobile order ahead at QSRs. More workers are also working remotely, where lunchtime involves taking a trip to the fridge. It's a cheaper and more efficient option for many employees, regardless of where they work, to cook more dinner the night before to take for lunch the next day — or to make lunch at home to eat at their desks while they work.

It's a trend that, in a different time, might have made CPGs grin from ear to ear.

Last year, IRI reported that 36 percent of shoppers said eating healthier meant they spent more time and money on the items sold on the perimeter of grocery stores: produce, seafood, meats and bakery.

That leaves those center-of-store items, like soups, cereals, snacks and boxed staples (such as flour and mac and cheese) — General Mills' sweet spot — as the discounted hooks to get shoppers into stores. Once there, shoppers are introduced to a variety of brands, including private-label store brands. For players like General Mills, competing for that center-store share is a margin-eroding experience. It's also one that limits their opportunity to build a direct relationship with their end customer. Those decisions are the domain of the Krogers, Walmarts and Stop and Shops,

who drive more than 25 percent of their business.

And now, Amazon.

THE AMAZON EFFECT ON CENTER OF THE STORE

Amazon's public interest in grocery goes back to the launch of its Dash buttons in March of 2015.

Thought of then as an April Fool's joke, these Wi-Fi-enabled plastic buttons have since evolved to become a convenient way to replenish more than 350 consumables across multiple grocery categories — now including third-party manufacturers that want to integrate the capability into their products. Later, the launch of Amazon Pantry leveraged Amazon's brand and Prime reach to offer consumers the convenience of buying online the bulky items they once schlepped home from the grocery store.

Amazon's 2017 acquisition of Whole Foods added 470 brick-and-mortar locations to Amazon's ambitions of capturing more consumer grocery spend — and driving more private label sales through both its in-store and online channels. Selling Whole Foods' 365 label on Amazon has reportedly added $11 million to its sales in the four months since the acquisition. Overall, Amazon's 2017 private label sales are estimated at nearly $450 million — not too shabby, given that its private-label business started in 2009 with just a handful of items.

It was also a tacit admission that capturing more grocery spend required more than just relying on the natural evolution of the growth of online grocery sales. And it revealed their intention of doing that, over time, by using their scale, reach and pricing algorithms to favor their own store brands.

At the expense, of course, of the branded products offered by CPGs like General Mills.

THE BATTLE FOR THE (FIRST) BASKET

At $627 billion, the U.S. grocery business accounts for about 6 percent of the GDP and 6.4 percent of consumer annual spend. But for as much as we talk about grocery shopping moving online, 98

percent of those sales happen in the store.

At 2 percent of all sales, roughly $13 billion in 2017, the online grocery growth curve is only now starting to take shape.

Estimates for the growth of online grocery are all over the map, with some analysts estimating that online sales will more than triple (which would be 6 percent) less than five years from today. Both Nielsen and The Food Marketing Institute estimate that online grocery sales will hit 20 percent of all grocery sales by 2025.

Today, Amazon is said to control the biggest chunk of those online sales, at 18 percent; Walmart is second at 9 percent.

For General Mills, the shift to online, even if tiny, has been a boon for their sales.

CEO Jeffrey Harmening reported on its Q2 2018 earnings call that even though eCommerce is less than 2 percent of its sales, internet sales have jumped 82 percent so far this fiscal year. In two years, the company expects that share to more than double to 5 percent, driven almost entirely by online sales in the U.S. market.

The center-of-the-store items that grocery shoppers are paying less attention to in the store, they're paying more attention to online.

General Mills likes that, for the obvious reason. Right now, regardless of where consumers shop online, they're buying their brands using a channel that is increasingly convenient for them to access.

But it's more than that.

General Mills is out to capture what they call the "first basket" — something my mom used to call the big weekly shopping. For her, that meant going to the store once a week to stock up on the "staples" needed to prepare meals for the household. Every week, Mom would buy more or less the same brands and the same quantities of those brands to replenish what she used the week before. She'd change it up only if there was a sale on the things she always bought — and then she'd buy more.

The items in her first basket were the brands that stayed in our pantry at home for a very long time.

That's what General Mills says it sees happening today with sales coming through the online channels.

Shawn O'Grady, SVP of General Mills' Global Revenue Management, said in an interview last summer that consumers who buy groceries online tend to be "full basket" shoppers, with an average spend of $150. That spend, he observed, is nearly four times the typical in-store shopper's basket size.

General Mills' strategy is to ensure that the consumer's "first basket" has as many of their products in it as possible. If they are able to achieve that, they'll see sales increase in a channel that is poised for rapid growth. They'll also establish preference for their brands by making it easy and automatic for consumers to replenish those products. Online shopping just makes it easier for consumers to be reminded of what they last purchased — and to do it again.

Amazon and Walmart — the one-two punch of online grocery sales — represent important online channels for General Mills to capture that first, full-basket opportunity online. General Mills products offer important hooks to draw in a diverse group of grocery customers.

Moving forward, it's not so sure. And if you are anticipating 10 years ahead, which any good CEO should, you might realize that you'd rather not put all of your eggs in the online baskets of those two retail giants.

CAPTURING THE CENTER OF THE STORE

Boxed was founded in 2013 by two 20-somethings with a million bucks and a vision to give urban consumers the same great bulk food deals found at suburban warehouse clubs. Without the membership fee, using mobile and with door-to-door delivery.

Warehouse clubs are a $200 billion business, highly concentrated among a few big brick-and-mortar players: Costco (the largest), BJ's and Sam's Club. Back in 2013, wholesale clubs were

clubs, requiring an annual membership to shop there. In an interview last year, Co-Founder Chieh Huang said that what attracted him and his co-founder to the business — and the investors who've ponied up $160 million over the last five years — is the massive market opportunity that is less than 2 percent of all grocery sales online, only 2 percent of warehouse club sales online and 0 percent of those sales on mobile.

For Boxed, it was nothing but upside.

What has been dubbed the "Costco for millennials" sees 81 percent of its sales coming from consumers ages 25 to 44 who buy 10 items each time they order. Those customers also include offices and schools who buy in bulk to stock snack rooms, vending machines and micro-markets.

Those center-of-the-store products are also General Mills' sales engine.

Would the acquisition of Boxed cure all of what ails General Mills and all CPGs facing the shift in consumer grocery spend, as well as the intermediaries who now control access to that consumer and that spend? Of course, it seemed unlikely. But it does offer important insight into how CPGs are thinking about their future — and the growing importance of online distribution as a way to drive preference and future spend.

Not to mention, real-time data about how consumers make those decisions. What CPGs know today is whether consumers in grocery stores leave with their items in their baskets. What they don't know is what influenced those decisions, and what might have tipped the scales in their favor. If General Mills asked Betty, she'd probably say $500 million — what some say it will take to buy Boxed — is a small price to pay to keep all of their options open and learn more about this new generation of grocery shopper.

Asking Alexa would probably yield a different answer.

2018: The Year Of The **Mobile Wallet** Reset

It's time to talk more about what we're really trying to accomplish for consumers – and for our businesses – and less about the tactics some are trying, with mixed success, to accomplish that.

It's seemingly all about tactics these days.

The 2018 predictions seem more like a laundry list of trends and tactics that've emerged over the last several years than a discussion of the profound impact these trends have had on the consumer and business payments experience.

It's seemingly all tactics all the time in conferences filled to the gills with sessions dedicated to that same laundry list than a conversation about the frameworks needed to examine the ability of these tactics to solve real business problems that real businesses have – and then to do it at scale.

You can especially see it when we examine the progress, or the lack thereof, of some of the "next big things" in payments and commerce that have neither turned out to be all that big, nor what most end users would say they want next from a payments and commerce experience.

Maybe the reason that no one is talking about profound impacts is because so far, there haven't been that many.

So, this should be the year to tone down the talk about tactics – and to turn up the discussion about what's needed to take full advantage of the opportunities to transform the future of payments and commerce.

Starting with mobile wallets.

Instead of talking about 2018 as the year mobile wallets will finally ignite tactic, let's talk instead about why this might be the year they could end up taking a backseat to something else that solves a more important problem for consumers and businesses.

Mobile wallets were built to solve a payments problem in the store that no consumer ever had.

And, with a few exceptions – Starbucks and Walmart Pay, to name two – it's

a platform the average consumer hasn't really wanted to use at all — or consistently enough to make it a habit.

Online, mobile wallets were a digital tactic pointed at a problem consumers actually had — faster friction-free checkout on the smaller screens that were driving the growth of online sales.

But the chance to use those wallets was offered to the consumer at the very end of her online/mobile shopping journey. And often, only after forcing that consumer to complete the friction-filled, merchant-required login or registration that risked driving her away.

The real problem mobile wallets are trying to solve is actually three problems in one: eliminate online buying friction for the consumer, increase conversion rates for the business and ensure that payments happen in a secure and compliant way.

That should make the job of a mobile wallet less about eliminating friction at checkout, at the end of the shopping experience, and more about authenticating that consumer and her account credentials at the beginning of her shopping journey.

Where "buy" becomes an affirmation of a transaction she's already started, shown an intent to complete — and then does.

Tomorrow, we'll publish our latest online Checkout Conversion Index (CCI), a study we do every quarter. It measures the friction associated with checking out online and via mobile devices. For the last two and a half years, we've shopped the same random sample of 750 online merchants, which collectively represent 70 percent of online commerce sales, exclusive of Amazon.

We examine more than 50 features critical to delivering a streamlined online shopping and buying experience, from the time the consumer hits the homepage to the time they exit. We look at a range of things, like the availability of live help; shipping, delivery and pickup options; inventory availability and the number of payments methods offered, including buy buttons. We estimate the lift or loss in conversion — and therefore sales — by merchants, by segment and collectively across the 750 merchant portfolio, based on the friction encountered on those shopping experiences.

What's surprising — or maybe not, since all of you are also online/mobile shoppers — is how little change there's been to the overall Index score since we started.

That's not good news.

What we'll publish tomorrow shows an aggregate Index score of 51.4 — out of 100 — for the portfolio of merchants we track. On a scale where 0 is "How can you even be in business?" and 100 is perfection, there's still way too much friction in the online checkout experience for consumers.

Let's not say that 51.4 is a failing grade; let's just say it means we're barely halfway to our destination, about five years after consumers have had fast enough cellular networks to access merchants and conduct commerce anytime and anywhere with their smartphones.

That friction costs merchants big.

Collectively, we estimate the opportunity cost across our sample of merchants to be on the order of $200 billion a year.

That's not real money lost, of course, since to the merchant with the best online experience goes the spoils of higher conversion rates and those sales. In our report, we examine what makes a top-performing merchant a top performer — but I'll save those details for you to read when it publishes.

What I will offer in the meantime is that the overall poor performance isn't because of a lack of wallets or acceptance marks that make checkout easier. We show that, on large and small sites, the availability and use of wallets and buy buttons reduces checkout friction and improves conversion appreciably when a consumer shows an intention to buy things from that merchant's site.

But for most sites, the ability to use one of those options is a well-kept secret until the very end of their shopping experience.

And by that time, it's just as likely that many of those would-be buyers have long since said bye-bye — and not buy.

In an increasingly digital world, where connected devices — mobile phones, cars, speakers, wearables, appliances, televisions — will become more relevant channels for how consumers will pay for what they buy regardless of where they might be at the time they're buying it, the general purpose mobile wallets that were designed to reinvent checkout by making it faster may need to do some of their own reinventing.

Authenticating that consumer at the start has the potential to shape not only how consumers pay and the payment method they use when they do, but, ultimately, from whom they buy.

It also suggests that one of the power plays we'll see unfold in 2018 and beyond is the someone, or someones, emerging as the trusted enabler(s) of that identity and the secure account credentials that travel with her.

Who that will be will most likely be up to the consumer.

Last year's Equifax breach did something that the 2013 Target breach didn't: It gave every single consumer a reason to believe their identity had been somehow compromised.

There's a very good reason for that: The identity credentials of nearly every adult in the U.S. were stolen and are now being sold for a couple of bucks on the Dark Web.

That breach happened at precisely the moment digital commerce opportunities outside the classic online and mobile channels — wearables, speakers, even cars — began to surface. Consumers, once confident their issuers had their backs if their account credentials and/or physical cards were lost or stolen, suddenly became nervous that cybercrooks were setting up accounts right and left in their names and robbing them blind.

There were even concerns, fueled by media coverage of the breach, that their banks might not know what was happening until fraud had already been perpetrated.

At the same time, consumers are being asked by a growing list of players to establish a profile and store their account credentials.

It's not just the proliferation of "Pays" that are asking — it's social networks, merchants, tech giants, search engines, mobile operators and just about anyone with a commerce ambition.

These days, that's just about everyone.

In May of last year, we asked a random sample of more than 2,500 U.S. consumers to tell us who they regard as trusted enablers of payments in a world where payment can happen using a variety of connected endpoints. That was two months before the Equifax breach was made public.

Three points were made clear.

First, that consumers, overwhelmingly, show enthusiasm about using connected devices other than their smartphones to buy and pay for things. More than two-thirds of consumers said the learning curve wouldn't keep them from trying new ways to pay. In fact, many of them had already tried new payment methods using a variety of devices — and liked it.

Second, there was concern over the uncertainty of the safety and security of their account credentials and the privacy of their data when tapping into new, connected devices for commerce. If anything would blunt the chances of commerce expanding to those new endpoints, security and data privacy were it.

And third, consumers said they'd trust their bank and card networks to enable these new payments experiences on their behalf. Seventy-seven percent of consumers responded that way, and even more who owned six or more connected devices. PayPal and Amazon were rated highly by consumers too. Merchants, the general purpose "Pays," mobile operators and tech giants were way down on the list. Social networks didn't break double digits.

(Even though all of these various players, including the "Pays," ask consumers to register bank-issued, network-branded accounts as part of their set-up.)

The "Pays" have some work to do.

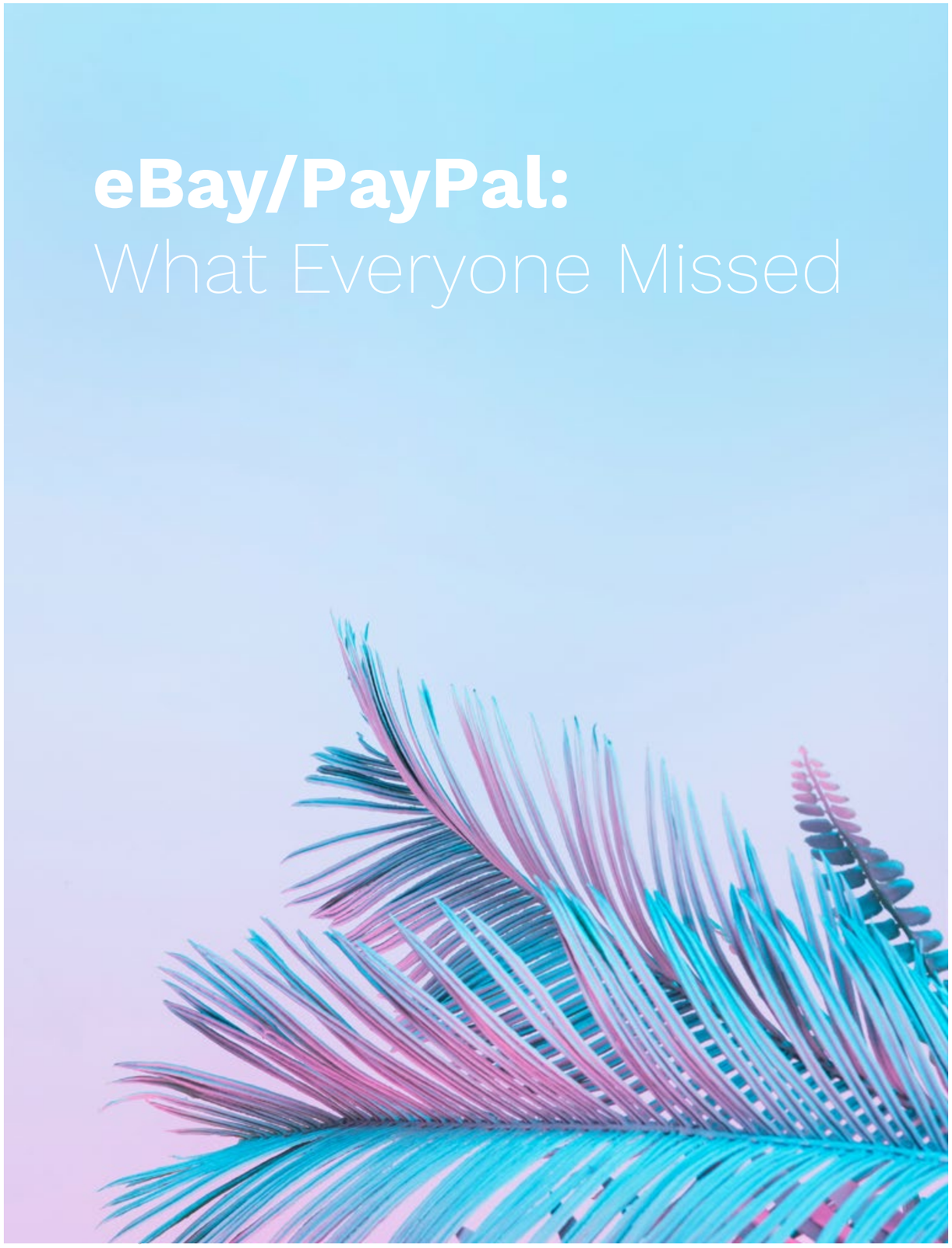
As wallets, they've been presented to consumers as the way to make checkout easier — convenient, fast, efficient. That doesn't seem to be enough. In our own recent studies of mobile wallet adoption, we've started to see a slight uptick in concerns over security by the large majority of consumers who don't use them.

That's a change from where we were two years ago.

In a world where the certainty of a consumer's identity and her authorized use of those credentials is essential to building trust in a world where the consumer and her credentials become more and more intangible, he who cracks the authentication code will take payments and commerce to its full, digital potential.

And even become the tailwind that moves identity and authentication beyond the retail payments use cases we speak about today.

eBay/PayPal: What Everyone Missed



The year was 1999.

eBay, then four years old, bought payments provider Billpoint to improve the payments experience on its site.

When eBay first launched in 1995, the primary way that buyers and sellers did business was via paper check and snail mail.

Back then, only the very, very large merchants had merchant accounts and could accept credit card payments online. And, since the vast majority of eBay sellers were very, very small, the only way to get paid was via a payment intermediary known as the postman.

At the time, eBay explained that having its own payments platform would give it the flexibility needed to improve the buyer/seller experience. Wells Fargo and Visa were Billpoint backers. At launch, eBay gave sellers incentives to sign up with Billpoint and gave buyers incentives to use it.

One year earlier, in 1998 — the same year Billpoint was founded — a software company by the name of Confinity was founded in Silicon Valley by Max Levchin, Peter Thiel and a few others. Confinity's first product, released in 1999, was PayPal — a (peer-to-peer) P2P payments platform that would let users send money to each other via Palm Pilots and on the web.

Levchin and Thiel knew that getting PayPal off the ground meant getting a critical mass of senders and receivers on board. They looked around for places that had a large concentration of senders and receivers online and a use case for payments that needed a digital upgrade.

eBay fit the bill.

For sellers, PayPal solved an enormous payments pain point.

PayPal became as the merchant of record for the little guys who couldn't get a merchant account from traditional acquirers, serving as the stand-in seller to offer buyers a digital way to pay. And, unlike traditional acquirers, PayPal made it easy for tiny sellers to come on board.

Meanwhile, buyers could use PayPal to buy the doodads collecting dust in someone's basement or attic without having to share their credit card account credentials with that seller.

After a rocky start, PayPal's technology street cred became its risk/fraud engine, which helped it take on and manage the attendant buyer/seller risk that came along with PayPal's new business model. That risk guarantee helped increase buyers' and sellers' comfort levels with doing business online, ensuring there were protections in place that kept them from being duped by bad actors.

The flywheel that PayPal hoped for started to spin.

More sellers with stuff to unload jumped on board with eBay, knowing buyers now had an easy way to pay them — one that accelerated the time to get money into their bank accounts.

eBay's homegrown alternative just sputtered along.

Three years later, in 2002, eBay bought PayPal for $1.5 billion and shuttered Billpoint.

At that time, it was reported that the vast majority of eBay sellers — 70 percent — accepted PayPal.

Despite having its own payment processor, eBay was willing to pay $1.5 billion for the payments platform for one simple reason: Buyers liked using PayPal on eBay, and sellers liked getting paid that way.

EBAY'S GROUNDHOG DAY

The year is 2018.

Last Wednesday, at the opening of eBay's 2017 Q4 earnings call, CEO Devin Wenig announced that eBay would, once again, bring payments in-house.

eBay said it had selected Adyen to be its primary processor for card payments. Adyen, headquartered in Amsterdam, has built its business on connecting merchants to a variety of online payment methods, including localized ones like iDEAL and Swish.

It's not known what the terms of the deal between Adyen and eBay are, but it is rumored to be aggressively priced, in exchange for an important payments credential outside of Europe.

eBay's pitch to investors is remarkably similar to its pitch in 1999: The ability to exercise more control over payments will give consumers more choice over how they pay when buying from an eBay seller. And it will give sellers more choice over the payments options they can accept — and less expensively.

eBay also said that the move to bring payments in-house and to use Adyen for payments processing is intended to reduce the cost of payments to its sellers.

Today, of course, PayPal accounts for the vast majority of eBay payments. PayPal comprised 70 percent back in 2002, and almost surely a lot more today.

Perhaps it wasn't a coincidence that eBay's announcement was made two days before Groundhog Day.

DIGGING INTO THE DETAILS

Headlines immediately following the news gave the thumbs-up to eBay: "A Smart Move for eBay." And they lowered the boom on PayPal: "eBay Chooses A New Dance Partner While Dunking PayPal."

Others just got it all wrong.

Analysts, with concerns over the longer-term implications of the move on eBay's part to intermediate payments, got spooked.

Since eBay's announcement on Jan. 31, PayPal's stock has taken a drubbing, closing on Feb. 2 at $76.57.

Two days earlier, it was trading at $86.17.

eBay's stock, on the other hand, has seen an uptick, closing on Friday at $44.30, down from a high of $46.78 on Feb. 1, but up from the $40.58 where it was trading moments before the announcement was made.

The angst over PayPal and the hype over eBay are both overblown — and even feel a bit like déjà vu.

According to sources at PayPal, under the terms of the deal, Adyen will process the unbranded card payments on eBay starting in mid-2018, and then only for a small number of pilots that will account for a small (think single digits) volume of payments. And even though eBay will require sellers to establish an account with eBay, it will not be at the exclusion of eBay merchants keeping their PayPal accounts up and running. Through 2023, PayPal will continue to operate as the payments intermediary for the branded PayPal transactions that happen on eBay.

The unbranded part of eBay's business — the part that Adyen will handle for a few markets beginning later this year, and then starting in 2023 for all unbranded business — is not only the smallest portion of eBay's current overall payments volume, but also represents the most highly commoditized part of payments.

Of course, eBay hopes it becomes much more than that.

For the buyers and sellers who wish to transact using PayPal, it seems that it will pretty much be business as usual for the next five years.

Which also means that the economics for the "vast majority" of transactions taking place on eBay — where PayPal makes its profits managing payments on eBay today — won't change much either.

MITIGATING THE FLIGHT RISK

eBay has fielded an extremely talented team to get its in-house payments platform off the ground. But it will have its work cut out for itself if it really wants to displace PayPal long-term.

Over the next two and a half years — as eBay allocates resources (money and people) to upgrade its technology platform, build its risk/fraud engine and improve its merchant services capabilities — it is also faced with keeping its core business from becoming destabilized in the face of these new developments.

That means keeping the buyers happy — and, more importantly for eBay, keeping their sellers from defecting.

Most eBay sellers sell on many other marketplaces that also accept PayPal, and likely value the convenience of having a single merchant account to manage all of their payments flows. Via PayPal, these sellers also get access to other value-added services, such as the option to extend other services, like PayPal Credit, and working capital for the entirety of their businesses across all their online channels and across borders.

eBay's bet on becoming a payments intermediary comes with a lot of risky assumptions.

Assumption: Most Buyers Ditch PayPal for Other Forms of Payment

Making payments cheaper for sellers and for eBay means moving buyers off PayPal. Using PayPal on eBay is pretty slick and seamless — and as we have observed, payments habits are hard to break. If buyers wanted to use credit cards to pay for things on eBay today — and for the last 16 years — they could have. As we've been told, it seems the vast majority don't — and haven't. It will require a big investment by eBay to get enough buyers willing to switch to a new form of payment — and to stick with it. The road to good payments intentions is well paved with players who think that offering sellers cheap payments is enough to get buyers on board – all buyers care about is being able to use the method of payment they like and want to use.

Assumption: Most Sellers Ditch PayPal for eBay Direct Payments

eBay's move to intermediate payments has been compared to Etsy's move to do the same thing. That journey has come with a lot of well-publicized bumps and bruises, including a payments outage that lasted five days, a turnover of three CEOs and seller fees that aren't all that much cheap(er). The value proposition for sellers must come with something more than just "it's cheaper to process card payments."

Assumption: Sellers Don't Bail for Other Online Platforms

Seller turnover is the nature of the beast on any marketplace, but it's a real threat to eBay during this critical juncture. It's been reported that over the years, fees have driven large sellers to defect from eBay to Amazon and other platforms — but I'm not sure that's the only reason or

even, perhaps, the primary one for that churn.

Sellers like to be where there's a steady stream of buyers, since what gets them out of bed in the morning is selling stuff. I know that I'm going to get killed for saying this, but paying fees in exchange for the ability to access buyers and sell lots of stuff to them is a high-class problem. It's possible that among the reasons for eBay seller defections is not having enough of those buyers to make it worthwhile to stay there.

Assumption: All of This Ends Up Cheaper for eBay to Support

And that will be a function of all of the above, plus eBay's ability to manage fraud and risk at scale — and across all of the global markets in which it operates today.

Seems hard.

It makes one wonder why this move, and why now, given the distractions that such an enormous shift will create for a marketplace that analysts still view quite cautiously.

And at a time when eBay needs to, first and foremost, make itself the place that lots of buyers and sellers really want to do business.

TOMORROW, TOMORROW — YOU'RE ONLY FIVE YEARS AWAY

The big eBay payments countdown clock isn't mid-2018, or 2020 — it's 2023, when the term sheet that eBay and PayPal just signed comes to an end. That's about two years after eBay expects most sellers will have migrated to their direct payments model.

A lot can happen over the next five years, which, these days, seems a lot more like dog years than anything else.

It might also mean that what we heard last week from eBay is just the first move in a very strategic game of payments chess, as the company prepares for something bigger and bolder over the next several years.

I wrote a piece last year suggesting that eBay needed such a big and bold move to give its marketplace a boost, and that perhaps Facebook might like to allocate some of its billions to buy it. What sounded like a crazy strategy then, for both eBay and Facebook, might not sound all that nutty now.

Maybe it's an opportunity for eBay to get Walmart in play. The Amazon/Walmart rivalry is at a fever pitch, and Walmart has made some aggressive moves to buy online properties in the past. Could buying eBay give Walmart access to a global online marketplace? Maybe that possibility isn't so far-fetched either.

Or a shot at moving buyers to use their bank accounts and alt credit platforms like Klarna – in an attempt to build their own version of PayPal? That really would be Groundhog's Day.

Then again, maybe it's a convoluted move to negotiate different terms with PayPal. Adyen processes payments, but it doesn't provide the depth of merchant services that eBay sellers now get from PayPal. Is there a world in which Adyen handles the low-cost payments processing side of the business and PayPal's suite of high-margin seller services are made available to eBay in some way?

We live in a world where (almost) anything is possible.

THE NEXT MOVE

CEO Dan Schulman told investors last week that PayPal expects a continued reduction in the percentage of its business that is eBay-dependent. He expects that percentage to decline to roughly 4 percent by 2023.

Even though PayPal's stock has taken a hit over the last couple of days, it's still two times what it was this time last year, with a market cap of $92 billion.

That said, PayPal also has its payments to-do list for the next couple of years.

PayPal, today, remains the leading acceptance mark online but obviously needs to keep buyers engaged in using it on eBay and everywhere else. That means PayPal must continue to expand the number of its use cases and may even require a rethinking of its business model to be a contender for some of those cases.

The emergence of new, voice-activated payments channels represents both an opportunity and a threat for PayPal. Asking Alexa to pay for something using PayPal will elicit the same reaction as asking Alexa to “Ask Google”: She won’t understand.

I’ll mention that Alexa also didn’t think the Patriots would win the Super Bowl, so she might have super powers after all. #painful

Where does that leave us?

Hard to know, but it will be fascinating to watch.

And just think, we have another 11 whole months to go, too, in 2018.

One thing’s for certain: Whatever happens, with eBay and payments, it won’t be buying PayPal this time around.

In The Age Of **Big Data**, Why Are We Still Flying Blind?

In a world where we're bombarded daily — even hourly — by data points on everything from stock prices and market cap to retail sales and consumer spending to cryptocurrency's ups and downs to the impact of innovation on the future of payments, commerce and financial services, we're all just flying blind when it comes to the things that really matter to businesses and consumers.

We're flying blind because we lack relevant data to build and then use the right frameworks to make confident, reasonable decisions that guide our businesses, and even our economy.

Despite being inundated with data, we're amazingly lost.

We see evidence of this every day.

PUT ON A RETAIL HAPPY FACE

Apocalypse, Schmapolcalypse, reports say, as a strong economy and historic levels of unemployment have driven people to open their wallets and buy more stuff than they have in a very long time.

Yup, physical retail is doing just fine — despite all the talk of doom and gloom.

Yet, according to Fung Global Retail & Technology, 6,985 stores closed in 2017, up 229 percent from 2016, and well above the number of stores which closed in the year that started physical retail's death spiral: 2008. Retailer bankruptcies were up 30 percent in 2017, with a number of familiar names in that list of 662 firms: Payless ShoeSource, Toys R Us and The Limited.

At the same time, the market caps of the top 20 retailers have lost more than $230 billion over the last two years, and mall operators are sucking wind as overstocked anchor stores shutter underperforming locations, which delivers a death knell for the stores that depend on anchor store foot traffic to lure customers in. Some analysts project that one in every four of the 1,100 malls that operate today will close by 2022 — just four years from today.

Simultaneously, U.S. Census Bureau data suggests physical retail is just fine, thank you — accounting for more than 90 percent of all retail sales, with lots of

analysts using this data point to push back on the notion that physical retail is really in trouble.

This whole eCommerce thing is kinda overblown they say, pointing to data that, on the surface, seems to suggest that all is well in the land of physical retail.

The slowing growth is off a big base — and the fast growth of online commerce is coming off a very small one, they say, so it will be a long time before in-store sales really tank.

But tell that to the nearly 7,000 stores that closed last year, and the nearly 700 that declared bankruptcy.

And the department stores that collectively closed 550 of their brick-and-mortar locations last year.

And the bookstores, music stores, office supply companies, sporting goods and apparel retailers who have seen or are seeing big chunks of their in-store business nosedive, as consumers shift their purchases online — and to one online player, in particular.

Part of the disconnect with the Census data is that it measures averages, but nothing is ever average. The average height of a female in the U.S. is 5'4" — even though few of the women reading this are exactly that height. The average temperature in Boston in February is 37 degrees Fahrenheit, but on Saturday it was 52 degrees. A week ago it was 28 degrees.

Census officials admitted to us two years ago (before they didn't) that their recordkeeping systems weren't set up to track transactions in a digital world — where the lines between on and offline are converging and digital channels turn manufacturers into brands from which consumers buy directly (think Apple and Dell) — so they didn't count.

Compounding matters is the fact that many retailers who report data to the Census Bureau aren't set up to report things such as buy online and pick up in-store accurately.

What we get from the Census, then, probably underreports online's cut of retail sales — but no one really knows by how much.

So, we live, quarter after quarter, with these inconsistencies, putting a happy veneer on the state of traditional retail while it slowly sinks.

An interesting side note is that even using the Census Bureau data as it stands today, projecting the growth in online sales and the slowing average growth in physical retail sales, we see the 50/50 split of online to offline happening just about three decades from now.

In a blink, we'll be there — and very likely before we get data from the Census Bureau telling us that.

WHAT INNOVATION?

Then there's the years-long debate that's raging among economists over whether GDP (Gross Domestic Product) is even the most accurate way to measure how well an economy is doing.

Much of GDP is based on consumer spending: price multiplied by how much people buy. It was devised when the world was largely a manufacturing economy and manufactured goods drove the output of goods and services.

And when there was always a price paid by the consumer to procure those goods and services.

But the internet, mobile apps, smartphones and advances in network capacity have changed the definition of output and the business models that drive the exchange of value between suppliers and consumers in some cases.

Today, more than two-thirds of the U.S. population owns a smartphone — double what it was just seven years earlier. By the end of 2018, eMarketer reports that a full third of the world's population — some 2.5 billion people — will own one.

And manufacturing accounts for about 11.7 percent of our output, down from 25.4 percent in 1947.

The intersection of apps and mobile phones and technologies like GPS have inspired entrepreneurs of all stripes to create new and/or to enhance existing digital intermediaries that bring two or more stakeholder groups together. In some cases, these virtual platform businesses may be new, but the business models that underpin them have stood

the test of time over more than 3,000 years.

Igniting platform businesses — virtual or physical — often means having one side of the platform subsidize the other who pays (gladly) for the ability to efficiently access it.

The emergence of these models reveals that the standard measure of GDP totally ignores the economic value consumers get from all the free stuff.

How much does it count in GDP? Well, that would be nothing — even though consumers are getting a ton of value.

Take Venmo (and P2P more broadly) — a service that's free to both the sender and the receiver. Because of that perk, the economic value of making it easier for Venmo and P2P networks to move money between parties isn't captured anywhere: It's a big zero as far as most economists are concerned. Worse yet, banks and PayPal are dinged when they can't point to a specific plan to monetize that service as a standalone, even though there are enormous efficiencies and benefits to all sides when the friction is removed from letting people pay this way.

This deficiency becomes a much larger issue when applied to ad-supported digital content platforms — from Facebook to Google to television networks — that exist today.

In a recent whitepaper published by Economist and Global Economics Group Chairman David Evans, he writes that in 2016, American adults spent 437 billion hours consuming content on ad-supported media across all channels. Those consumers thought that time was worth something; otherwise, why would they divert their attention? And if they valued it just at even an after-tax minimum wage rate, Evans says consumers must have believed they got at least $2.8 trillion in value from those services, since they continued to visit them day after day, hour after hour.

DATA DOUBLETALK

At the same time, the lack of a consistent way to interpret the data we do have can create market imbalances with far-reaching impacts.

Two weeks ago, eBay's decision to intermediate payments wiped about $8 billion in market cap from PayPal in the space of 48 hours. A close examination of the facts suggests PayPal isn't staring down the barrel of a massive eBay risk either short- or long-term, given the complexities associated with building, igniting and maintaining a two-sided platform.

We see it regularly whenever Amazon announces it's expanding its presence beyond its retail/eCommerce playing field, even though the U.S. Census Bureau tells us eCommerce sales are diddly squat — and we know from other sources that Amazon has half of the diddly.

Amazon announced Shipping With Amazon last Friday, and UPS and FedEx, together, lost $25 billion in market cap ($18 billion for UPS and $7 billion for FedEx). That came a few days after UPS took it on the chin for getting squeezed over the costs of supporting eCommerce deliveries.

Months earlier, when it was revealed that Amazon had applied for a wholesale pharmacy license in 12 states, signaling its move into the $560 billion-a-year pharmacy market, pharmacy benefit managers Express Scripts, Caremark and Optimum saw their stocks plummet too — 4 percent across the board — even though stepping into the regulated world of prescriptions is a very new business for Amazon, and we really have no idea how large the online pharmaceutical market is.

And, when Amazon bought Whole Foods in August of 2017, Kroger saw its market cap slashed from $30 billion — already down from $34.2 billion at the start of the year — to $18 billion in September 2017. It's recovered since to $24 billion — $10 billion off where it was this time last year, even though grocery is an extremely fragmented business in the U.S., with Amazon and Whole Foods' share combined representing less than 3 percent, using 2016 data.

But then again, who really knows, since measuring online sales is a real crapshoot. What's driving these market movements is observing the devastating impact Amazon has made on the retail sectors it has entered, regardless of U.S. Census Bureau data reports that suggest

nearly all retail sales happen in a physical store.

We spend a lot of time in our world talking about the importance of Big Data and the impact of artificial intelligence (AI) and machine learning on crunching the massive amounts of data that washes over us each day — well, that maybe drowns us each day.

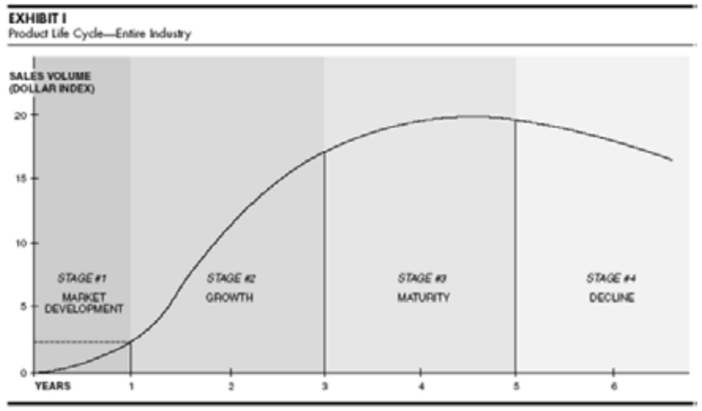
It's been reported that we generate 2.5 quintillion bytes of data daily. A quintillion is 1 million trillions. In other words, it's a lot.

But instead of leaving it all up to the machines to crunch endless amounts of data, maybe what we need is to spend more time creating the thoughtful frameworks that could lend clarity to some of innovation's most basic questions and then go out and get the right data to answer them.

Data, in the absence of those frameworks, becomes just a bunch of numbers on a page.

Mobile Wallets:
Where's The S-Curve?

The classic product lifecycle that all of us had drilled into our heads in business school tells us that at the three-year mark for any new product, it's top of the S-curve or bust.



Here's a walk down S-curve memory lane, courtesy of a Harvard Business School (HBS) article written by economist, marketing sciences expert and HBS professor, the late Theodore Levitt.

Now, three years plus four months after the launch of the first general purpose mobile wallet to hit the market – Apple Pay – we thought it was time to see how well it, and the other Pays that followed, have fared on this S-curve test.

We used our latest mobile adoption study as our starting point.

This consumer study of active mobile wallet users is something we've done each quarter in collaboration with InfoScout ever since Apple Pay's launch in Oct. 2014. You might recall that we ask consumers with smartphones that (a) are compatible with one of the four mobile wallets we track and (b) who just bought something at a store that accepts

one of those four mobile wallets to tell us (c) why they did or didn't use that mobile wallet to make the purchase they just made.

In other words, we observed what people actually did and then asked them why they did it. Each quarter, we survey roughly 2,000 consumers for each type of wallet for a sample total of roughly 8,000 consumers.

What we've learned is that Apple Pay's adoption since its launch in Oct. 2014 looks more like a flat line than an S-curve. In fact, the overall growth in Apple Pay transactions is almost certainly the result of more merchants installing near-field communication (NFC) terminals than iPhone users getting more interested in Apple Pay itself.

Meanwhile, Walmart Pay looks more like it could be on an S-curve and, at least given what it's designed to do — pay at Walmart — could possibly be on the path to success within the Walmart universe.

MOBILE WALLET ADOPTION AND USAGE Q4 2017

Today, most people in the U.S. have a smartphone capable of activating and using a mobile wallet. Of the 195 million adults (18 or older) in the U.S., 77.1 percent own a smartphone.

Apple and Samsung, together, as handset makers, have about 70 percent of the U.S. market for smartphones — Apple with 43.5 percent and Samsung with 29.5. Android, as an operating system, has a 52 percent share of smartphones, with iOS having 43.5 percent. When looking at those percentages as a percentage of all adults — not just those with smartphones — the numbers are 33 percent (for Apple), 22.8 percent (for Samsung) and 40 percent (for Android).

These figures are really important to keep in mind when comparing how well these wallets are doing across all smartphone users and adults in this country.

	Total Number of Smartphone Users		Adult Smartphone Penetration	
	U.S. Total	Adults (18 and Over)	All Smartphone Users (195.0 mm)	All Adults (252.8 mm)
Apple	95.6	84.8	43.50%	33.50%
Andriod				
Samsung	64.8	57.5	29.50%	22.80%
Other Android	49.5	43.9	22.50%	17.40%
Total Android	114.3	101.4	52.00%	40.10%
Non-Andriod	9.9	8.8	4.50%	3.50%
Total	**219.8**	**195**	**100.00%**	**77.10%**

SOURCE: PYMNTS.COM/INFOSCOUT

We're also at a point in time where acceptance for NFC-enabled wallets has grown quite a bit as a result of a liability shift by card networks and merchants installing new terminals capable of enabling contactless payments.

On Apple's last earnings call, CEO Tim Cook said Apple Pay is now accepted at more than half of all U.S. retail locations, including two-thirds of the top 100 retailers. We haven't audited that yet, but let's take it as a given for this piece.

As a practical matter, wherever Apple Pay is accepted, every other contactless mobile wallet is probably also accepted, since the main gating factor is having contactless terminals and the willingness to turn on the "Pays." The lack of merchant acceptance for contactless wallets is no longer the barrier to usage it was at the beginning. (Samsung Pay's technology can even be used with magnetic stripe terminals, although we don't have data on how often that happens.)

Last quarter's results — which are based on a survey done with InfoScout at the end of Christmas — reflected a bit of good news for the "Pays." Call it the booming economy, the Christmas effect, a statistical aberration or a take-off — good news is still better than bad news.

The percentage of smartphone users who've tried the "Pays" has inched up.

Emphasis on the word inch, since most of these upticks are quite small, and they may not be statistically distinguishable from the earlier results.

We timed our study last quarter to look at consumer behavior during the holiday season, post-Christmas and on the run-up to New Year's Day. We did that to observe the impact of the holidays on trial and usage. Smartphones tend to find their way under the Christmas tree, and 2017 was a banner year for smartphone gifting.

That's why we weren't too surprised when more people tried mobile wallets right after Christmas, particularly since consumers are also more exposed to advertisements about activating them and people have the time and interest to take their new phones out for a test drive.

Smartphone users with iPhones who activated and tried Apple Pay stood at 29.4 percent, (up from 24.8 percent the previous quarter), 17.2 percent for Samsung handset users who activated and tried Samsung Pay (up from 13.9 percent the previous quarter), 13.3 for Android phone users who activated and tried Android Pay (up 11.0 percent from the prior quarter) and 24.8 percent for any smartphone user who activated and tried Walmart Pay (up from 23.3 the previous quarter).

Remember, a trial for these mobile wallets takes place at a store where they're accepted so users can actually use them.

Now, putting on my Scrooge hat, I should note a preponderance of smartphone users haven't even tried using a mobile wallet. More than 70 percent of iPhone users still haven't tried Apple Pay about 40 months after launch. Still, even slightly better is better than worse.

Of smartphone users who've installed mobile wallets and were at a store where they could use it, the percentage who used it at that retailer inched up a tiny bit too.

For each wallet, we did the following calculations: the people who had that wallet installed, were at a store that accepted it and who used it for the last transaction they made at that store.

In December, 23.1 percent of Apple Pay users (up from 22.9 percent) used it for their last transaction at a store where they could use it. Just to be clear here, that means 29.4 percent of people have activated and tried Apple Pay, and of those people, 23.1 percent used it the last time they bought something at a place that accepted Apple Pay.

Samsung Pay's usage was 26.8 percent of Samsung Pay users (up from 21.8 percent); Android Pay was 17.3 percent of Android Pay users (up from 15.6 percent) and Walmart Pay was 23.7 of Walmart Pay users (down from 25.6 percent).

All in all, this suggests consumers who had bothered to install one of the "Pays" weren't much more interested in using it in December than they were last quarter.

To compare the mobile wallets, and to determine whether they're on an S-curve, we need to have a — no pun intended — apples-to-apples comparison.

That means looking at things across all smartphone users — not just on a particular hardware platform or operating system. Doing this takes into account the growth in the number of smartphone users who have the relevant handset or operating system or application and are using a mobile wallet.

PASSING THE S-CURVE TEST (OR AT LEAST NOT FLUNKING)

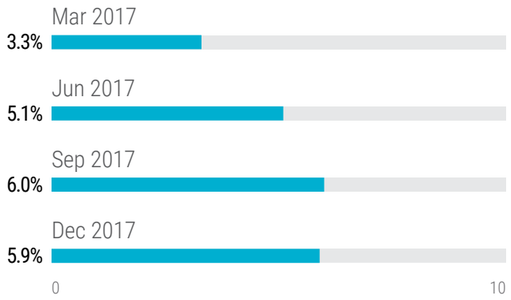
Walmart Pay looks like it could be on an S-curve trajectory so long as we judge it for what it is: a mobile wallet designed to be used only at Walmart stores.

The percentage of smartphone users who've set up Walmart Pay and who used it for their last transaction — at a Walmart, of course — has increased from 3.3 percent of all smartphone users in

March 2017 to 5.9 percent in Dec. 2017, as you see in Figure 2.

The almost doubling between March 2017 and Sept. 2017 suggests an S-curve. If December 2017 is an aberration — maybe Walmart shoppers were tapped out at the end of December and began using cash — and growth continues, then this could be a growth story, particularly since Walmart isn't even two years into its product launch.

FIGURE 2:
Percentage of smartphone users that have set up walmart pay and used it for the last transaction at walmart



SOURCE: PYMNTS.COM/INFOSCOUT

Today, 25 percent of adult smartphone users have set up and used Walmart Pay at least once — and nearly 6 percent (5.9 percent) of smartphone users used it in December to make a purchase in a Walmart store.

What Walmart may lack in total number of merchant locations in the U.S. — Walmart Pay can only be used at Walmart — it makes up for in the larger universe of smartphone users who can access and use it and who are apparently motivated to do so.

Of course, it's also possible Walmart Pay could stall. But, in this class, not failing the midterm is actually pretty good.

So, stay tuned.

Samsung Pay might have some momentum building that, unlike Apple Pay, likely wasn't fueled by the holiday smartphone sales effect. More ubiquitous acceptance, and its broad-based Rewards program, could have accounted for its uptick in usage.

Sorry, but Apple Pay flunks the S-curve test.

Now, nearly 40 months on the market — four months after the three years that product launches generally show themselves to be successes or failures — the adoption curve of Apple Pay isn't a curve. It's had its ups and downs but it's essentially flat.

The percentage of smartphone users who used Apple Pay for their last transaction at a place where they could have has changed from 1.9 percent at launch to 2.6 percent in March 2015 to 3.0 percent in December 2017, with some ups and downs in between.

Based on our study, there's no evidence, therefore, that iPhone users are getting more — or less — enamored with Apple Pay.

Of course, it's possible that at 40 months the blip upward in Dec. 2017 reflects some sort of delayed inflection point. My guess: It has more to do with the recent launch of new iPhones and new device activations over Christmas. The bump primarily came from more people trying Apple Pay for the first time rather than existing Apple Pay consumers using it more often.

Whether Apple Pay is a very late bloomer when it comes to the S-curve will be seen from how it does in future quarters. But the fact that only 17 percent of people who have installed Apple Pay say they use it every chance they get doesn't stoke optimism.

Now, this isn't all bad news. Apple transactions are increasing because there are a lot more places where people can use Apple Pay. But that growth is the result of merchants adopting NFC terminals — not from iPhone users becoming more in love with the product. And that will eventually taper out.

For Apple Pay to get its S-curve in motion, iPhone users will need to learn to love Apple Pay.

Yes, but, you say, they will, since Apple Pay can be used at many more locations than just at Walmart stores. Over time, Apple Pay will drive more sales, more adoption and usage. Walmart only accounts for 7.3 percent of all U.S. sales; by the numbers, Apple Pay's merchant base accounts for much more than that.

But it's not hard to see why Walmart is ahead when it comes to people who've installed it wanting to use it.

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They probably visit Walmart every week (or maybe more) to buy groceries and other items for their family. And we know that frequency drives habituation.

The wallet also does more than just initiate payment.

Walmart Pay solves for things other than checking out. It automatically applies savings and discounts for its users when they're checking out and makes returns simple by managing purchases both online and offline.

More value equals more usage.

WHAT'S NEXT?

Tim Cook told shareholders a few weeks back that he wasn't thrilled with Apple Pay's progress, and if you had told him three-plus years ago that this is where they'd be, he wouldn't have believed it. It's the first time anyone from Apple, particularly Tim Cook, has ever hinted that things were less than terrific and fantastic in the land of Apple Pay.

That's because the folks back home in Cupertino are looking at the same data we are — and are comparing it to the S-curves of products past and present — at the three-year mark.

Take a look at the growth of the iPhone, iPad and iPod in its first three years.

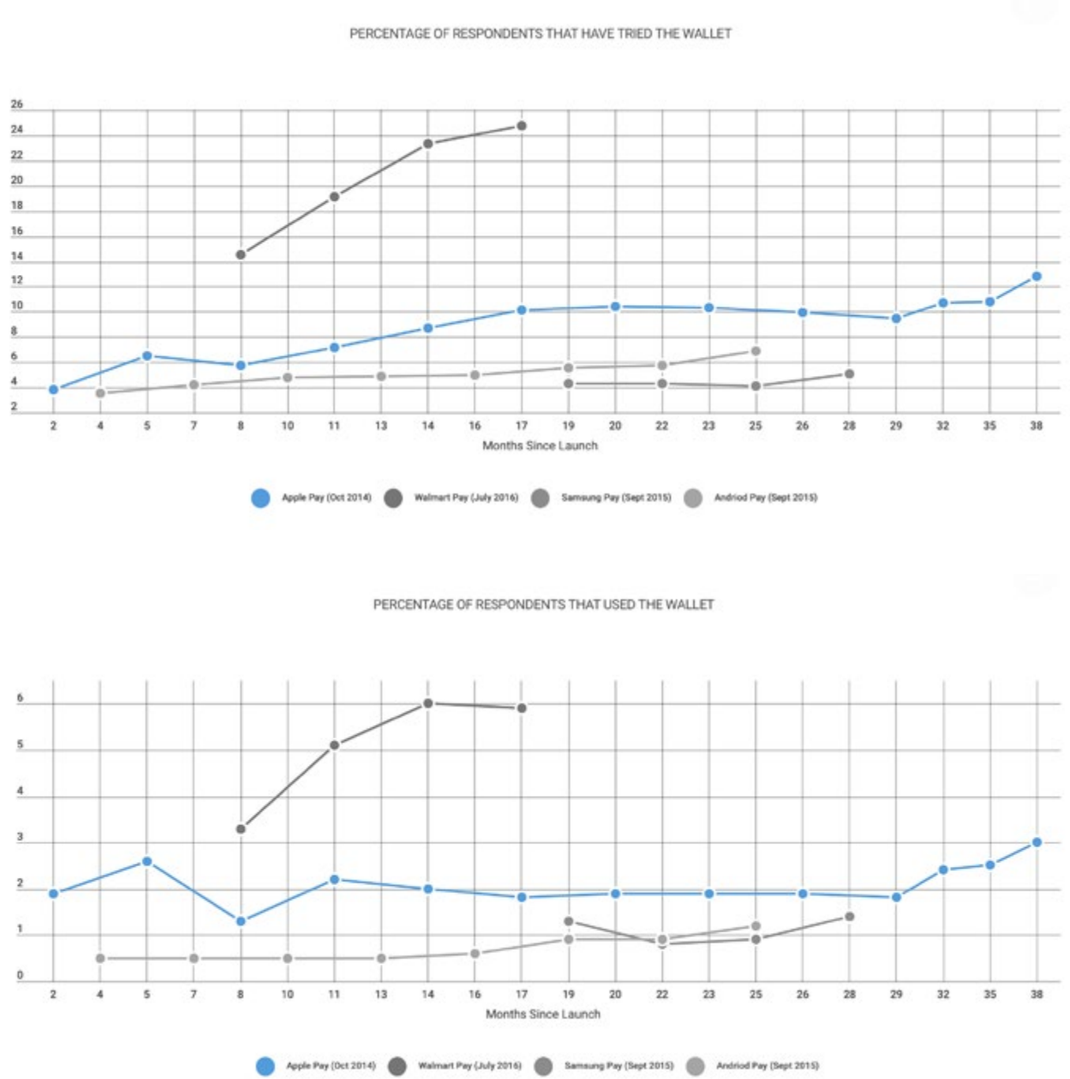
The iPod, on this chart, looks puny only because of the scale of the chart. The iPod went from selling 125,000 units in Dec. 2001 to 10 million by the end of Dec. 2004. S-curves in abundance.

Then, there are Apple Music subscribers. After a rocky start in 2015, Apple Music is on the upswing — and hoping the release of the HomePod will juice those numbers even more.

It's also been reported a new set of AirPods is on the product release schedule too, with hopes for the same result on the Apple Music subscriber front.

If you want to know why Apple doesn't release anything more specific about Apple Pay than the fact that it's doubling and tripling its non-specific user numbers, perhaps this might explain it.

There isn't an S-curve — not even really the glimmer of one — and finding it now looks really hard.



SOURCE: PYMNTS.COM/INFOSCOUT

I wrote at Apple Pay's launch that as great as Apple Pay may do on iPhones, it will only ever have a share of the population that owns an iPhone. That puts Apple Pay, and any of Apple's services, at risk. But a utility as important as a mobile wallet has to follow the user wherever she goes, and that, increasingly, is across devices, operating systems and channels.

People with iPhones use Walmart Pay. They use Amazon Pay too.

And, increasingly, people with every other Pay will be able to use it on iPhones too.

I don't know this for a fact, but I would surmise that renaming Android Pay to Google Pay had something to do with breaking the mental association consumers may have had with where they could use Google to pay for things. That now includes Chrome, which is a mobile app on the iPhone, and Google Shopping when searches for products on Safari are found. I suspect there will be other Pay plays soon that will make this cross-platform, cross-operating systems point further.

Unfortunately, for Apple Pay, that doesn't work in reverse.

You can't use Apple Pay at Walmart, and you probably never will. You can't use Apple Pay with Amazon Pay, and you probably never will. You can't use Apple Pay with voice assistants like Google or Alexa. And it's likely to be a cold day in you-know-where before you'll be able to use Apple Pay on Samsung handsets.

Apple Pay's S-curve, then, will be shaped largely by itself — totally dependent upon a handset that doesn't prevent consumers from using any other mobile wallet.

And without a clear reason why they shouldn't.

Click here for the charts and graphs detailing the latest PYMNTS/InfoScout mobile wallet adoption results, as well as the history since each mobile wallet's launch.

Who'll Win When Facebook Advertisers Flee?

Procter & Gamble made headlines last week when its Chief Brand Officer, Marc Pritchard, confirmed that the world's largest advertiser cut $200 million of digital advertising spend in the last nine months of 2017. That year, P&G's ad spend totaled $7.1 billion.

That wasn't the big news.

The big news was Pritchard's blunt admission that the reduction in spend had no impact on the performance of P&G's business.

In fact, he characterized much of that digital ad spend as "largely wasteful."

Among those who lost big — 20 to 50 percent of their budgets — were Facebook and YouTube, although Pritchard didn't name them.

He didn't have to.

He, on behalf of P&G, took a very public stance on brand safety last year when the consumer brand giant discovered advertisements for its products on YouTube were placed next to questionable and inappropriate content. Consequently, the company pulled its advertising, spawning a digital media audit that revealed something else: Some digital platforms weren't bringing the right eyeballs to P&G's products.

Or, more precisely, eyeballs, to those ads.

Pritchard said one of the reasons eliminating $200 million in digital ad spend didn't hurt its business was because too many ads were being "seen" by bots that couldn't buy or influence anyone — and not by real consumers who can and do buy products. Transparency with respect to metrics and measurement is essential, he said, before he and his team can determine the value of those platforms in P&G's advertising mix and engage in a meaningful way.

So is platform governance and trust.

The ability for a brand to be places that can capture and monetize consumer intent, not simply the content the consumer — or a bot pretending to be one — may be looking at, is crucial, which makes platforms that can not only deliver real eyeballs — but convert them into

sales— potentially the biggest winners of the P&G's digital ad spend shift.

Think Amazon, not Facebook.

Think Google Search/Chrome, not Google's YouTube.

Think intent, not content.

I wrote at the start of the year that Amazon and Google were among two of the payments and commerce power brokers that could wield their power in 2018 because they monetize the consumer's intent to buy.

In the face of the big brand digital ad spending backlash, it seems now big brands are thinking that way too.

WHOSE INTENT IS IT ANYWAY?

I wrote a piece in April of 2017 that posited that Facebook had a Myspace problem.

"Fake news" on the platform was what made headlines then.

But before there was fake news, there was a steady stream of violent and horrific content — live videos of people being beheaded, killed and killing themselves. Posts perpetuating hate speech and bullying, including ones that led to teen suicides, were rife on Facebook. The platform which said it was founded to do good for the world by connecting people began to show the cracks in its armor: It began seeming like a platform that was more focused on doing good for its investors and its bottom line.

(But once you understand the importance of platform governance, doing good for the community and creating profits go hand in hand. So, in reality, Facebook probably hasn't done the right thing for its investors in the long term.)

Facebook, the social network, is actually Facebook, the massive advertising platform.

It's first, second and third objectives are to monetize the content seen in a user's News Feed through ads, which Facebook's algorithms can target down to a gnat's eyelash level of detail — employed college-educated males living in Cambridge, Massachusetts, who like Kit Kats and have a dog. Its algorithms can stop people from posting pornography — remember the controversy over the Napalm Girl? (Eventually, the photo was ruled not pornographic.)

But its algorithms also couldn't flag — and shut down — violent content or, in the case of the 2016 U.S. presidential election, fake news courtesy of the Russians in an attempt to sway the outcome of the election.

To this day, Facebook has struggled to fully admit its platform's shortcomings in exposing more than a third of all Americans to these fake posts and acknowledging the hit to consumer trust it's taken as a result — even when user traffic on the platform has declined.

YouTube suffers from the same platform conundrum — how to monetize the massive volume of user-generated content put on its platform while, at the same time, assuring brands their reputations won't be sullied by having their ads shown next to questionable or objectionable content.

Sympathizers say the sheer volume of content makes policing that content challenging. It's been reported that users upload nearly 400 hours of content every minute to YouTube. Execs at the company told Wired last year that it knows improvements are needed, but that nothing will ever be "100 percent perfect" under those circumstances.

But critics say if there's one thing Google and Alphabet know, it's how to process, parse, synthesize and act on data appropriately at scale.

There were more than 11 billion searches a day across all of Alphabet's properties in January 2018 — with those requests processed across billions of web pages and relevant results returned in a nanosecond.

Both YouTube and Facebook are in the business of monetizing the content users go to those sites to consume by placing ads in and around that content.

Consumers don't go to YouTube to purchase things, even though there's shoppable content there for them to buy. They visit the site to view videos.

Consumers don't go to Facebook to buy anything either, even though shoppable ads are presented for them to click on if they wanted to. They go to stalk their friends or read the news.

In both cases, content — not commerce — is what motivates those visits.

WHY INTENT MATTERS

It's a very different story when consumers take a spin on Amazon or Google via search.

Those are the digital platforms people visit when they're in the mood to buy something or think they might want to buy something. That consumer intent — to buy something — is what Amazon and Google's search business monetizes.

Both do that by making it easy for consumers to access a broad swath of inventory fast.

Both do it by giving brands tools to help them increase the odds of being seen.

Both also do it by giving brands data that can help them understand and then convert a consumer's intent to buy into a sale.

And they do it in a place that's safe for brands to interact with potential buyers and where they think they can close a deal.

Amazon does it today by making it easy for the consumer to close the loop and check out.

Amazon's also built an entire set of advertising services that tell brands how much they have sold for every dollar of media they spend on Amazon. It's something Amazon can do because, as an Amazon ad executive told AdExchanger last year, the company closes the loop between the media spent and the retail channel that gets the sale — because they are the retail channel that gets the sale.

Amazon can track the beginning of a consumer's intent to buy to a sale and then influence repeat purchases. It uses a number of tools to move that process along — everything from making repeat purchases an easy subscription option to suggesting products to buy that might

"go with" what's being considered or in the basket to free/same-day shipping with Amazon Prime membership to generous cash back rewards if their co-branded Visa card is used to layering on more products and services that keep consumers loyal to its platform.

And, now, thanks to Alexa, consumers can also order things across a slew of connected devices and mobile apps.

Analysts have estimated the value of Amazon's ad business, in revenue, to be between $5 billion and $18 billion today, while others say it could be worth as much as $50 billion by 2028. Experts may disagree on the numbers, but all of them agree Amazon's ad business is growing annually at a healthy clip — most estimate its growth stands at a 40 to 45 percent clip — faster than either Facebook's or Google's more mature advertising businesses.

That's because brands want to be where consumers go to purchase goods. And where there isn't bad stuff.

Amazon has that problem licked because, aside from reviews, it doesn't feature user-generated content. Brands may have to worry about their ad appearing near a competitor on Amazon but they don't have to worry about it appearing next to a racist rant, online suicide, posting by a Russian troll or videos of teens eating Tide Pods.

Google, of course, is well aware of this growing and dual threat to its business model.

Google used to be the first stop on a consumer's path to purchase, but it isn't anymore. Our own research in 2015 stated that nearly 60 percent of the time shoppers started their product searches on Amazon, not Google.

The big question for me was always this: What fraction of that 60 percent started a search on Google but ended up closing the loop on Amazon?

The answer matters because Google's search business today is about monetizing search — delivering responses to a consumer's stated intent to buy something. It's shifting increasingly to converting those browsers to buyers

across a diverse set of retail channels for which it enables access.

The greater the distance between those two points — search and convert — the more likely it is that buyers will divert to a place where the journey is shorter (a.k.a. faster). It's why Google's Shopping carousel has upped its game and why Android Pay is now Google Pay — a simple autopayment option online and in apps that once accepted Android Pay and merchants that enable Chrome payments' credentials form fill.

It's also why Google — and its virtual assistant, Google Home — is extending its reach into the retail channel.

Big brands, including Walmart, have signed on to work with Google Home to leverage the consumer's interest in conversational commerce and to hedge their bets against Amazon.

PLATFORM INFLECTION POINT OR BRAND WIN-WIN?

For a brand, it's a win-win.

Today's big brands now demand access to data that helps them make sure the 50 percent of their advertising that doesn't work doesn't get spent. Digital platforms are already in the business of monetizing a consumer's buying intent and are in a good position to capture that spend.

Platforms that can't have a tough hill to climb.

User-generated content will continue to flow, and perhaps so will consumer eyeballs. But without advertisers that trust those platforms with their brands, there's no business model to monetize those content assets.

P&G and Unilever, among others, have already voted with their pocketbooks and put digital platforms like Facebook and YouTube on notice, suggesting they'll be back when they're satisfied changes have been made.

In the meantime, they said, they'll divert their ad spend to strong digital alternatives consumers like and trust. Today that's Amazon and Google Search, among others.

Whether they'll return to Facebook and YouTube, or other social media platforms that face the same problems, at the same level they used to remains to be seen.

The big question is whether other brands will follow.

My guess is this: If Facebook and YouTube don't invest in algorithmic, artificial intelligence-based methods for cleaning up their platforms, excluding bad actors from the community, ad dollars will flee to Google Search and Amazon.

And we'll all look back at P&G's $200 million digital ad spending exodus as those digital platforms' advertising inflection point.

The **Amazon Effect** On Consumers And Grocery Shopping

If you're like most Americans, you or someone in your household made a run to the grocery store on Saturday to get food for the week.

If you lived in the Northeast, you were also there to stock up on the three things that everyone always buys when big snowstorms are expected — our third big storm in as many weeks (for those of you not keeping score like we are here in Boston).

Like most grocery shoppers, you already knew most of the things you were going to buy before you even got there — roughly 75 percent of grocery shoppers do. Although your favorite grocery store probably has a loyalty program and offers digital coupons, that probably isn't why you like shopping at that store. In fact, fewer than 20 percent of all grocery shoppers say they chose a grocery store for that reason.

Like most consumers, your favorite store is probably your favorite because it's easy and convenient to get to, has good prices and is where you've always shopped — a sentiment that nearly 90 percent of all grocery shopping consumers in the U.S. share.

As for using a mobile app before and during that trip?

That depends on where you shop and whether your top pick is a big store — Walmart, Target, Albertsons, Kroger, Whole Foods — or a Bi-Rite, JustSave, Luckys Market, Town & Country Market or one of the thousands of smaller format stores that dot the grocery landscape in the U.S. and often don't even have an app.

About three in 10 grocery shoppers use a store's mobile app as part of their grocery shopping process to check prices and see what's on sale if they shop in a big store — only one in 10 do so if their go-to is a smaller store.

Whether you might have used the app to pay for your order depends on whether you went to the store to shop and to pay — or just to pick up what you ordered earlier online — and what you value most from your favorite store.

All those data points — and the insights they yield — are just some of things

we learned when we, in collaboration with Vantiv, now Worldpay, asked about 4,000 consumers how they shop and pay for groceries today and how well their favorite grocers are doing to support the features they value most when shopping with them.

The short answer is: not all that well.

The gulf between what consumers want and what grocery stores today deliver as consumers move regularly between the online and offline worlds is pretty big. On a scale of zero to 100, where zero is, well, zero, and 100 is a perfect score, grocery stores scored a pretty lousy 30, based on consumer responses and a statistical analysis of store features and functionality.

That sets the stage for change.

Habit is the force that drives the majority of grocery shopping behavior today — consumers buying what they usually buy, where they've always done it.

But a funny thing is starting to happen at the intersection of the consumer's frequency of food shopping, their level of spend when doing it and their access to connected devices and apps.

Old consumer habits are starting to break, and new ones are starting to form.

Spend on groceries is starting to fragment and shift across channels — and not necessarily across different channels with the same merchant. Consumers use mobile phones and apps, and increasingly voice assistants, to help maximize their time, putting them closer to the brands they want to buy and new intermediaries from which to buy them.

All this is forcing grocery stores to confront what it means to offer consumers convenience and value — as consumers now define it.

THE BIG SPEND

Food is a big part of consumer spending, accounting for more of the typical consumer's annual spending than most anything else, except for housing and transportation. In 2017, that amounted to 12.6 percent of what American consumers spend every year — about $7,203 according to the U.S. Census Bureau. More than 50 percent of that spending — $4,049 — was on food bought at grocery stores to eat at home.

That spend is typically done about 1.5 trips a week, mostly at a brick-and-mortar grocery store.

That's starting to change — slightly — but in significant ways.

More than half of all consumers we studied — 55 percent, in fact — said they use both online and offline channels to buy their groceries. Only 41 percent of consumers said the only way they shop for groceries now is by going to a physical store.

Roughly 3 percent of these consumers said they buy their groceries online and pick them up at the store, and — hold on to your hats for this one — 8 percent order their groceries online and have them shipped home.

All of this has a big influence on what consumers now say they expect from their favorite grocery stores.

Even though a lot of feet still visit grocery stores to buy food, not many see the value in using an app to pay for them when they're ready to checkout; only about 4 percent said that's important, which is consistent with what we found in our mobile wallet adoption study. What they value more — and by a lot — is the ability to use an app to buy and pay online, with either delivery or store pickup as an option when paying that way for securing the items they purchased.

In fact, more than 53 percent of consumers said the feature they valued the most from their favorite grocery stores was free shipping and/or delivery.

Good prices are table stakes, a given.

The most convenient location of all for a consumer now seems to be her home — or the trunk of her car when pulling up curbside.

With 55 percent of consumers now shopping comfortably across physical and online channels, it's a measure of convenience that could dent traditional grocery store business and its profits — enough to hurt more than a little as

consumers use mobile apps to cherry pick where to buy the things they want to buy at the cheapest price, now paired with the most convenient way to get them.

THE DASH TO CAPTURE GROCERY

It will come as no surprise that one particular newcomer to grocery, located in Seattle (but hopefully moving to Boston soon), is the biggest catalyst of this change in consumer thinking.

I've been talking about the Amazon Effect on grocery since April 2015, shortly after the Amazon Dash button was launched.

Back then, the ability for consumers to stick funky-looking little plastic buttons on their washers and dryers and inside their kitchen and bathroom cabinets to order branded supplies like paper towels, toilet tissue, potato chips and dog food when supplies were running low put grocery stores on notice that change was coming.

Early Dash adopters saw a way to remove the friction from buying — and hauling back home — the same bulky staples week after week by having Amazon deliver it to Prime customers for free in two days instead. (The $4.99 for each button was refunded once an order was placed.)

The consumer brands that were the early adopters saw it as a new way to develop a relationship with consumers outside the traditional grocery store format. The product that everyone thought was an April Fool's joke was popping up for just about everything.

Dash buttons today have evolved from funky-looking, plastic doodads to digital prompts for subscription ordering on Amazon's site — for everything from makeup to hand cream to laundry detergent to dog food and much more.

More than anything else, those Dash buttons — physical and digital — started a new consumer habit: the ability to order things consumers always buy (and once always bought at the grocery store) online from Amazon.

The joke, it turned out, was on the grocery segment.

HITTING A FEVER PITCH

The topic of grocery shopping — and how consumer shopping patterns were shifting — hit a fever pitch last June when Amazon announced it was buying Whole Foods. That was when visions of the "Amazon Effect" landed a sucker punch to the stomach of a retail segment that once thought of itself as insulated from its reach.

But even then, the talk was what might happen "down the road."

After all, the fraction of the $1 trillion in US grocery sales, counting Target, Walmart and Costco, that Americans spend online is little more than a speck on a flea's eyelid right now — at about 1 percent. That online sales data comes courtesy of two-year-old U.S. Census Bureau data, which we know to be inconsistent with the reality of what's happening in the world of retail — and should be of about as much comfort to grocers as it is to department stores that are still being told by the Bureau to believe that 92 percent of retail sales still happen in a physical store.

Then there's the reality of the combined grocery market share of Amazon and Whole Foods, which together in 2017 amounted to a mere 2.5 percent. Walmart/Sam's Club together hold a 20.7 percent share of grocery sales. Kroger, the largest traditional supermarket in the country, is a distant second at 8.4 percent.

But like a lot of retail that's come face to face with the Amazon Effect, grocery stores have taken it on the bottom line ever since the announcement was made that Amazon would acquire Whole Foods.

Kroger's earnings last week only raised analyst concerns over the Amazon Effect on Kroger and the grocery segment at large, evidenced by the drubbing its stock price took after Kroger CEO Rodney McMullen cautioned that future profits could soften.

He said then that further investments in tech as part of the Restock Kroger initiative announced last October would mean profits would take a hit. Those investments include everything from beefing up the retailer's private label brands to being more price-competitive

on individual grocery items to investing more into its online order, pick-up and delivery capabilities.

The latter — online order/pickup and/or delivery to shoppers — was a big theme when Walmart CEO Doug McMillon told analysts last month that the company was "doubling down" on its investments in grocery to include the expansion of curbside pickup to 2,000 more stores in 2018.

Target CEO Brian Cornell reprised a similar sentiment last week when describing the retailer's plans for Shipt, the personal shopper plus same-day delivery Instacart competitor it acquired last year.

At the same time, Amazon announced an unprecedented guarantee of $22 billion in food futures to Whole Foods, which analysts said was an indication of the company's commitment to growing the grocery segment and boosting the fortunes of Whole Foods as the horse it picked to ride into that sector.

Taken all together: It's just further evidence of the looming threat, as the 55 percent of consumers who once only bought groceries in a physical store now play the field, moving seamlessly between on and offline grocery shopping channels — and quite possibly not buying from the same grocery store when they shop across those channels.

The two consumer habits that were once the local grocery store's greatest blessing could turn into their biggest curse.

Unlike most every other retail segment, consumers buy most of the same stuff week after week — brands they know, products they like, quantities they use. Of the nearly 40,000 SKUs (stock keeping units) in any given large format grocery store, the average consumer usually buys about 260 of them. With the exception of meat and produce, most are things consumers don't need to see and inspect to feel comfortable buying — and are buying at great prices.

The big winners in the grocery wars are the consumers who have seen grocery prices remain low for a very long time. So low, in fact, that many consumers have shifted a portion of their spend on eating out to buying groceries and prepared foods at grocery stores and eating in. Restaurant industry analyst NPD said foot traffic to fine dining and casual/fast casual establishments was down last quarter for the first time, while traffic to casual and fast casual establishments has been off for a very long time.

Record low jobless rates, higher wages, strong consumer confidence — all of this suggests consumers are making dinner at home more of a priority. It's why grocery stores like Walmart, Wegmans and Whole Foods are making prepared foods more of a priority in the hopes of bringing more traffic into the store and tempting consumers to buy more while there.

The Amazon Effect on all retailers is about raising the expectations consumers have of the merchants they shop. For grocery stores, it's about that, with a turbo-boost. In many cases, it's about making it easier to get **the exact same thing** they'd otherwise spend 45 minutes going to the store every week, sometimes dragging the kids along, to buy.

It's why Walmart paid $3 billion for Jet.com, and Kroger was willing to pay $400 million to buy Boxed.

Retaining the consumer's business isn't about loyalty programs or even coupons. People would rather have cheaper prices than go through the rigmarole of keeping track of digital coupons at checkout and the fear of missing out if they don't.

It isn't about having an app that can only be used to pay inside a store and not do much else in the way of adding value to the overall grocery shopping experience.

It's truly about being an omnichannel merchant — making it convenient for the consumer to buy things wherever they want to buy them and to get them whenever and however they want them.

The implications for grocers — and the ecosystem that supports them — seems clear.

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The Curious Case For **Breaking Up Tech Giants**

There's no question that the world's weather patterns are undergoing a massive change.

In the last few months alone, we've seen snow in Rome and three powerful nor'easters in Boston in the space of two and a half weeks — with some forecasts predicting a fourth this week. 2017 was the most destructive hurricane season in 82 years, with Harvey, Irma and Maria pummeling parts of the U.S. and the Caribbean, leaving tens of billions of dollars in damage in their wake. In Sept. 2017, more than 230 people lost their lives when Mexico City was struck by a 7.1 magnitude earthquake.

To name but a few.

This must all be because Beyoncé and Jay-Z had twins in July.

Think about it — did any of this happen before they had those twins?

It did not.

Those twins were born July 2017. All of these bad things happened after that.

Cause and effect.

Their twins. Our really, really bad weather.

I'd say there's about as much of a correlation between our bad weather and the birth of those cute little twins as there is between Google, Facebook, Apple and Amazon's fortunes getting bigger and middle class wages getting smaller.

Yet, that's the claim being made by Scott Galloway — serial entrepreneur and adjunct faculty member at the Stern School of Business who wrote a book, participated in numerous TV interviews and composed a 7,000-word article in *Esquire* saying just that.

His thesis is based almost entirely on what statisticians call spurious correlation — inferring cause and effect from the seeming correlation between two unrelated things. A famous one is the correlation between sunspots and murder rates — there is none.

Galloway's narrative asserts that "the four" — Facebook, Apple, Amazon and Google — should be broken up.

And that we should do that not because they're tax evaders or evil — all things he said they, like all of us, are.

And not even because they're job destroyers, which he said is the natural consequence of innovation, and innovation is goodness.

But because not breaking them up throws cold water on the American dream — which is to work hard, save money, be prosperous and even become a millionaire, as he told CNBC in a recent interview.

So, as capitalists, he said, it's now time to "oxygenate" the economy and "prune [the] firms [that have] become invasive, cause premature death and won't let other firms emerge."

His premise knits together a series of storylines that regular readers of PYMNTS are quite familiar with:

- That the Amazon Effect on retail, despite the company's 4 percent share of it, is real and that it uses its diversified sources of revenue, like Amazon Web Services, to subsidize its retail business at the expense of traditional retail.
- That Google dominates search and is using its search platform to monetize commerce, including its integration of Google Pay into apps and sites and the Chrome browser.
- That Facebook seemed happy to ignore all the bad stuff taking place on its platform until it got caught — and that its mea culpas are too little, too late.
- That Apple uses its closed ecosystem and the power of its brand to disadvantage others by denying access or imposing frictions on competing services like Spotify.
- That the middle class is bifurcating — to the have's and mostly to the have not's as a result of jobs that are disappearing because technology and software is eliminating them.
- The number of new businesses is at an all-time low.

But it is simply not right to say that the last two bullet points are the direct result of Amazon, Facebook, Google and Apple's success over the last 10 to 15 years.

And that carving these companies into multiples of themselves would make things better for the middle class.

This topic is as complicated as it is controversial for four reasons.

"THE FOUR" DON'T HAVE A MONOPOLY ON GOOD IDEAS

Before there was Google Pay, there were three earlier versions of Google payments, starting with Google Checkout in 2006.

They all died.

So did a lot of other things Google launched to boost its commerce offerings — as well as businesses it acquired to build commerce experiences around, such as Zagat. It found itself unable to compete with other, better-positioned competitors. And how about the purchase of Motorola and Google's ambitions to become like Apple with its own hardware?

The company bought Motorola and quickly dumped everything except the patents.

Who among you bought one of Amazon's Fire Phones?

That would probably be none of you (except for you Amazonians reading this who were probably gifted one to use). The Fire Phone was quietly sunsetted before it even turned one, since in the iPhone era, no one wanted a phone with its own OS and no apps.

How about Facebook gift cards? A slam dunk for Facebook, right? You notice it's your friend's birthday and have the perfect opportunity to send a … physical gift card that they receive 10 days after the event. #Fail — along with just about every other commerce initiative Facebook has tried to ignite using its platform, starting with Beacon in 2007. (Perhaps our first clue that Facebook was playing perhaps a bit too fast and loose with consumer data.)

I saved the best for last — Apple and Apple Pay. You all know this story so well by now that you're proficient on the details. But there wasn't a person on the

planet, save us here at PYMNTS, who back in 2014 didn't say Apple Pay was going to crush everyone, marginalize the card networks and kill PayPal. It didn't — and the jury is out on whether it ever will.

Since 1999, we've seen venture capitalists (VCs) pour hundreds of billions into new ventures in the U.S. There's been no shortage of capital to start new businesses. There's just been a shortage of ventures with new ideas that consumers and businesses find useful enough to try and then to stick with — ventures with a business model that can make money beyond the VC's checkbook.

That's not because the Big Four have or had the market locked so they never had a chance, but because a mobile-centric world creates a very different set of expectations around what consumers want from the businesses with which they interact.

To be relevant now, a business needs scale.

That's just a fact of life in a world where consumers move easily between environments, ecosystems and devices — and where their inability to do so causes them to shift to a provider that can. Platforms, like the Big Four and others like them, give small players a chance to play big where they never ever would have had a chance to get to first base.

For example:

Brad Stone writes in his book, "The Upstarts", that Airbnb got a huge boost in its early days by advertising on Facebook, targeting people with a house or extra room to rent out.

I ordered Vance Packard's classic book, "The Hidden Persuaders," written in 1959, from Amazon last week. They could fulfill it because a little bookstore I wouldn't have ever found sells its books on the site. About 50 percent of items sold on Amazon now are from sellers just like him.

I just had to have a pair of fancy Italian shoes from a designer I'd never heard of after reading about them. A Google search directed me to an online merchant that sent them to me (from Italy) four days later. A tiny merchant I never heard of selling shoes from a designer I'd never heard of — but for Google.

CONSUMERS PUNISH FIRMS THAT DON'T MEET THEIR NEEDS, INCLUDING THE FOUR

The Cambridge Analytica fiasco on Facebook is the latest in a string of big missteps made by the social networking giant whose CEO, Galloway told Michael Smerconish on CNN on Saturday, is more powerful than Trump or Putin, since he's organized more people than Christianity.

Facebook, he said, is the most successful commercial product in the history of mankind. That, of course, minimizes the importance of innovations such as the telephone or electricity, which, like Facebook, are technologies upon which innovations were developed and then commercialized. Call me crazy, but between Facebook, the telephone and electricity, I might not rank their importance to mankind in quite that same order.

Regardless, a funny thing has happened to Facebook ever since the emergence of fake news, Russian trolls throwing the 2016 U.S. presidential election and now the breach of 50 million Facebook user profiles without their permission: Consumers are disengaging.

Since all of these issues were made public, engagement on the social platform — in all demographics — has declined by 20 percent.

Simply changing the algorithms and showing more posts from friends and fewer from advertisers isn't enough to curate the image of a kinder, gentler, less money-centric Facebook, especially when what's really going on is that fewer friends and family are posting things.

Facebook, like all social networks, suffers from the syndrome of more lookers than contributors, so losing both becomes a problem of massive proportions for Facebook since it means fewer eyeballs. Fewer eyeballs means fewer advertisers, and fewer advertisers means less revenue for Facebook.

Between the bullying, the videos of people being beheaded and murdered, fake news and now a breach of user information,

Facebook is facing a backlash from consumers and advertisers.

Regulators may be circling the wagons around Facebook, but it's not clear what that means, what the remedies might be (outside the EU and U.K.'s efforts around GDPR) or how breaking it up would have prevented its bad behavior — or would in the future. What will is consumers fleeing the platform — just like they did with Myspace.

Then, there's search. Google's share of core search in the U.S. is about 64 percent. Microsoft's Bing is about 24 percent, with Oath (a.k.a. Yahoo) at about 12 percent. In terms of mobile search, Google has a 93 percent share. Consumers could download and use Bing on their mobile phones — Bing is an app in iOS and Google Play — but they don't. They don't because Bing search isn't what consumers want to use.

If it was, more people would use it.

Crying foul over Google's dominance in the EU, as Bing-funded opposition groups have done over the years, ignores the fact that consumers have a choice when it comes to search engines — and by and large they don't choose Bing.

I'll betcha my new, fancy, sparkly Italian shoes that the regulators in the EU don't use Bing either.

As we've seen in the EU, after the huge $3 billion fine that was levied on Google, on top of being forced to change how its Shopping results are returned, merchants still aren't satisfied and want the remedies revisited.

Why?

Because making Google pay a fine and change its business practices did nothing to make consumers want to use vertical search sites any more than they did before – just like they don't want to use Bing.

Department stores used to dominate retail, and shopping was always done in a physical store. The internet was something in the early 2000s that most retailers dismissed as never amounting to much, so they ignored it.

And completely missed the impact to the consumer shopping experience that mobile phones and apps would have and the hit it would make to their businesses.

Today, despite the story the U.S. Census Bureau likes to tell — that 92 percent of all sales still happen in a physical store — the largest retailers have lost hundreds of billions in market cap in a few short years. In a sea of product sameness, consumers value convenience over going to the store. Buying from Amazon to have it delivered two days later is easier and comes with less risk than a trip to the store to buy something that's out of stock.

Is that Amazon's fault?

Or retailers' — who ignored the impact of the Amazon Effect on consumer expectations and were forced to play defense, not offense?

At the same time, Apple and Amazon don't rule all that they touch, either.

Consumers still like Netflix more than Amazon Prime. And Spotify more than Apple Music. And streaming generally a lot more than iTunes downloads.

When consumers see something they like, they use it, and they use it a lot. And when they don't, they don't — regardless of whether the business is the biggest of the big or the smallest of the small.

Just think, before Spotify was an IPO contender, it was just a tiny streaming app company in Sweden that turned out to decimate one of Apple's crowning achievements — its music download business — despite its being a nearly trillion-dollar company.

THE MIDDLE CLASS WAGE SQUEEZE ISN'T NEW

Ten years ago, the topic of income inequality was placed at the feet of Wall Street — the 1 percenters who all worked for the big banks that were too big to fail.

Ten years before that, Microsoft was the source of everyone's problem in tech.

Today, it's the Big Four that are being called out for robbing the middle class of the jobs they need to put food on the

table. Robotics and technology are taking jobs from people who need them the most, it's said.

However, the issue of middle class wage inequality has a history that's longer than "the four" have been around — about three decades, most economists say.

I wrote a piece about the fascinating research done by economists who looked at consumer incomes over a series of generations. They examined anonymized tax data starting in the 1940s until 2015.

What they discovered was sobering: 56.5 percent of today's millennials will never make more than their parents. With a median income of about $56,000 in the U.S. today, the financial future of the largest generational cohort since the baby boomers is clearly in question, and that's a problem bigger than any or all of the Big Four put together.

There are many explanations for this.

Over the last three decades, our economy has moved from a manufacturing economy to a services economy. Since the 1950s, we've seen the services economy grow from 24 percent to 50 percent of GDP — with financial services, healthcare, consulting and insurance the big growth drivers — and manufacturing shrinking from 33 percent to 12 percent — driven largely by the demise of the agriculture economy in the U.S.

Advances in technology have made it possible for goods and services to be produced more efficiently, delivering better outcomes for businesses and consumers. Access to data and the ability to mine, analyze and apply it has only expanded those possibilities for both businesses and consumers — and impacted how nearly all businesses operate.

Accommodating that shift and seizing these new opportunities requires a different workforce.

If it's true that someone's lifetime wage potential is more or less determined by the time someone reaches the age of 25, 10 years from now, the crisis will have only escalated.

Someone aged 45 in 2007, who was 25 two decades before the financial crisis, probably thought their future earning potential was pretty solid — until they lost their job and tried to replace it at the same level in a world defined by technology and a new set of skills.

Millennials who largely came of age during that same financial crisis had trouble getting good jobs — or any job — and got a late start to their earnings potential. Those with good educations and the right skills have the potential to catch up over time. Those that don't, probably won't.

But neither is the result of "the four" reducing the potential for job creation — or fixing it if there were eight or 10 and not four of them.

The failure of our educational system to prepare young people for the rhythm of this new economy bears a huge brunt of that blame. Positioning 25-year-olds for success means preparing them over the course of the 18 or 21 years they're in school, recognizing that not everyone needs to go to college to build a great financial future for themselves. Self-driving cars will need repairs. Robots in fulfillment centers will need to be run by people. Construction workers will need to build the houses, roads and transportation hubs of the future.

If anything, the four, and platforms like them, can be the catalysts to unlocking those new opportunities and stimulating public-private partnerships to improve the quality of what our kids learn in school.

THE BIG FOUR ALL COMPETE WITH EACH OTHER

This, I guess, is the most important point of all — and one that's lost on everyone, including the regulators, everywhere in the world.

Facebook, Amazon, Google and Apple are competitors — vigorous competitors — not four companies operating independent of each other in discrete silos.

Amazon competes with Google for search in commerce — and vice versa — and now with Google and Facebook for advertising dollars. Apple and Google compete head to head for share in the smartphone market — and for commerce with their respective "Pays" even more broadly

than that. Facebook would like to be a commerce platform and has invested in programs to position it that way, including enabling commerce via Messenger, Facebook and Instagram. All of them compete with each other in some way via peer-to-peer payments. Google today just launched Shopping Actions with Target and other retailers to close the loop when shoppers ask "Where can I buy this" as part of their search. That's more than a casual shot across the bow at Amazon.

Voice has introduced an even more interesting dimension to this competitive dynamic. Alexa and Google are positioning themselves as intermediaries through which consumers find and buy products, do their banking, pay their bills, order an Uber and make a dinner reservation. Apple struggles to find its footing here, even though it was a voice pioneer with Siri. Facebook, if the rumors are true, is said to be building its own voice-activated speaker.

People like to compare the power of the big four with Ma Bell before the breakup. Before telecoms were deregulated, there was only one way to get phone service — Ma Bell. Now, landlines are a dying breed, and people spend most of their time on smartphones using apps and browsing the web — not making phone calls from a landline in the living room. In 2004 in the U.S., 92.7 percent of the population had a landline phone; today, only 45 percent of Americans do.

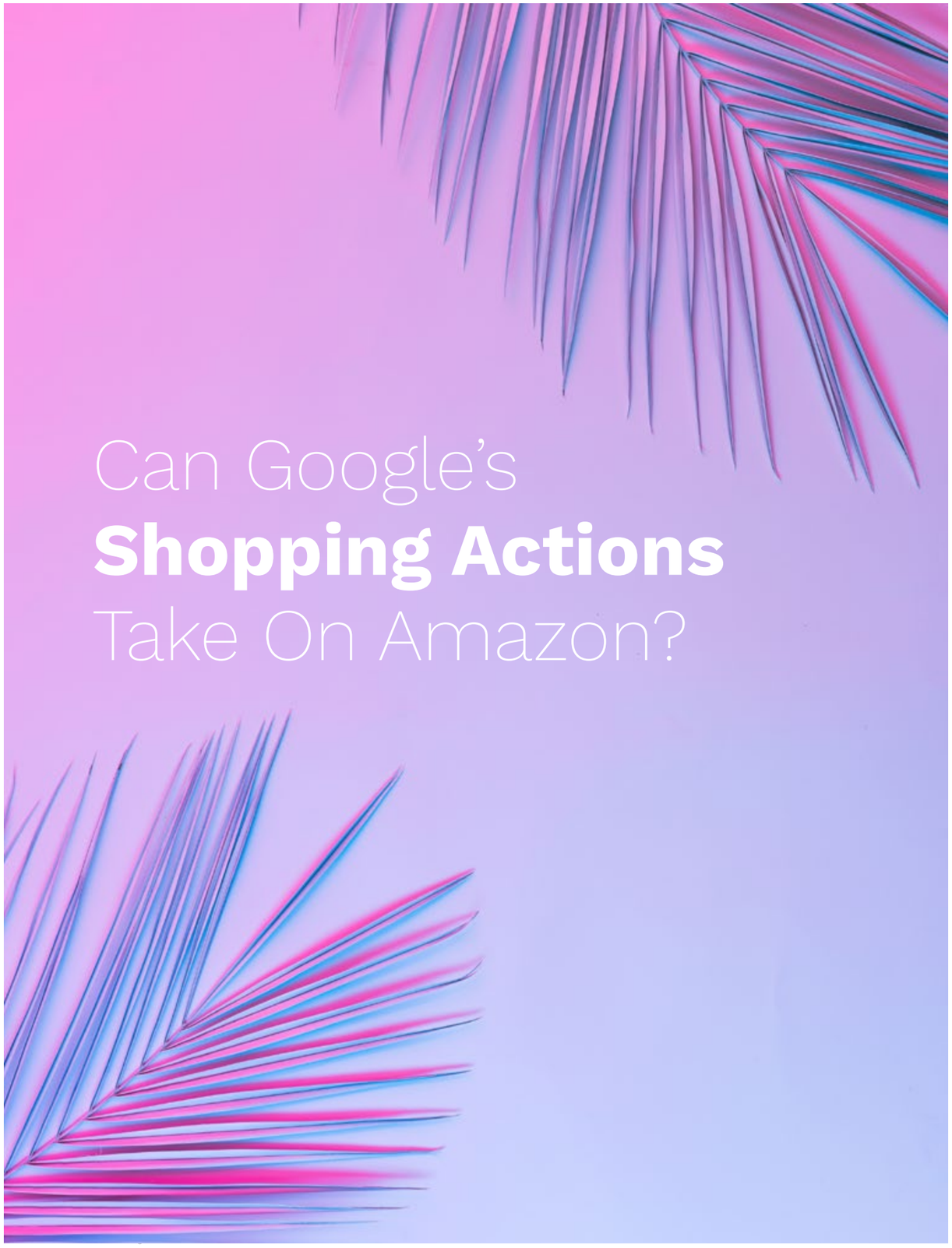
Breaking up companies, like the government did with Ma Bell, is to prevent consumer harm. That's a tough claim to make when consumers have many choices today including Facebook, Amazon, Apple and Google and others that compete with them, too. And they move freely between and among them. Competition, it turns out, is the best oxygen there is for pruning the forest to let new growth sprout because it lets consumers decide who gets pruned and who gets to grow.

When consumers don't like what a company is doing — for whatever reason — they take their business somewhere else. Today, they now have lots of choices and channels available to to find those new options.

Like any business, Facebook, Apple, Amazon and Google are using whatever tools they have at their disposal, including the customer assets that they've created over the last ten or twenty years, to find and keep the same customers. As platforms, they all leverage the power of a business model to make decisions about what services or products to subsidize to eliminate the friction of getting suppliers and buyers on board. That's not a reason to break them up either, but the reality of how these platforms – and every platform like them – work.

To win their business, and to keep it, companies have to listen, watch and respond.

Regulators and everyone else who thinks breaking up the Big Four — and the next four who happen to come along behind them and get big — is the best way to let a thousand new flowers bloom might be advised to listen and watch what consumers do, too.



Can Google's **Shopping Actions** Take On Amazon?

In between stories last week about Jack Dorsey saying that bitcoin will be the world's single digital currency in about 10 years and Facebook's meltdown over its latest data scandal, you might have missed Google's announcement of Shopping Actions.

Shopping Actions is Google's big shot across Amazon's bow, giving consumers access to a universal shopping cart to fill and then buy the things they find when searching the web. Payment is made using the payment credentials that consumers have stored with Google (courtesy of the Google Pay upgrades announced last month), including payments credentials stored at a merchant site via the Chrome browser.

Google's universal shopping cart is channel-agnostic: Consumers can start their search on a desktop computer, jump to mobile to add more items and then to Google Assistant to add even more to their cart, check out and have them shipped by the merchant.

The program also gives participating retailers a chance to attach themselves to those search queries via sponsored posts.

For example, a consumer searching for terra cotta flower pots might first see those flower pots sponsored by Walmart or Target. They can choose which one they want, put that item into their cart from the Google search page and buy it without clicking through to Target's or Walmart's (or whichever retailer she chooses) website. Fulfillment and shipping remain the responsibility of the retailer. Walmart, Target, Ulta Beauty and 1-800 Flowers are among the early adopters of Google's new service.

Shopping Actions, Google said, is a response to the 85 percent increase they've seen over the last two years in the number of searches asking where an item can be bought. Google also said in the blog post announcing the launch that 44 percent of voice-initiated searches are for things consumers buy weekly, such as groceries and household items. The convenience of having a single cart to put those items in and then buy them, Google claims, gives consumers more — and more convenient — shopping and payment options.

Google reports the retailers that have tested Shopping Actions have seen their basket sizes increase by 30 percent, with higher-than-average conversion rates than using sponsored advertisements alone. Unlike Google's pay-per-click ad model, Google is paid a percentage of the sale when it's made, just like Amazon Marketplace.

But for Shopping Actions and Google to live up to its billing as commerce's "next big thing," it will have to convince the more than 60 percent of American consumers who start their search for what to buy on Amazon to break that habit and instead use Google to start — and finish — their search there for what to buy.

That will depend on how successful its participating retailers are in delivering an experience that meets or beats what Amazon offers consumers today — and how many consumers actually do turn to Google (not Amazon and not their favorite merchant) to find something they want to buy.

KEEPING THE EYE ON THE BUY

As I've written many times, there's a dearth of Amazon alternatives in the market today.

That's because Amazon isn't just an online retailer anymore; it's a marketplace of sellers wrapped around a loyalty proposition so powerful that tens of millions of consumers pay to belong — and keep paying every year to continue to receive those benefits because it's so convenient and so reliable.

Amazon is online and offline — but not just in groceries. Amazon has its own bookstores and high-tech convenience stores and partnerships with some of the same offline players with which it's competing. Kohl's, for example, will accept Amazon returns in its stores and sells Amazon-branded hardware.

Amazon has a pervasive voice assistant — Alexa — that started on Amazon-branded devices, but has quickly moved into lots of other ones too, including cars, appliances and smart home devices. Alexa is also a mobile app on smartphones and wearables and is much more than an artificial intelligence bot. People speak about Alexa as if she's a member of their family. Don't know what to have for dinner tonight? Ask Alexa. Don't know what kind of new car to buy? Ask Alexa. Don't know how badly your NCAA brackets have been busted? Ask Alexa. Need a joke to take your mind off how badly your brackets are busted? Ask Alexa.

Alexa, in other words, is fast becoming part of the consumer's day-to-day life.

Alexa's ecosystem is open to anyone with an interest in teaching her new skills. That's spawned the interest of developers across just about every nook and cranny of every industry segment to find new ways of using Alexa and Amazon to find and buy a wide range of products and services — from healthcare to banking to bill pay to retail to insurance to office supplies.

Amazon itself is available to consumers regardless of what device or operating system they use. Or whether the retailer they want to order from has an app. Amazon Places enables food orders for any quick-service restaurant with a website. I can ask Alexa to help me find and buy stuff from Best Buy, and she will gladly oblige — no app needed.

Amazon has programs in place that help merchants to be successful. Amazon manages fulfillment for merchants who want and need them to and provides working capital to its sellers to help them grow their businesses.

All those things set the bar pretty high for anyone wanting to cut in on Amazon's turf. The high degree of consumer trust, the ease of one-click checkout and the ubiquity of Amazon (and now Alexa) across devices, channels and operating systems — and products to buy — has spawned "The Amazon Effect" that has become retail's nightmare, more generally.

THE BIG BET ON SCALE

Google, now with Shopping Actions, is making a bet on scale that it can.

Scale it hopes comes from turning its search engine into the world's biggest shoppable marketplace.

Scale it hopes comes from getting the right roster of participating retailers on board to pull adopters in early on — that drive sales to merchants that keeps them sticky and encourages more to join.

Scale it hopes comes from giving retailers access to a voice commerce platform with a large and growing user base that competes with Alexa.

Scale it hopes comes from the billions of searches done by consumers today that can drive new customers to merchants — and that they can monetize.

Scale it hopes comes from all the apps and utilities beyond search where Google is now enabling commerce, including Maps, Waze and Gmail, that add more commerce touchpoints for consumers and merchants.

SHOPPING ACTIONS AND CONSUMER REACTIONS

It's an interesting strategy.

In 2015, only 40 percent of the consumers we surveyed said they started their search for what to buy on Google.

Three years later, Google said searches for "where can I buy…" are up by a lot — suggesting that consumers may be looking to Google to help them find a particular product type or brand that they don't believe Amazon has — or can get to them when they need it.

Products that, through Google's Shopping Actions, they can buy via its universal shopping cart or order using Google Assistant and pay, via Google, using a merchant-branded payment method linked to the merchant's native loyalty program.

With orders passed to the individual retailer to process and fulfill.

And that will be where the Shopping Actions' rubber will literally meet the road.

Retail is being reshaped by many forces, including changing consumer preferences. Consumers want to shop at retailers that sell the things they want to buy. They establish their favorites based on lots of little things but start their shopping journey with retailers they know, trust and make it convenient for them to do business.

In an on-demand world, convenience means delivering what consumers want to buy on demand too. That means that retail's success largely, and Shopping Actions more specifically, will be defined by how well its participating retailers are able to manage that last mile, including using same-day delivery via inventory in their stores as a competitive advantage.

Managing logistics and optimizing that last mile is why Target bought Shipt in December of 2017 and was among the early pioneers of buy online, pick up in-store.

It's why Walmart — the king of supply chain logistics — has turned its attention to strategies intended to sharpen its delivery efforts. That includes experimenting with a lot of things, including using employees and Uber drivers to deliver purchases to consumers, establishing a program called Wam! (that a patent filing says is a new retail and grocery delivery platform) and making investments to expand curbside pickup for groceries and other purchases.

All important "make or break" Shopping Actions experiences that, unlike Amazon, are today largely out of Google's ability to control.

That's a risk to Google and the success of its Shopping Actions platform. The first time a Shopping Actions purchase fails to get to a consumer on time could be the last time she ever uses it.

Granted, it's very early days, and Google has obviously been investing in a vision and technologies that give retailers an Amazon alternative and Google a strategy for competing with Amazon in the commerce trifecta: search, payments and online advertising.

Their first plank was a decision to improve and standardize the Shopping carousel at the top of the search return page to make it more consumer-friendly — and therefore more retailer-friendly.

The second was to create and then open its voice commerce platform, Google Assistant, to merchants to advance their own voice commerce initiatives and to developers to write skills.

The third was to standardize its disparate payments options into a single, rebranded

and vastly expanded and enhanced Google Pay.

The fourth was standardizing checkout via search by creating a universal shopping cart with a consistent checkout experience and Google-enabled payments options that include merchant-branded payments methods.

Could the fifth be the standardization of delivery using one of Alphabet's Moonshot initiatives, Project Wing?

Project Wing has been testing the use of drones to deliver packages to suburban areas — most recently in Australia — and has hired a former Amazon exec and Staples CTO to commercialize that program. Shopping Actions now has merchant partners with the capacity to invest in their own logistics capabilities. Most retailers don't and therefore can't. To make search shoppable, Google has to solve not just for the shopping and paying part of the experience, but also for the delivery part of the experience that enables the very long tail of merchants.

And could the sixth be a partnership that helps them deliver credit and financing options that help sellers become successful?

All things that remain to be seen.

Regardless, it's nice to see competition emerging in a space that many have ceded long ago to Amazon. Competition, as I said last week, is the oxygen that markets need to thrive, expand and improve. This competition isn't just about Google and Amazon; it's about Amazon and the rest of retail, with Google as its enabling platform.

Perhaps now we'll see the retail games really begin.

What Everyone Missed About **Facebook**

There are any number of conclusions one might draw after watching the Facebook hearings on Capitol Hill last week.

- That most of our elected officials don't have any clue how Facebook, much less the platform business models that have powered so much innovation across industry segments for thousands of years, work.

- That Mark Zuckerberg showed remarkable restraint in the face of being asked, repeatedly, over the course of two days and 10 hours, questions that highlighted that lack of understanding. (That trait also probably makes him a great dad.)

- That whoever decided to limit lawmaker monologues/questions to four minutes each should be given the Congressional Medal of Honor. Anyone who gets it down to one minute should definitely get the Nobel Peace Prize.

- That putting what is now the inevitable regulatory screws to social media platforms will impose unwieldly compliance costs on every player, making it harder for new players to emerge and scale, and thereby strengthening Facebook's position.

- That lawmakers have now put any big tech company that uses consumer data in the same bucket: bad guys out to make billions of bucks at the consumer's expense.

It's that last point though — one now central to the current Facebook data debate — that I find most unsettling.

Not because players such as Facebook, who've allowed unauthorized access to consumer data and generally haven't been very careful with consumer data, shouldn't pay the price for what they did — they should, and Facebook will. That's what the Federal Trade Commission's Consumer Protection division is there for, not to mention class action lawyers, as well as similar regulatory authorities in other countries.

And not because everyone who touches the consumer shouldn't consider data privacy and security part of the deal they must have with their consumers if they

want those consumers — their crown jewels — to keep coming back.

But unsettling because it fails to consider the fact that platforms differ a lot in how they get and use data. They aren't all like Facebook.

In particular, the one-size-fits-all approach lawmakers seem to be taking ignores consumer intent when using these platforms, how that intent varies across the platforms with which they interact and how that intent shapes the expectations that consumers have of those platforms.

And, most important perhaps, what data is — or isn't — needed to close the loop on that intent.

It's also a core tenant that I outlined in my January 2018 annual opus on trends that will drive the payments and commerce ecosystem dynamics this year and in the years to come.

I said then that the payments and commerce power brokers of 2018 and beyond understand how to use context to monetize consumer intent without compromising their trust, their data and therefore their expectations of the platforms when using them. It's why I said then that Google Search and Amazon and platforms like them — not Facebook — are among the new power brokers in our world.

And now why it's important not to throw all of the platform data babies out with the congressional big tech regulatory bathwater.

THE EVOLUTION OF THE AD PLATFORM

Not even 20 years ago, before digital, mobile and the always-on world in which we all live today, there were newspapers and television.

People would read the daily newspaper to digest the comings and goings in the world. On those content-filled pages were advertisements hoping to catch the consumer's eye, build a brand and influence a purchase.

Those same people would also sit in front of the television to watch their favorite shows. About every seven or so minutes, there was a commercial break in which ads were inserted with the same ambition — build a brand and drive a buy.

Consumers read the newspaper and watched TV not for the advertisements, but for the content. Ads went along for the ride.

Really, really good ads made it seem as though the brand was talking directly to the consumer — even though the best those brands could hope for was that people watching "L.A. Law" or "CSI" or reading *The Boston Globe* or *The Wall Street Journal* all more or less liked the same things. That meant neither the brands nor the publishers nor the networks knew a lick about whether those ads directly drove a purchase; thus the famous adage about not knowing which 50 percent of advertising really worked. But they all recognized that it was the best way then to reach a massive number of eyeballs.

The ads also served another very important purpose: They brought the consumer eyeballs for the advertisers and the right type of content brought the right eyeballs (daytime soaps for stay-at-home moms, financial news for business people).

That business model and platform dynamic made it possible for consumers to watch network TV for free and buy the paper for $0.25 or $0.50 — all because advertisers paid tens and even hundreds of thousands of dollars to be in front of their eyeballs.

Before digital and mobile and online stores, there were physical stores and shopping malls — and both were among the only ways consumers could find the things they wanted to buy.

Moms packed up the kids and drove to the store to browse and to buy. Coupons or sale circulars or signage in the store promoted items on sale or storewide discounts. Those ads were presented in the context of a conscious decision on the part of that mother to make a purchase in those stores.

It made perfect sense: Where there is intent to buy in an environment that the consumer knows and trusts, presenting an ad to a consumer increases the likelihood that a sale will be made.

AWASH IN DIGITAL EXHAUST

Our all-digital, all-mobile, always-on world is rife with new, digital intermediaries that all want to attract consumer eyeballs to monetize the digital exhaust their interactions leave behind.

There's a lot of digital exhaust.

In July 2017, business data enabler Domo reported that 2.5 quintillion bytes of data is produced every minute worldwide. "Data as the new oil" has galvanized company executives, their advisors, boards and investors around using tools and new technologies to find and monetize those proverbial gushers. The pitch and the panacea for every business without a source of revenue to sustain it is to acquire consumers so the data generated by their interactions on those platforms will turn into revenue "down the road."

But all digital, all mobile, always on doesn't change the consumer's intent nor their expectations of the platforms with which they engage when they do.

THE INTENT TO SHARE, NOT TO BE SHARED

Take Facebook.

Facebook's MO almost from the start was to assemble a critical mass of eyeballs to their platform that they could use to attract and monetize advertisers that wanted to buy access to those eyeballs. Becoming a Facebook user meant completing a profile that gave Facebook insight into that individual user: their name, email address, phone number, age, gender, school, employer, title, marital status — among other things. That profile data was enriched as the user's social network grew, users clicked the "Like" button, commented on posts and shared content. Users checking in with their friends on their News Feeds saw ads for brands that correlated to those likes and the interests of those users — more targeted — but in very much the same way that they would see ads in other content feeds like newspapers or TV.

It was in many ways just like any other ad-supported content platform.

Until it wasn't.

The goal to monetize user eyeballs by selling advertiser access to them ended up swamping the user-generated content that Facebook users wanted to see with too many ads that they didn't. Updates from friends and their shared content became too hard to find in between sponsored content, ads and, later, "fake news." Brands once enamored with the notion of highly targeted ad buys found they were missing out on big swaths of users who were also qualified buyers — and switched tactics.

What consumers didn't count on, since it wasn't their intent when signing up for Facebook initially or using it on an ongoing basis, was being part of a platform that would take their most personal data — their name, email, age, gender, marital status, sexual preferences, employer, position, likes, address, school and phone number — and make it accessible to third parties without their permission off the Facebook platform. And have those third parties, in turn, serve them content without their permission. And do bad stuff with their data.

They also didn't sign up to being tracked via the use of cookies when they weren't logged into the platform. Nor did most users have any idea how much of their personal data was being shared when using Facebook Connect to log into other sites.

Over the years, Facebook has adjusted its policies and practices to stop some of the bad behaviors that compromised user data without their knowledge, including limiting third-party access to a user's social network and adjusting its News Feed algorithms to prioritize user-generated content over ads.

The Cambridge Analytica data scandal that has dominated the headlines only raised the decibel level over why and how the user data of not just 87 million people — but quite possibly all 2 billion users — has been compromised in a way that gives access to that data and those users without any implied or express permission to do so.

It seemed that not only did Facebook turn a blind eye to the behaviors of these bad actors but turned a blind eye to the consumer's intent in using Facebook: to

share content with friends, to see what content their friends have shared and be served ads and content relevant to their interests, just like any other ad-supported content platform would.

Not to be targeted by third parties who accessed their data without their knowledge or permission.

And not, it seems, to enable commerce.

Research that we will be releasing shortly suggests that for as much as brands may think of Facebook and the News Feed as a natural for enabling "contextual commerce" on the Facebook platform, there is an inverse relationship between the frequency, spend and satisfaction with a contextual commerce experience and the use of Facebook as a platform for that type of commerce engagement.

THE INTENT TO BUY

That's not the case with Google Search.

Consumers make 40,000 searches every second on Google Search for a total of more than 3.5 billion searches a day or some 1.2 trillion searches a year. Those searches are prompted by a consumer's interest in discovering the answer to something: When are federal taxes due? Why has the weather been so crappy for the Boston Marathon for the last 10 years? Will it ever be spring in the Northeast?

And, increasingly, where do I buy [fill in the blank]?

Asking Google Search demonstrates an intent to buy — and the consumer's expectation that they'll get a response in a millisecond with options for where to do that. They know that they'll be presented with many of them, including some placed at the top of the search page paid for by brands or retailers to appear there when a searcher uses those keywords. It's then up to the consumer to decide whether — or if — to click through and make a purchase.

Google Search uses consumer intent — a search for a product to buy — to match that consumer with a range of places she can go to complete the purchase. Google knows where that consumer is but not her name or any personally identifiable information, nor does it have to in order to deliver a list of relevant places and options for her to buy. If a consumer punches through to a merchant that has enabled Google Pay or form fill via Chrome, those credentials can be used with the user's permission to expedite checkout there. Consumers can also bypass that step, register with a merchant, use a card on file or any other checkout option presented to them.

Think how different this is from Facebook.

A consumer intends to use her News Feed to find out what her friends are up to, or maybe learn some news, not to buy a product. A consumer searches when they're actually interested in something, and when that looks like it is related to a product, Google serves an ad. Most search pages don't have ads for non-product-related searches. The Facebook News Feed, on the other hand, always shows ads.

Take Amazon.

When a consumer goes to Amazon to buy something, she'll also be presented with a list of products to buy, including sponsored posts, recommendations on what to buy with that product and product reviews based on what she types into the search bar. If that consumer is an Amazon customer, she'll probably also see details about whether it was a product she had purchased before and be given the ability to make that purchase in one click and/or to add it to her Dash buttons for replenishment if appropriate.

Amazon uses that consumer intent — a search for a product to buy — to match that consumer with products and marketplace sellers, so that she can complete that purchase on Amazon. The company provides its sellers with the opportunity to make a sale on its platform for a product they can fulfill but doesn't share customer data with those sellers — a position that's been a lightning rod between Amazon and retailers for years. Since Amazon is in the selling business, it has a real incentive to make sure people are happy with what they buy.

That's pretty different from Facebook too.

If a user clicks on a Facebook ad and buys the product, since Facebook isn't a commerce platform, they probably won't

blame Facebook if the product is poor. If a consumer clicks on and buys something from Amazon and they don't like it or it breaks, they'll blame Amazon.

And yes, I know that in both situations, there's another data conversation related to the ability of the merchant or retailer's access to and use of customer data, but let's save that for another column on another day.

THE INTENT TO SHARE — AND BE SHARED

There are many other platforms that are in the business of monetizing consumer intent — all related to why the consumer seeks out and uses that platform.

Two made news last week.

Uber announced that its app will soon become a transportation hub for consumers.

Within the Uber app, in addition to finding a ride using Uber, consumers will be able to find and book mobile tickets for local public transportation, rent a bike through the ridesharing company's recent JUMP acquisition and find someone willing to rent their car to them for an hour or a day. The consumer intent is to make getting around town easy and convenient.

This new offering is on top of the delivery services provided by Uber Eats — the $10 billion Uber business that uses location data and Uber account credentials to make it efficient for users to order food from local restaurants and have it paid for and delivered via the Uber app.

All users had to do to take advantage of those services was establish a profile that included only a few pieces of information — name, email and payments credentials. Uber uses those credentials to enable the "Uber experience" when completing a ride, but the most important piece of information that they need is their location and that of the driver. The rest simply makes it easier for that consumer intent to be actioned inside the app — without being served ads that get in the way of that service experience.

Zillow also made news last week when it announced that it would leverage its reputation as a trusted provider of data on home values and its platform that brings a massive number of eyeballs to people who want to sell their houses to launch a house-flipping business. The market didn't like it much: Zillow's stock dropped 9 percent on the news, fearing channel conflicts with realtors whose content populates its pages.

Yet it's another way for Zillow to monetize a consumer's intent to find and buy a house by offering a convenient option to sell the one they own now.

THE INTENT OF INTENT

The late Supreme Court Justice Thurgood Marshall once wrote: "What is the quality of your intent?" It was a rhetorical question with its own intent — to flag the difference between what someone might say and the intentions, as he wrote, behind those words. Intent, he said, always surfaces — the good and the bad.

It's an appropriate analogy for the consumer data debate that started last week and the one that will rage in the weeks, months and years to come. The consumer's intent when interacting with the physical and digital platforms they use seems clear — even when the intent of the platforms they engage with isn't.

It's time to close that gap.

Consumer Convenience, Retail And **Payments Disintermediation**

Disintermediating the established intermediaries has become something of an art form in payments and retail these days.

Physical retail is being disintermediated by a host of new players using digital technologies and data that further erode their relevance.

Point-of-sale (POS) terminals are being disintermediated by consumers using the very device that gave digital payments acceptance to micro-merchants: the mobile phone.

Traditional banks are starting to feel the disintermediation pinch by alternative lenders who lack their legacy infrastructure and cost structures and use digital-first, artificial intelligence-powered processes to underwrite risk and extend credit instantly.

Traditional acquirers are being marginalized by technology players that provide solutions — not just payments processing — to software platforms who want more control over the end-to-end payments experience for the merchants with which they do business.

And digital wallets face new risks to their model on the heels of the card brands' recent embrace of browser-based, EMVCo-based online standards (Secure Remote Commerce, or SRC) that deliver a robust card-on-file solution experience for their issuers' products inside a single "Pay" button.

To name but a few.

The truth is that intermediaries have always found themselves on both sides of the disruption dynamic, and not all who aim to disintermediate are successful. Survival depends upon how well the incumbents anticipate a future beyond the one they entered the market to disrupt — and how prepared they are to change their strategy to disrupt their once-disruptive ways of doing business.

Disruptors Being Disrupted

Sometimes it helps to put things in context.

In 1734, in a city outside London, shoppers walked into a single store, Bennetts, to buy the things that once required visiting many different stores.

For the first time, shoppers could conveniently visit one store to see, touch and buy things, many of which were simply not available to them in the stores lining the main streets in their towns. The brick-and-mortar department stores that disrupted those main street merchants took off, flourished and remained largely unchanged for the next 270-plus years.

In 1916, Clarence Saunders opened the first self-service grocery store in Tennessee. Just like department stores, Piggly Wiggly gave shoppers the chance to personally see, inspect and then select food they wanted to buy in one place. Before Piggly Wiggly, shoppers went to multiple shops to buy meat, produce and canned and dry goods — all of which were kept behind counters and required a salesperson to get. Almost overnight, grocery stores, the brick-and-mortar intermediaries that disrupted main street food purveyors, became the way that shoppers bought all their food. And just like their department store counterparts, grocery stores remained largely the same for the next 100-plus years.

In 1985, Blockbuster opened a chain of stores that let consumers rent video cassettes of the movies that had recently been playing inside movie theaters and watch them at home. For the first time, local and regional rental stores aside, people across the U.S. who wanted to see a popular movie didn't have to buy a ticket and go to the movie theater to watch it. Video rentals and movie nights at home became the go-to consumer movie ritual for the next two decades.

In 1979, Sony introduced the Walkman, an innovation that made music both portable and personalized. Before the Walkman, portable music came via the portable radio and whatever songs the stations were playing on-air. For the first time, consumers could buy a cassette — and later a DVD — with the songs they wanted and listen to them anywhere they wanted to go. The "There's A Revolution In The Streets" ad campaign that introduced the Walkman to the U.S. market in 1980 was said to have been the most effective product launch ad campaign in the fifty-year period prior to its introduction and gave Sony a 20-plus foothold on the portable music market.

In 1995, one year after Amazon was founded, eBay opened its virtual doors to consumers who wanted to sell the stuff that was taking up room in their attics, basements and garages. Before eBay, sellers and buyers were largely limited to their local geographies and the effectiveness of newspaper classifieds. The retailer became the category leader by moving yard and garage sales online and later by expanding into selling new branded products. That was until Amazon branched out of books and niche players like Etsy provided a different and better product selection with a cleaner user experience less than a decade later.

In each case, marketing and merchandising became the tools used by these once-disruptive intermediaries to hold their competitive place in line. The competitive dragon they were slaying was the "other guy" just like them who wanted in on their turf. The battle was fought on a playing field that was more about being a better intermediary than the other guy — more products, better products, newer products, cheaper products, unique products, better in-store experiences, rich loyalty schemes — than it was about reexamining how to deliver an even more convenient consumer experience.

Until it became a defensive move and a new crop of disintermediators used new technologies that would, like they did decades ago, redefine the role of an intermediary and the customer value they could deliver.

Digital swamped physical.

Software swamped hardware.

Frictionless swamped friction-filled experiences.

And the ability to deliver the convenience that once put these intermediary pioneers in a position of power ended up swamping them all.

See the Future — or Face the Inevitable

In 2018, it's a little bit of déjà vu all over again.

Take retail.

Those who continue to believe the Census Bureau reporting that 90 percent of retail sales are still done in physical stores are living with their heads in the sand. The cycle of failure defined by a

record number of mall and store closings and bankruptcies over the last decade is a very visible sign of the wholesale decline of physical retail that we seem now to witness daily.

As someone I was speaking with about this very point said the other day, “I mean people even buy mattresses online today.”

Yes, they do.

Digital and mobile and the use of data to enhance the consumer shopping experience that have disrupted the retail status quo will continue to disintermediate retail.

All of it.

Playing the Digital and Physical Fields

We’ve been studying consumers walking in and out of physical stores every quarter for more than a year. We’ve talked to 8,000 consumers over that period of time and examined their shopping behaviors at physical stores large and small across four retail segments — mass merchants, including department stores, grocery, apparel and health and beauty.

We asked them what they bought, why they decided to shop that store and how much of their shopping they do in that store and other physical stores like them and how much of their shopping is done online.

We have complied a pretty compelling story.

Across the four merchant segments that drive a large part of consumer spend, most people don’t shop exclusively in physical stores anymore.

For mass merchants, only 35 percent said they shop only at the physical store — defined as 50 percent or more of their spend in that channel — with 49 percent saying they shop both physical and digital channels.

For grocery, the number of physical store-only shoppers was slightly higher at 41 percent. Fifty-five percent of consumers said they shop both physical and digital channels.

The story is the same for apparel: Thirty-three percent said they shop physical exclusively, with 58 percent shopping

across both. In health and beauty, 39 percent of consumers shop exclusively in the physical store, and 52 percent shop both digital and physical channels.

The shoppers who play the digital/physical field are younger, more educated and more affluent than their physical store-only shopper counterparts.

They are the future of retail, and their shopping habits and preferences are now well-shaped.

But regardless of age, income, education, spend or preferred retail channel, there is one constant undertone: What decides their channel and store preference is convenience.

Prices come second. Convenience comes first.

More than rewards. More than loyalty programs. More than product selection. More than support or service. More than what payment methods are accepted.

Increasingly, the shoppers who are leaning toward digital said they’re leaning on technology and the variety of connected devices in their possession to find the convenient shopping experience they want.

Convenience Inspires Disintermediation

The ripple effects of this shift are profound and are being felt throughout the entire payments and commerce ecosystems.

Software plus digital is swamping physical retail intermediaries and the ecosystems that support them.

Standing in line and checking out at counters and terminals will be the exception and not the rule of what people do in stores a decade or so from now — because it’s increasingly not what people are doing today.

Checkout is happening in the aisles, on mobile devices while in the store or via an app before a customer even gets to the store to pick up what’s been bought.

Software and apps and connected devices are disintermediating the POS checkout experience that has been retail’s cornerstone for more than 270 years

using a device that, ironically, expanded digital payments acceptance for small merchants in 2009 with Square.

Product discovery is happening on mobile devices and more recently with Alexa and Google Assistant. These virtual assistants can also buy the products consumers find with their help. Stores — not products — risk disintermediation as consumers search for what to buy first and then make the buying decision on who can most conveniently get the product into their hands.

Assuming, of course, that consumers don't find it more convenient to start and end their search on Amazon.

Frictionless swamps friction-filled payments experiences and the ecosystems that support them too.

Issuers and digital wallets are facing their own version of disintermediation , as consumers set, forget and default to the payment method and/or registered card on file option that they like and always use.

Top of wallet could be decided by default because it's what's most convenient for the consumer.

In a world in which voice may be emerging as a dominant access channel for retail, voice platforms could become the new intermediary for not only what stores consumers buy from, but how they will pay for what they want to buy.

So, too, could a universal pay button that makes the registered card options already a part of a consumer's digital payments experiences available across all of the merchants they want to shop.

All of these same forces are disrupting banking and lending.

Convenience-driven consumers have been trained that using mobile and digital banking channels are easy and secure. Physical interactions are no longer a requirement to get what they want, including loan products.

On the consumer side, Quicken Loans is now the biggest mortgage lender in the market, with a 6 percent share. Consumers happily traded off the

inconvenience of an in-person mortgage process at a bank for the convenience of an online lender who could give them an immediate credit decision — from the comfort of wherever it was convenient for that consumer. Small businesses are gravitating to online lenders, too, for the same reason: using technology to instantly underwrite and pay out loan proceeds that provide them with important sources of working and growth capital conveniently and quickly.

Digital, software and frictionless payments have dented the lucrative lines of business that were once the traditional banks' to lose.

What's an Intermediary to Do?

That's up to the retailers, payments players and lenders, all of whom are facing a new crop of disintermediators, to decide — and not all of whom are venture-backed startups with a big hill to climb and big intermediary shoes to fill.

For retailers, it will mean standing at the digital — and now voice-enabled — fork in the road and picking a path, using the requirement of meeting the consumer's need for convenience and the requirement of making a sale as waypoints. Now — before voice becomes the next wave of consumer innovation for which they have to play catch-up.

For lenders, it will mean using technology to rethink data flows that can both leverage their balance sheets and expand credit options for consumers and businesses.

For digital wallets, it will mean preserving their current role as a value-added intermediary to merchants and consumers by upping the convenience quotient, adding new sources of value that make transacting across digital and physical channels seamless, efficient and ubiquitous — today.

For everyone, it will require new strategies and ways of thinking that use the assets they have and marrying them with the new technologies that deliver the experience that defines the consumer's behaviors today. And being open to partnerships that once seemed like an anathema in an earlier time.

And two more things.

Understanding that consumer convenience, throughout history, has driven disintermediation and defined innovation — across all sectors.

And recognizing that time is a precious currency.

Department stores have been around for 271 years, but the digital blows that have sent them reeling started, in earnest, about 10 years ago when the iPhone and apps were introduced. Banks have been lending for 150 years, yet it took Quicken Loans only 32 to capture the mortgage lending market.

Ten years from now, the world of retail, payments and lending will look quite different, and intermediaries will play an important role in shaping it.

The question to be answered between now and then is who will disintermediate whom. It's a question rife with speculation — but with, at least today, few clear answers.

Can FinTech **Walk The FinTalk?**

Benjamin Franklin is best remembered as a signer of the Declaration of Independence in 1776 and a prolific inventor who created the lightning rod after flying a kite with a key on it in a thunderstorm. A little known fact, perhaps, is that Franklin is credited with inventing two things that almost every person has used – or will – at some point in their lifetime: swimming fins and bifocals.

Mr. B Franklin was also a prolific writer, whose many musings were captured in *Poor Richard's Almanac*. Published under his nom de plume, Richard Saunders, between 1732 and 1758, the almanac was an annual collection of poems, puzzles, prognostications and words to live by.

Many of Franklin's published aphorisms have survived the test of time and remain quite familiar.

A penny saved is a penny earned.

Honesty is the best policy.

In this world, the only things certain are death and taxes.

And one that should be every innovator's anthem:

> **Well done is better than well said.**
>
> — Benjamin Franklin

It's a thought that was triggered recently after reading and reflecting on recent developments across three innovations heralded as FinTech's poster children — disruptors out to change the world and eat the proverbial lunches of incumbents they say are too big and too unmotivated to change.

Blockchain. Marketplace lending. Digital banks.

Three things that today seem more like talk than truly transformative innovations.

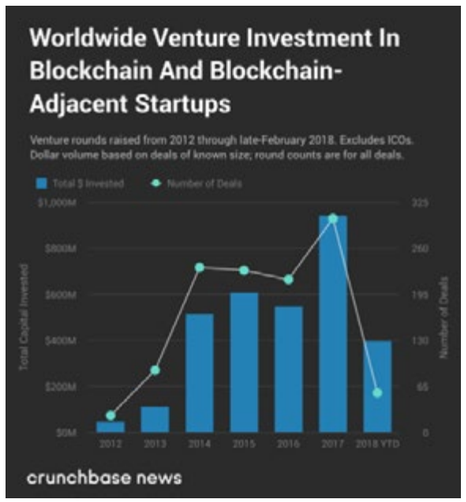
BLOCKCHAIN

Take the blockchain.

An alien landing on Earth and reading the popular tech press would be thoroughly convinced that blockchain is the biggest thing to have happened here since the invention of indoor plumbing.

Consider the money being poured into it.

According to a Crunchbase article published in February of 2018, investments in blockchain and blockchain-related startups (excluding initial coin offerings, or ICOs) were already 40 percent of what they were in 2017. And in 2017, those investments were off-the-charts nuts.



Then, there are the claims being made by innovators about its potential.

The blockchain has been hailed as the most significant invention since electricity and the fix for the world's biggest problems and pain points. It's positioned as the way to send money to people anywhere in the world in an instant and for free. It's said to be the answer to the world's food safety and digital identity problems. The blockchain can even end world poverty and transform society by making it safer for total strangers to lend each other money — without any third-party intermediary — and without any risk.

In short, there seems to be, literally, nothing the blockchain cannot do.

The hype cycle on blockchain and blockchain tech has become so frothy that companies have even changed their names to include it. Today, corporate public relations and communication teams go to great lengths to find any angle to connect what they're doing to the blockchain so that they, too, can ride its publicity draft.

However, the reality behind the hype tells a different story.

In January, the International Data Corporation (IDC) reported worldwide spending on blockchain solutions would increase to $2.1 billion in 2018 from $945 million in 2017 and will grow more than 80 percent year over year to reach $9.7 billion by 2021. Most of that spend will be concentrated in the U.S., with supporting use cases mostly related to financial services and cross-border settlement, for a grand total of $242 million in 2018.

To put that into context, the IDC projected worldwide growth and spending on mobility solutions at 15 percent a year from a 2018 base of $1.6 trillion; on security-related hardware, software and services at 10 percent a year from a 2018 base of $91.4 billion growing to $120.7 billion in 2021 and on the Internet of Things at 14 percent a year from $772.5 billion in 2018 growing to $1.1 trillion in 2021.

Then, there's IBM and its most recent earnings report.

IBM has made its blockchain ambitions clear: It wants to be the first mover, using its "Blockchain as a Service" initiative as a way to capture and keep that lead.

In its earnings call two weeks ago, IBM even used those words — a first mover in blockchain — citing the 50 blockchain networks that are now up and running using their platform. IBM's management team described its blockchain developer toolkit as another way to make it easier for innovators to "stand up" blockchain networks. Some 750 such networks, they said, were provisioned in the first two weeks of that launch.

After reporting those earnings and making those claims, IBM's stock lost 6 percent of its value.

Many were surprised, since IBM posted an increase in revenue for the second straight quarter — after five consecutive years of losses.

Analysts said disappointing performance in its strategic imperatives group was to blame.

Strategic imperatives include the blockchain services IBM has invested heavily in and counts as one of its important strategic cornerstones. That group, collectively, grew 17 percent and contributed 49 percent of revenue at the end of Q4 2017. The first quarter of 2018 saw that shrink to 15 percent growth and 47 percent revenue.

This all comes on top of Warren Buffet dumping nearly all of his IBM holdings at the end of last year. In 2011, Buffett made a $10 billion investment in the company in support of then-new CEO Ginni Rometty's turnaround plans. Buffet told CNBC in May 2017 that he doesn't value IBM the way he once did.

Blockchain, of course, isn't only to blame. The issues at IBM run far deeper.

But its positioning of the blockchain as one of its critical strategic pillars emphasizes a bigger and more important point: The hype is only as good as the numbers it can deliver.

And we are in the very, very, very early stages of finding and determining blockchain **tech's** true potential.

Now, it's true that some companies — including some very big names across many important sectors of the economy — are taking measured steps and experimenting with blockchain tech — aka distributed ledger technology (DLT) — in the support of use cases that address tough problems

But they're spending small (emphasis on small) amounts of money to do that. They're also using software and cryptographic techniques and permissioned-based networks to digitize and move assets around the world faster and in a secure, compliant manner.

And to learn.

Anyone in a regulated industry — and that's just about all of them — are also plenty dubious about using cryptocurrencies as the processing rails for supporting those pilots and incorporating them into their longer-term plans should their pilots show promise.

Today, the hype machine, which is the fuel of the investments in blockchain and crypto, rooted in a world run by algo-driven, permissionless networks, appears to be little more than a bunch of academic white papers and blog posts that sound great in the echo chambers.

All you need for proof is to just follow the smart money.

MARKETPLACE LENDING

LendingClub was hit with a lawsuit by the Federal Trade Commission (FTC) last week over claims of "deceptive" practices.

The FTC complaint alleges that LendingClub's advertisements of "no hidden fees" is in conflict with reports from consumers who received loan proceeds minus those hidden fees that were, well, hidden in the fine print. The suit also alleges that some consumers were double-charged and continued to be billed after their loans were paid off.

Following that news, LendingClub's stock price took a nosedive. Yesterday, it was trading at an all-time low of $2.70.

Even before this latest blow to the company's stock price, the bloom was starting to fade from the marketplace lending rose. Investors have remained skeptical that the marketplace business model touted in 2006 is sustainable.

LendingClub's Q4 2017 results, under new management, showed four straight years of losses, sales that missed forecasted targets and continued losses in 2018, seemed to prove investors had every reason to be skeptical. Additionally, LendingClub's stock has lost 88 percent of its value since its 2014 IPO.

LendingClub is considered one of the pioneers in marketplace lending — a supposedly disruptive model that wasn't about lending money and making money the good, old-fashioned way, but about creating a tech-driven front and back end to originate loans and then making money when those loans are sold, offered to investors, traded and then serviced. LendingClub makes unsecured personal loans to consumers, mostly to consolidate and pay off credit card debt and more recently to refinance auto loans.

In an interview in 2013, Founder and then-CEO Renaud Laplanche boasted that incumbent banks like Chase were "like Blockbuster Video" in a world in which tech and new lending models like LendingClub's would bury them. All-digital, all-tech lending platforms that could deliver better user experiences and faster credit decisioning would become the new normal and take share from banks who were too big and cost-laden to keep — or catch — up.

Three years later, in May of 2016, Laplanche was ousted from the firm he started after the Board concluded that he violated business practices after failing to disclose investment conflicts that some say were driven by growing pressure to meet sales targets and prove the efficacy of its teetering alt-lending model. A month later, a new management team was put in place to rebuild the business.

It's now hard to see how even a new management team can rebuild LendingClub — unless it blows up the marketplace lending model it was founded to popularize.

Without any skin in the game, like balance sheet lenders have, there's not much to prevent making loans to people who may not be able to pay them back. Fast-as-lightning credit approvals come with an unintended sidekick: loan stacking — either by fraudsters looking to score big or desperate borrowers with nothing to lose by stacking up loans for unsecured credit lines that they'll never have to repay.

Either way, it's a recipe for losses and lost investor confidence.

Tightening up their risk models to serve a more Prime-like customer means LendingClub would look like every other digital lending platform competing for the most creditworthy of customers: competitors with healthy balance sheets, a lower cost of capital and a broader digital consumer platform to offer consumers.

Take Goldman Sachs and Marcus.

Marcus is a digital consumer platform that includes lending and deposit-taking. Launched in October of 2016, Marcus is Goldman's $2 billion annual hedge on

threats to its core commercial banking and trading businesses. Goldman Sachs reported on its Q1 earnings call that Marcus, since it launched, has originated $3 billion of new loans and taken in $9 billion of new retail deposits.

During that call, Goldman Sachs' management said they're in no big hurry to grow Marcus by opening the credit spigot too fast or too wide. They said they have decided not to approve "large numbers" of credit applications, opting instead to slowly grow deposits and high-quality loans by offering no-fee, fixed-rate loans, CDs and interest on checking accounts through the acquisition of Clarity Money, a personal financial management tool. Marcus is reinventing the lending model not by clever card tricks, but by creating a trusted, digital retail financial services platform to help consumers find and use credit responsibly and save.

They have a big incentive on their books to make sure that happens.

JPMorgan Chase and OnDeck have made the same point on the small business (SMB) lending side with the announcement in 2015 of their OnDeck partnership.

The partnership does what Chase CEO Jaime Dimon said at the time is something Chase didn't want to do and could not do — lend small amounts of money to SMBs. Mashing up OnDeck's quick credit-decisioning tech with Chase's risk and underwriting models and capital pools gave Chase a way to expand its community of SMB borrowers without expanding its bad debt.

Marketplace lending models were about using tech to lend money while sidestepping the regulatory burdens of being a bank. Tech and a great user experience alone didn't turn out to be a great way to sidestep the merits of using good, old-fashioned credit, risk and lending models to do it.

DIGITAL BANKS

If the blockchain is all about replacing the global financial system and marketplace lending is all about replacing traditional lenders, digital banks in the developed world are about upending the traditional banking ecosystem.

There are literally hundreds of digital banks — all targeted at people who reportedly don't like banks for one reason or another.

Most, though, aren't really banks in the true sense of the word at all.

They're prepaid accounts that run on network-branded rails that come with a network-branded plastic card that its customers can use just like they would a debit card to make purchases.

These digital banks offer a lot of free services — including overseas cash withdrawals — without any additional fees. Some digital banks encourage savings via the Federal Deposit Insurance Corporation bank behind them. All tout an easy user experience via a mobile app that helps users track and monitor spend.

The business model of these digital banks is based on the fees they collect on those transactions. But that's not enough to support and service these accounts. Monzo bank, one of the larger U.K.-based digital banks, reported 450,000 users at the end of December 2017, losing $67 on average per customer account.

To make up for those losses, some of these challenger banks are selling access to their customer bases for a fee — a distribution channel of sorts for other financial and related services. That makes challenger banks less like banks and more like ad platforms wrapped around the delivery of a prepaid card product. Supporters say that's not a bad thing, since investors tend to value ad platforms like Google over regulated banks.

Which begs the question: Who are these digital banks serving — investors or consumers?

In the developed world, delivering banking services must be more than acting as a prepaid program manager.

It's about meeting the financial needs of people — adding value and delivering trust.

And doing it using mobile and digital means.

But digital banks don't have a lock on delivering digital banking services.

Being digital is de rigueur for banks today, and some analysts project that the more than 2 billion mobile banking users that will exist worldwide by the end of this year is a powerful proof point.

There are, of course, people in developed markets for whom traditional banking services are not viable, but that number is small — at about 16 million — and includes a population for whom a variety of powerful digital alternatives are in place to serve those specific needs: think PayPal, MoneyGram, Walmart and some of the other global players like Finablr that are emerging to fill those gaps. Those players have scale and a variety of services that go well beyond a prepaid account and a mobile app. They also have something more: the consumer's trust.

In developing worlds, of course, the situation is quite different. Mobile is how banking and financial services are done — again, by players with scale (think Ant Financial), services and an objective to help consumers achieve a much-needed path to financial inclusion and a more convenient ecosystem in which to provide digital financial services.

Today, digital-only banks are licking their chops as open banking directives will soon level the competitive playing field and give them easy access to incumbent bank customers. But, as we've seen, simply being digital isn't enough of a value proposition for consumers to care. Consumers want a bank that's digital, but not necessarily a digital-only bank. Ben Franklin was famous for another aphorism that I find particularly relevant to this discussion: Time is money.

In a dynamic space like banking, lending, payments and financial services more broadly, time is a valuable currency.

Take too long to get something off the ground, and chances are that a newer tech will leapfrog it.

Take too long to prove value, and chances are that consumers will lose interest and bail.

Take too long to prove you have a viable business model once the VC's checkbook runs dry, chances are that partners and investors will lose interest and bail, too.

Take too long to scale, and chances are that you'll be outmaneuvered — quite possibly by the very players you set out to clobber.

Spend too long living in the hype cycle, and chances are that you'll end up wondering how and why it all happened.

Facebook And Dating: **It’s (Not) Complicated**

Finding one’s soulmate isn’t easy.

In fact, physicist, NASA roboticist and “What If” author Randall Munroe says that, scientifically speaking, it’s impossible. The math behind his claim suggests that finding someone’s honest-to-goodness soulmate is a once in every 10,000 lifetimes kind of thing.

That does make it seem kinda hard.

But it hasn’t stopped people from looking.

Or intermediaries from helping them make that impossible dream their reality — or a reasonably suitable facsimile of it.

Before online matchmaking intermediaries like Match.com and Tinder tried their hand at increasing those odds, there was Frigyes Karinthy, SixDegrees, Friendster, not to mention village matchmakers.

And now, Facebook.

PLEASE DON’T MAKE ME KISS A THOUSAND FROGS

For millenia, people living in isolated villages and towns found it hard to meet anyone beyond the borders of the small communities in which they lived and worked, never mind their perfect soulmate. Village matchmakers would seek input from the parents of children of marrying age in those villages and then use their networks across many villages to find a suitable match. The practice that most describe as “arranged marriages” was often less about “arranging” to a set of strict parent-led criteria but using an intermediary to fish for a possible mate in a much larger pool of eligible candidates.

The first use case for social networks, started after the birth of the commercial internet, was helping people find the perfect mate (well, seriously, these were started by guys, so the idea was to help them find girls).

The basic idea occurred about seven decades before the first online social networks.

In 1929, Hungarian author, Frigyes Karinthy, published a series of fictional

short stories, one entitled “Chains.” In that story, Karinthy posited that any two people could be connected by, at most, five personal acquaintances and illustrated that through a game he created and wrote about.

His idea was that these personal, social networks would become even more expansive and powerful as the inevitable advances in mobility and technology made it easier to make and then share those contacts.

Over the years, economists, statisticians and mathematicians evolved this concept more rigorously. But Karinthy is credited with naming and popularizing the social network theory that gave rise to the first online social network some 68 years later.

In 1997, SixDegrees.com launched.

Its founder, Andrew Weinreich, is given credit for launching the first social intermediary that invited people to join, create and share a profile online, and then invite their friends to join too. Friends of friends were visible to any friend of those friends in the network. SixDegrees provided users with a new way of expanding the size of their own social networks by making it much easier to meet new people — particularly, possible dates and soulmates.

But not just any people.

People who were more trustworthy than the average Joe or Jane, because a connection was made via a friend they knew firsthand and trusted too.

SixDegrees.com grew to 3.5 million members and was sold two years later for $125 million dollars.

Weinreich said growing the user base became difficult, constrained by its ability to keep users engaged. Sharing photos and content was clunky in a world devoid of smartphones with digital cameras, and the lack of broadband connections necessary to support content-rich sites made it hard to run the site on the desktop computers with dial-up connections people had in their homes at the time.

But it’s Weinreich’s Six Degrees patent — giving people the ability to see people they do not know by making the friends

of their friends and their friends’ friends visible online — that’s become the underpinning of online social networking.

In 2002, three years after SixDegrees shut down, Friendster would emerge with the same premise — an online, members-only site where friends and friends of friends could find each other and share updates. While finding a soulmate wasn’t its explicit purpose, striking up new relationships that turned romantic was a frequent occurrence.

Friendster shut down five years later in 2009, owing its lack of success to technology challenges that made the user experience slow and cumbersome in the face of a more powerful and focused Facebook challenger that launched two years after they did. Ironically, a year later, Friendster sold its social networking patents to Facebook for $40 million.

The story of Facebook and its rise over the last 14 years as the world’s most powerful social network icon is, of course, well known.

Zuckerberg and his co-founders chose an ignition strategy that, first, built critical mass one college campus at a time. Students were invited to join by creating a personal profile with their picture. Access to the user’s personal network was at their own discretion after receiving an invitation from someone to join it.

Like Friendster and SixDegrees, friends of friends of friends were visible to users and their own network of friends.

Like Friendster and SixDegrees, access to a trusted network of those friends of friends of friends was the big draw.

Updates from those friends and across those social networks could be seen, liked, shared and commented on, creating the user engagement that would sustain and grow Facebook over the next decade-plus.

More important, the new online friendships Facebook fostered could be easily converted to offline friendships and meet-ups, since everyone went to the same school or one close by.

Including friendships that turned romantic.

Unlike the online social networks that came before it, Facebook asked its users for one piece of information that is, today, the cornerstone of the dating app it will soon launch.

NOT SO COMPLICATED: THE POWER OF RELATIONSHIP STATUS

When users create their Facebook profiles, they can declare any number of relationship status options: single, married, engaged, divorced, in a relationship, "it's complicated" and many more. Users can also opt to leave that part of their profile blank.

Zuckerberg is reported to have told his co-founders in 2004 that no one walks around advertising their relationship status, and asking about it in person can be awkward. An online user profile with a relationship status feature not only eliminates that awkwardness but telegraphs who's available and who's not.

It also gives users important and accurate information they can act on — or not — depending on their own interests and relationship status.

In 2014, Facebook added an "Ask" icon next to a user's relationship status, inviting others to ask someone they might have more than just a passing interest in getting to know for more details.

It seems a safe bet that watching user engagement with that feature was one of many data points that led to Facebook's decision to make finding someone's soulmate a more formal part of its platform.

Along with having a lot of eligible fish in the Facebook pond for those unmarried eligibles to find.

Facebook has more than 2 billion active users who visit the site each month, 214 million of whom are in the U.S. These users check Facebook an average of 14 times a day, spending 50 minutes each day on the site.

Many of whom are also looking for love.

LOOKING FOR LOVE IN ALL THE WRONG PLACES?

The Census Bureau reports that 45 percent of adults over the age of 18 in the U.S. are unmarried — that's about 111 million unmarried people. It also stands in stark contrast to the state of marital bliss just a few decades before. In 1960, only 28 percent of the adult population was unmarried.

Helping singles find a mate is a niche that online matchmaking sites like Match.com, eHarmony and Tinder emerged to help fill, using algorithms based on user profile information to make those perfect matches.

People have taken the bait.

It's been reported that roughly 50 million people in the U.S. — or nearly half the unmarried population if those numbers are true — use dating apps. Tinder reports about 46 million users and has seen a 100 percent increase in subscribers since 2015. Match.com reports 7 million users.

Those singles are said to check those dating sites an average of 11 times a day, spending 90 minutes a day, or some 10 hours a week, in search of Mr. or Ms. Perfect.

Finding a soulmate on those platforms, however, comes down to how well these online intermediaries can solve a pretty simple math problem.

Too much qualifying criteria applied to too small a pool of eligible singles means too few potential Mr. or Ms. Rights for users to see and get to know.

Opening the aperture too wide means presenting users with too many potential Mr. or Ms. Wrongs who don't match their criteria.

Add to that the problem of embellished profiles and profile pictures that make a potentially exciting first date a disappointing last encounter — and users get frustrated and leave.

It's not surprising that dating apps aren't the way most people say they've had the most success in finding the love of their life.

Most people — 39 percent of singles — say what's worked best for them is having friends of friends fix them up. Roughly 15 percent of people find a relationship at work, 12 percent at a bar.

Only 8 percent say dating apps have been the onramp to a satisfying relationship.

That's why Facebook has more than just a shot at making a killer dating app to help singles find a new relationship — while also finding a new way to monetize its platform beyond selling advertisers access to its user base.

A BIGGER POND WITH MORE FISH AND LOTS OF GREEN

Facebook as a dating platform has the same simple math problem to solve as any other dating site: having enough eligible singles to increase the odds of any of its users finding a suitable, compatible mate.

But Facebook has something else that no other dating platform has: a network of friends of friends of friends of friends who can vet any potential match.

Six degrees of separation on a site as humongous as Facebook means it's also highly likely that someone in its massive network of friends of friends of friends can vouch that Joe's status is complicated because he really isn't single and Jane is a great gal but has just been too busy to meet and find someone special.

And that Joe isn't a lying, cheating son of a gun or that Jane is a lot more like Glenn Close's character, Alex, in "Fatal Attraction" than Meg Ryan's in "Sleepless in Seattle."

Of course, dating sites conduct basic vetting and background checks, but they're no substitute for a friend who can vouch for the character of someone they — or a friend of their friend — knows firsthand.

That means Facebook has the potential to deliver the online dating trifecta: relationship status, an extensive friend network to vet and vouch for a potential match and a whole lot of potential matches from which unmarried people can choose.

It's why Match.com's stock price took a nosedive when Facebook's dating app news was announced.

For Facebook, having dating as a formal part of the Facebook experience also delivers a monetization trifecta — something that's increasingly important as regulators beat up its ad-supported model.

- **An easy monthly subscription sell for singles on the platform today** who want a safer and more trusted intermediary to help them find their soulmate. Ten dollars a month times even 10 or 20 percent of the number of unmarried adults in the U.S. is an enormous number — and, if the experience is effective, it's a number that will only grow.

- **A way to increase the engagement of existing users** whose eyeballs on the site have value to its core advertising business — as well as a way to revive dormant users with an existing Facebook profile. Ad revenue is what keeps the Facebook revenue engine humming. And if Facebook manages to capture even a sliver of the time that singles spend on dating sites today, adding dating to Facebook has the potential to drive user engagement to new and record levels.

- **A way to monetize intent around the commerce opportunities that dating can unlock.** I wrote earlier in the year that 2018's power brokers are those that can monetize intent and that Facebook as a content distribution platform doesn't really create any intent to buy.

Dating sure does.

Singles looking for a soulmate want things to do on those first, second and third dates. Booking dinner reservations, flights to see a potential Mr. or Ms. Right in another city, arranging for a romantic weekend away, tickets to concerts or sporting events — all viable commerce experiences both on and offline. Leveraging the payments capabilities of digital payments platforms could turn dating into the catalyst for the payments and commerce experiences that Facebook has, to date, failed to ignite.

Despite Facebook's well-publicized data scandal, consumers still trust the platform with their data and remain loyal.

A new Reuters/Ipsos study released yesterday states that half of Facebook

users in the U.S. haven't adjusted their usage at all and that 25 percent of users now use it more — at least right now — muting the 25 percent who say they reduced their engagement or removed their profile entirely from the site.

That trust, provided it holds, will become a helpful tailwind as Facebook makes its move into one of the most trusted activities of all: dating.

That combination — a trusted intermediary with a network of trusted connections — is what made the village matchmaker effective and her skills in demand hundreds of years, even centuries ago.

Facebook is sort of like that village matchmaker today. It's just that its village has 2 billion or so people in it — with potentially a lot more to offer than helping someone find her soulmate.

Bridge Millennials And The Threat To Physical Retail

Sometimes it pays to follow the scent.

Each quarter for about the last 18 months, we've asked 4,000 consumers to tell us why they shopped in the physical store and how the physical store fit into their overall shopping pattern.

Over that time, we examined four retail segments – mass merchants/department stores, grocery, health/beauty and apparel/accessories – and pushed an online survey to those consumers after they made a purchase and left the store.

This work was done with the support of Worldpay and was intended to gain greater clarity into consumers' expectations of an "omnichannel" experience across the digital and physical retail touchpoints. More importantly, we wanted to understand how consumers felt the retailers they shopped measured up.

The story, as we've reported, was that consumers didn't think those retailers were up to snuff.

Less than half of all consumers we studied over that period of time reported being satisfied with how well retailers followed them across physical and digital channels.

The gap was particularly acute when it came to something consumers regarded as a no-brainer in today's mobile/digital world: knowing them and their purchase history regardless of the channel they shopped.

Personalizing the offer and the experience was key, and it was where consumers expressed the most disappointment in today's retail experience. It's why so many consumers are shifting online, and to a small set of retailers led by Amazon and Walmart, to do their shopping.

But something else piqued our curiosity as we looked at tens of thousands of data points – with a hunch that the shopping and spending behaviors of 24-year-olds were very different from 34-year-olds – even though they were both lumped together and labeled "millennials."

That's when we discovered a new demographic cohort: the first real

generation of connected consumer with spending power. We called them Bridge Millennials.

At 30 to 40 years of age, they are younger than Gen X-ers but older than most millennials.

They are affluent and well-educated.

They are settling into more stable careers and are earning more money.

They are spending their money using connected devices to guide their shopping decisions — from the products they buy to the stores at which they shop.

And, in that order.

We believe the Bridge Millennial is the bellwether for how connected commerce will evolve over the next five to 10 years. We also think comprehending their behaviors today is critical for retailers to understand for three reasons.

They are the consumers whose expectations of omnichannel and omnicommerce are the highest.

They are the shoppers whose connected devices are the intermediaries they look to first for what they buy and from whom they buy it.

And they are the cohort of shoppers who are reviving a shopping trend retailers thought they might have left in their rearview mirror: showrooming.

FOLLOW THE SCENT

Our omnichannel work uncovered three consumer shopping personas.

- **The Digital Shopper** — one who characterizes herself as making half or more of her purchases through digital channels. Forty-four percent of Digital Shoppers report having a college degree and a household income of $76,000 a year. At 42, she is the youngest of the three persona groups. As a point of reference, the Census Bureau reports that roughly a third of U.S. adults have a college education.

- **The Any Channel Shopper** — one who characterizes herself as dividing her spend between physical and retail

channels. This group is roughly the same age as the Digital Shopper and reports an annual household income of $70,000 a year. Twenty-two (22) percent report having a college degree.

- **The Brick-and-Mortar Shopper** — one who characterizes herself as conducting half or more of her spend in a physical store. This persona reports an annual household income of $64,000, and 13 percent report having a college degree. This group is two years older than their Digital and Any Channel shopper counterparts.

Individually and collectively, these shopping behaviors tell a slightly different story than what Census Bureau numbers might have us believe.

Fewer than half of all shoppers said the majority of their spend was done exclusively at a physical store.

Most people divided their spend between physical and online channels, and the degree to which they did varied by retail segment. But even in a segment once considered the bastion of physical store purchasing — grocery — shoppers reported using both digital and physical channels.

Forty-one (41) percent of shoppers reported that brick-and-mortar buying dominated their grocery spend. For those of you doing the math at home, that means 59 percent used both digital and physical shopping channels when buying grocery products — think food plus things like paper towels, laundry detergent, garbage bags, etc.

That, I think, is an amazing and remarkable development.

The other surprise, though, was apparel, where only a third of respondents reported doing most of their shopping in a physical store.

There's something else.

As part of our omnichannel study, we asked consumers who just came out of a physical store whether they knew what they wanted to buy before walking into the store to buy it.

In almost every retail segment, the vast majority of consumers said they did — and for one of two reasons: They had either shopped there before and knew what to expect and/or they had consulted their mobile phones or computers first to determine whether that store did have the item or items they wanted to buy before going there.

There was one outlier: apparel.

Sixty-five (65) percent of all shoppers and 68 percent of digital shoppers said they didn't really know what they wanted before walking into a store. Their visit was to inspect and/or to look at the merchandise they found online before making a purchase.

We wanted to know what happened when they got there.

STORES AS SHOWROOMS — REDUX

It's no secret that brick-and-mortar clothing retailers are under intense pressure today.

The consumer's taste in clothing has changed, and that has changed how people shop for clothes.

Business casual Fridays have become all casual and every day. Men and women who once bought "work" clothes and "casual" clothes are now buying casual clothes that do double duty. Athleisure has emerged as a work/casual/workout crossover trend.

That change has made it easier for consumers to buy their clothes online and not spend a lot of money when they buy them. Black yoga pants and fleece hoodies aren't that hard to buy online. They're also a lot cheaper than buying a nice sports jacket, collared shirt and pants or pencil skirt, blouse and blazer. "Restocks" of items like jeans and T-shirts, once people have found what works for them, are also an easy point, click and ship away.

For those with more sartorial tastes, subscription players like Indochino, Bonobos, Trunk Club, Stitch Fix, Rent the Runway and Amazon Fashion — along with fashion-forward eTailers like Revolve and FRWRD — have emerged to make it

easy to buy the latest fashions without spending much (or any) time in a store.

That's put lots of pressure on brick-and-mortar retailers to figure out what's next.

So, in early March, the PYMNTS team conducted a new study of more than 2,000 consumers to understand how they shop and buy clothes — and the role of the physical store in those buying decisions. If more than three-quarters of consumers said they walked into a physical store to look at something before buying it, we wanted to know if they also walked out having made a purchase.

And this time, instead of just asking people to check a box with age ranges that map to Census Bureau-reporting age bands, we asked people to tell us exactly how old they were.

That's when we discovered the power of the Bridge Millennial.

THE BRIDGE TO THE FUTURE OF RETAIL?

When it comes to clothing and accessories, here's the Bridge Millennial punchline:

- **They buy a lot:** Eighteen purchases a year, second only to millennials at 19 purchases a year.

- **They spend a lot:** $2,225 a year, second only to Gen X-ers at $2,367 a year.

- **They prefer debit to credit and PayPal much more than store cards.** Bridge Millennials use debit more than any other shopping cohort when making purchases and credit less than millennials and only a smidge more than Gen X. They use PayPal only slightly less than millennials do — and much more than baby boomers and Gen X. Store cards barely register.

- **They shop using their mobile phones a lot:** Seventeen (17) percent of Bridge Millennials say they use mobile phones to make clothing and accessories purchases — more than millennials at 15.9 percent.

- **They are also the most fickle:** Nearly a third, 30 percent, of Bridge Millennials have switched away from or tried a new merchant in the last 30 days compared to 21 percent for other shopping cohorts.

- **They use stores as showrooms a lot:** Fourteen (14) percent of Bridge Millennials say they use retail stores to look at things but not to buy them, compared to 11 percent for other groups.

- **They like buying online a lot:** Nearly half, 48 percent, of Bridge Millennials report a preference for making their clothing and accessories purchases online compared to 40 percent of other shoppers. A quarter of Bridge Millennials report Amazon as their retailer of preference when they do make purchases of clothing online.

It's not that Bridge Millennials avoid going into the physical store — they do. It's just that they don't always walk out of those stores with a purchase in their hands.

Brick-and-mortar retailers, no doubt, understand this too.

Many are making investments in creating in-store experiences that will appeal to this new generation of shopper: fashion shows, trunk shows, personal appearances by designers and more.

That's not what these Bridge Millennials say they want.

This connected consumer wants technology — and more of it — to make their shopping experiences in the physical store as efficient and easy as buying online. This set of shoppers reports the ability to scan items and/or use kiosks in the store to query product information, inventory availability or check out is what they want.

Personal shoppers in-store? Not really.

Chatbots? Nope.

A personal assistant who is virtual? Yes.

Roughly 5 percent (4.8 percent to be precise) of Bridge Millennials report using a voice assistant when making purchases of clothing and/or deciding what to buy and where to buy it — twice as much as other groups.

Above all, this generation of shopper wants the retailer to know who they are when they walk into the store so services, products and promotions can be tailored to their preferences and reflect past purchases.

And delivered via their mobile devices.

Convenience is what drives the shopping decisions for the Bridge Millennial, followed by having the product they want to buy. Followed by price. Rewards and loyalty schemes are way, way down the list.

WHAT'S NEXT?

There's a glass half full and a glass half empty story here with respect to how physical store retailers should adapt their strategies to serve the Bridge Millennial consumer — at least when it comes to clothes and accessories.

The glass half empty says: game over, physical retailer.

This connected consumer is in charge, and she knows she's the boss.

She doesn't need the physical store to be the intermediary between her and what she wants to buy. For this shopper, physical stores have given way to physical devices like phones and speakers and software and apps that make it easy for her to discover what she wants to buy and then buy it — using one of the three payments methods she likes best; debit, credit or PayPal — on her own terms.

This generation of shopper is opportunistic — using the physical store to inspect the things she's found online. Maybe she'll buy it there and maybe she won't, but that's not up to the store she's standing in to decide. And maybe not even to influence her.

Convenience and product selection is what she craves, and physical retail doesn't really check those boxes for her anymore. Online does, Amazon does increasingly, and that is the standard by which this cohort of shoppers will judge every other retailer they encounter — online and offline.

The glass half full says physical retail still has a shot.

Amazon may be the favorite retailer for 25 percent of Bridge Millennials (against 14 percent of all shoppers), but most consumers say their favorite retailer is a lot of them.

Product selection is important to consumers, and they like to shop with a variety of merchants to get what they want. And, for clothes at least, seeing and touching and trying something on is still important. Thirty-eight (38) percent of Bridge Millennials go to a store and then buy in a store, and that's a start. Using technology to identify and influence those conversion opportunities for this highly connected consumer can turn a visit into a sale and a repeat customer.

What seems clear is that the Bridge Millennial's shopping behaviors and patterns, like her baby boomer parents and Gen X siblings before her, are already well-established. Clothing trends may come and go, but her digital shopping habits seem pretty predictable as more connected devices deliver more opportunities for Bridge Millennials and brands to connect.

And not necessarily in the physical store.

There's no doubt the Bridge Millennial will drive the reinvention of retail — she has the spending power, the appetite to spend money and the interest in shopping a large swath of retailers to do it.

The big question is whether retailers will be as quick to master the technology that's now second nature to this important retail segment.

The **Gig Economy**'s $1.2T Digital Payments Potential

A smart entrepreneur dropped out of college, identified an unmet market need and created an entirely new market segment.

He did it by establishing a platform that matched an underutilized source of supply with a growing demand for services. One of his platform's competitive advantages was the centralized payments platform he created to remove the friction involved in paying suppliers.

The idea took a couple of years and a pivot to get going, but soon, the S-curve kicked into high gear. This entrepreneur's platform grew into a multibillion-dollar global business as measured by annual sales and ignited what is today a half-a-trillion-dollar global industry.

This entrepreneur wasn't one of the familiar big tech giants, even though the storyline is both familiar and similar.

His business was not that high tech — at least not by today's standards.

The entrepreneur was William Russell Kelly, and the platform he created 72 years ago is known today as Kelly Services, the temporary staffing agency once synonymous with temporary office workers known as the "Kelly Girls."

Russell Kelly Office Service, established in 1946, gave birth to the idea of what the modern-day, on-demand gig economy platform would look like — even though no one used that term at the time to describe the model he created. Kelly's company supplied office workers to local businesses, on demand, in need of a temporary workforce — igniting the $480 billion category known today as temporary staffing and workforce management services.

THE DEMAND FOR ON-DEMAND WORK

Fast forward 72 years, and 35 percent of today's workforce participates in what we now call the gig economy, according to the PYMNTS Gig Economy Index published last week, with the support of Hyperwallet. Some sources estimate that gig economy workers could swell to as many as 50 percent of the workforce over the next two years.

That may not be too far off.

Based on the work we've done over the last couple of years, we've seen the percentage of gig worker participation swell too — this quarter by nearly 9 percent year over year. More than 37 percent (37.2) of workers said they receive 40 percent or more of their income from gig economy jobs, accounting for $1.4 trillion of total U.S. personal income in 2018 (I'm getting to the $1.2T in the title of this piece, so hang in there).

For this latest report, we surveyed 10,000 consumers to get a clearer understanding of how the gig economy has evolved over the two years we've been tracking it. We wanted to comprehend the motivations of a gig worker and to gain more clarity about what services they perform and for whom.

What we discovered is, just like the vein William Kelly tapped 72 years ago, the majority of workers who participate in the gig economy, skilled and unskilled, do so because they can make extra money to pay bills (19 percent) or to save for things like an annual family vacation or a kid's wedding (17 percent).

Only 15 percent of all gig workers said gigs were their primary source of income.

Nearly 60 percent of gig workers found their gigs via a digital marketplace. These marketplaces are highly valued by these workers because they provide leads in near real time. Fifty-five (55) percent of gig workers said they used one platform primarily to source those leads. This changed as the nature of the work and skills required became more specialized. In those cases, workers used multiple platforms to source their leads.

Unfortunately, fewer than half — 46 percent — of these gig workers said they were very or extremely satisfied with the services provided by those digital marketplaces.

One of those reasons can be traced back to the problem William Kelly solved 72 years ago that many of today's digital gig economy platforms still haven't cracked: an efficient way to match the real-time nature of the work performed by these gig workers with a more efficient — and even real time — way to be paid.

A GIG PLATFORM PIVOTS — AND CRACKS PAYMENTS

Russell Kelly Office Service opened its doors in 1946, right after the end of World War II. Kelly, the son of a wealthy oil executive who died prematurely in 1928 when Kelly was a college senior, was forced to leave college before graduating to support his mother and six siblings. Over the next 18 or so years, Kelly worked in companies that had embraced business technology — such as it was at that time — and helped them use those new technologies to streamline their businesses.

One of those jobs involved helping the Army solve a mission critical procurement problem during World War II. The Army was facing long delays in getting food to the troops because they couldn't pay their suppliers in a reasonable timeframe. War or no war, payments to suppliers were often months late, so suppliers stopped sending food. Kelly was part of a team that devised a centralized payments platform that got money to suppliers in just eight days, drawing on his experience years earlier working in accounting and supplier payments at the largest grocery store chain, A&P, to save the day.

At the end of war, Kelly was in search of the next big thing. The U.S. economy was booming, and Kelly saw a huge demand for helping local businesses use new technology to operate more efficiently as they grew.

The latest technology at the time was an adding machine called a comptometer and an electric typewriter.

Kelly bought several of each and opened his doors.

At that time, Kelly Services was a "service bureau" where local businesses would drop off the work they needed done and pick it up the next day, completed.

Kelly's workforce consisted of American housewives, many of whom had acquired basic bookkeeping, administrative, typing and organizational skills in secretarial schools. These stay-at-home moms were raising their kids but wanted an opportunity to make extra money, on a part-time basis, while the kids were in school, but only when their schedules

permitted. Kelly tapped into this trained and conscientious workforce to build his business.

It all worked well — until it didn't.

Companies began to realize they needed to invest in the tech that would make their businesses more efficient and competitive — and did, which meant they no longer needed to outsource their work to an off-premise provider with the same technology they now had in their businesses.

What these businesses needed was access to a trained and reliable workforce to keep their businesses moving when there were temporary staffing gaps. That's when Kelly pivoted his business model from one that had the businesses come to him to get their work done to one that sent a trained, on-demand, reliable temporary worker to businesses when their own workers went on vacation, were out sick and/or left the firm.

That's when gig economy 1.0 took off.

These temporary workers, known famously as the Kelly Girls, were sent to offices to perform secretarial and other administrative, accounting and bookkeeping services. Russell Kelly Office Service gave part-time housewives a way to earn money that was otherwise unavailable to them. They welcomed the platform because it gave them the flexibility they wanted and needed while making it easy to find work. In fact, they really didn't have to look hard at all. The work came to them once they passed Kelly's screening criteria.

Businesses welcomed it too.

In Russell Kelly Office Service, they found a reliable source to access trained, vetted and qualified workers — on demand — without any permanent strings attached, or the requirement to train them in basic office skills for a day or a week's worth of work.

Or the hassle involved in paying that temporary workforce.

The company's secret sauce, in addition to its trained, on-demand workforce, was eliminating the hassle of paying them. Kelly billed the businesses for services performed based on timesheets

workers completed and turned in at the end of their assignments, along with a fee. Russell Kelly Office Service paid its workers within seven days of Kelly's regular payroll period — and still do — upon receipt of those timesheets.

Kelly's model soon expanded to other cities using the same formula and ignited other complementary businesses.

Secretarial schools became even more popular in the 1950s and 1960s as women sought to burnish skills they could turn quickly into a reliable stream of temporary work through what would become, in 1966, Kelly Services. Some of those jobs often led to full-time employment at companies following a temporary stint.

THE GIG ECONOMY LONG TAIL: HIGH-TECH TALENT. LOW-TECH PAYMENTS.

Like many platform businesses — digital or otherwise — Kelly Services scaled by going market by market to build a critical mass of skilled workers to satisfy the demand of local businesses with temporary staffing problems. Back then, that was a competent team of administrative professionals with the right skills who could step into any business, at any time, and perform those tasks.

Today, that's increasingly the gig worker with more technical skills — the long tail of the gig economy that consists of skilled and trained web developers, nurses, lab technicians, doctors, engineers, computer scientists, architects, security officers, even CFOs and lawyers who could be living and working anywhere in the world.

Digital platforms and advances in software, communications and other tech make it much easier to create a critical mass of skilled workers to complete ad hoc projects in the event of a staffing shortfall, or to provide highly specialized skills to a business when it wouldn't make economic sense for the business to hire on a full-time basis.

Our Index supports that claim. Fifty-four (54) percent of specialized gig workers were hired not to fill a temporary staffing shortfall but to fill in an organization's current knowledge or skills gap.

What seems lacking is paying this specialized, highly technical, on-demand workforce in a manner befitting the digital payments age.

Overall, fewer than 20 percent of gig workers (18.4 percent) were paid via the digital platforms that source their leads, and for many highly skilled workers, that percent was fewer than 5 percent. With gig workers expected to earn $1.4 trillion in 2018 through gig economy platforms, that leaves roughly $1.2 trillion ($1.14 trillion to be precise) of market potential for these digital marketplaces to digitize — and monetize — payment for those gig jobs.

THE GIG ECONOMY'S $1.2 TRILLION DIGITAL PAYMENTS POTENTIAL

Gig workers told us that, today, they were paid one of four ways: check (40 percent), cash (39 percent), direct deposit (34 percent) or PayPal (32 percent). Prepaid cards, at 11 percent, were used infrequently — in part because gig workers didn't want to be paid that way.

How they were paid depended on who paid them.

Gig workers said when they worked **for SMBs**, they were paid via check (52 percent), PayPal (38 percent) or cash/direct deposit (37 percent).

Enterprise businesses paid their gig workers using direct deposit (45 percent), check (43 percent) and PayPal (40 percent).

Consumers paid gig workers using cash (47 percent), check (41 percent) and PayPal (37 percent).

And with the exception of government and some enterprise businesses, few workers were paid using prepaid/payroll cards.

But here's where it gets interesting.

Eight-four percent (to be precise, 84.3) percent of all gig workers said they would do more gig work if they were paid faster.

This is the 35 percent of the workforce with the capacity to do more and would if payments frictions were eliminated. Remember, they are working another job (or jobs), like doing gig work, because it's a flexible way to supplement their income to pay bills or to save for a special event. These workers earn, on average, as much as 40 percent of their household income this way.

This pay-me-faster, pay-me-better sentiment was relatively consistent across income bands — workers with an annual household income of $150,000 and those with an annual household income of $50,000 were equally interested in being paid on demand and via digital payment methods for the work that came their way through a digital platform.

These are also the people who were paid via check most of the time — thus the interest in being paid faster — but who also reported a 70 percent satisfaction rate with being paid that way. That's orders of magnitude higher than the average consumer who, 96 percent of the time, said they hate getting checks for any kind of payment. Period.

So, why the desire to be paid faster if 70 percent of gig workers said they're happy with getting a check?

If it means getting paid, and the choices that a business offers for payment is check or check, most gig workers will take a check. They're free for them to accept. Checks are also the most ubiquitous form of payment businesses large and small have and use to pay vendors. Gig workers, for most companies, fall into the category of vendor.

As a vendor, gig workers are paid like a vendor via the accounting department — and not the HR/payroll department — and via a procurement process tied to the receipt of an invoice. That invoice triggers an internal process that leads to a payment via a 30-, 45- or 60-day cycle — only after someone at the company has agreed the work was completed to everyone's satisfaction.

Many of the digital platforms that source leads for these more specialized gig workers are set up today to handle digital payouts to credit cards, and maybe PayPal accounts and only if there is a way for a payment to be triggered that way via an invoice that accompanies that payment. Most enterprises aren't set up to pay using a credit card or PayPal and

may not want to be. Gig workers don't want to be paid that way either, especially on invoices that can run several thousands of dollars and where a fee of 3 percent is material to them.

Our study found that 39 percent of gig workers who didn't use digital marketplaces to source leads said the reason they didn't was because of the fear of high fees associated with being part of that platform, including how they're paid.

WHAT'S NEXT

The gig economy may have developed its contemporary label thanks to the rise of Uber, Lyft, on-demand delivery drivers and the digital platforms each of these players created to match supply with real-time demand.

But we suspect it will be the long tail of the gig economy that will increasingly become the tailwind for the gig economy's future growth.

For that to happen, a few things must happen first.

To start: giving buyers access to a marketplace of specialized and vetted talent who can do the job. Russell Kelly Office Service then and Kelly Services today hires workers as Kelly employees after they meet specific requirements. Only then are those workers placed in temporary roles with Kelly's corporate clients that match their skills and availability.

Today's gig marketplaces must do a great job of aggregating the right number and level of skilled workers. They must also do a great job of vetting those they allow on their platform and put in place strict governance measures that includes verified ratings and rankings so companies can be sure the workers they're hiring via those platforms can do the job well.

Then, these digital marketplaces must innovate how payment is made to those workers by creating a model that eliminates the frictions that exist today.

That's particuarly challenging when gig workers perceive that the status quo isn't so bad and that faster often comes with expensive baggage.

To #KillTheCheck in a gig economy world increasingly defined by specialized workers with higher billing rates and invoices that trigger payment, digital platforms must give gig workers a choice over how they want to be paid. That means being open to new business models to support how digital payments can be made above and beyond what is currently on the table today.

The marketplaces that understand that, and the digital payments players that help them close the gap by expanding choice, are well-positioned to cash in on the trillion-dollar-plus opportunity that the gig economy offers today and in the years to come.

Those that don't, might find themselves on the wrong side of that choice, particularly when those who do will use how they pay their workers as their competitive advantage, just like William Russell Kelly did 72 years ago.

Is GDPR EU's **Frankenstein Monster?**

Two hundred years ago, the world was introduced to Dr. Victor Frankenstein.

Mary Shelley's book "Frankenstein" was published in January 1818 and told the story of a genius scientist, Victor Frankenstein, and his work to create the perfect creature from the flesh of corpses.

Frankenstein's creation turned out to be not so perfect. His massive size and looks scared people to death, so he was forced into hiding. That wasn't exactly the lifestyle this so-called perfect creature had in mind, so things deteriorated rather quickly.

The straw that broke the creature's back, in this case, was Frankenstein's refusal to create a female mate for him, out of fear of perpetuating a whole species of incredibly large, strong and not so very attractive-looking creatures who Frankenstein believed could bring great evil into the world.

In a fit of revenge, the creature killed Frankenstein's wife on their wedding night and fled into the darkness. In a fit of rage, Frankenstein went after the creature with the intention to kill him, fell into the Arctic Ocean, got rescued, got sick and ultimately died. The creature, upon discovering the death of his creator, vowed to kill himself, before walking off into the darkness — leaving readers to presume that is what he did.

It was not what we might call a happy ending.

Tragic as it is, the story line is, I'm sure, quite familiar.

What may not be as familiar is its potential relevance to the regulations put in place by the European Union (EU), which forces its idea, from Brussels, of a perfect regulatory environment on the rest of the world.

The actions of the EU over the last several years — the European Commission through decisions and fines and via regulatory fiat in the form of GDPR last week, PSD2 next fall and ePrivacy waiting in the wings — are attempts to create the perfect set of operating rules for businesses, with ample punishments for those who don't comply. This is all done

under the guise of protecting consumers from the actions of companies the regulators have decided aren't in the consumers' best interests.

Thanks to the proliferation of mobile devices, internet connectivity and the platforms that make it easy for businesses and people to find each other regardless of where they live, that's now every business on behalf of every consumer it interacts with anywhere in the world.

ONLY I KNOW WHAT'S BEST FOR CONSUMERS — ALL OF THEM

Frankenstein was written by Shelley to make the point that it's dangerous to have one person think they know what's good for everyone and take action on those beliefs. Her message was those sorts of actions, driven by hubris, will ultimately destroy a person and many of the things they care about.

Frankenstein was motivated to create the world's most perfect creature to improve the state of humankind. He believed that only he was gifted enough to know what perfect should look like and how to create it.

When he did, a chain reaction of unintended consequences was set in motion, and things spiraled out of control — all because the less-than-perfect creature to whom he had given life was suddenly forced to live a less-than-perfect life.

It wasn't until Frankenstein personally felt the impact of the creature's rage and revenge that he realized the serious — and deadly — consequences of his actions, driven by, in Frankenstein's own words, a desire that "far exceeded moderation" and, later, filled his "heart with disgust."

At that point, it was too late to save either the creature or its creator.

EU REGULATORS AND A BACKWARDS VIEW OF WHO'S BEING HARMED

EU regulators have long waved the "what's best for the consumer" flag as part of its many actions against "Big Tech" to create the perfect business framework for the 28 countries operating within it — even if it wasn't always clear that consumers had been harmed or were the ones complaining.

Take Google.

The saga that is Google versus the EU over these last eight years is well-documented, so I'll spare you the lengthy narrative. The Cliff Notes version is that a bunch of tiny websites convinced the Commission that Google's Shopping product put them at a disadvantage when consumers were searching for products. Google Shopping is that carousel of product images that consumers see at the top of Google's search results page and for which marketers pay to be there.

In 2010, the tiny websites making those allegations had some big-time help through Microsoft.

The tiny websites, egged on by Microsoft, managed to convince the Commission in 2010 that Google was manipulating its search algorithms to provide favored placement via Google Shopping — all for the sake of making more money. Tiny merchants without the budget to pay for such a favored position on Google, the claim alleged, never had a shot at getting anyone's attention — and that was a very bad thing for these small sites, since the only other option for search was an otherwise unpopular Bing.

Since European consumers weren't using Bing to search for much of anything, Bing generated little traffic for these smaller sites. And since these smaller sites didn't have enough of a consumer following to generate enough clicks to move up the ranks in Google search, nor the budget to buy ads to drive clicks, they claimed their business was more or less hosed.

That, in the eyes of the EU Commission, harmed consumers.

Arguments over many years to convince regulators that Google's so-called "dominance" was the result of consumers using Google more because they found it to be a better option, and that Google's practices were driven by giving consumers what they wanted, fell on deaf ears.

Arguments that stated limiting the search market to Google and Bing is like saying that grocery store competition is the

domain of Kroger and Stop & Shop were also ignored. Consumers use Facebook and Amazon and vertical aggregators like Houzz and Expedia and others like them increasingly to search for what they need — and are among Google's biggest threats.

In a decision that highlighted that the EU's appreciation of the dynamics of platform businesses and commerce ecosystems is circa 1995, Google was fined $2.7 billion in 2017. EU Commissioner Margrethe Vestager said at the time that their actions were "illegal under EU antitrust rules" and harmed consumers by "denying them choice and the full benefits of innovation."

Of course, it wasn't the consumer that was egging on the Commission.

As they say, the beat goes on.

Yelp re-upped its antitrust complaint last week and took to "60 Minutes" to describe its version of Google's alleged wrongdoings. The media is lapping it up, and everyone is piling on to the idea that Big Tech, especially Google, is doing bad things to hurt — well, you name it.

All this only further fuels the big-equals-bad narrative promulgated by EU regulators who believe that one firm getting big means others gets smaller — which must mean consumers are getting hurt.

In most of the world, that's considered a competitive, free market, where consumers have a lot of choices.

HOW 28 COUNTRIES ENDED UP REGULATING THE WORLD

The latest regulatory salvo to fix all of what Brussels believes is harmful to consumers is GDPR — General Data Protection Regulation — which took effect last Friday, May 25. GDPR now governs how every single business in the world interacts with consumers and uses their data, regardless of where those businesses are domiciled, so long as Europeans are interacting with them.

The regulation, which all of you know quite well from the privacy emails filling up your inboxes, requires companies to provide more transparency over how consumer data is used and protection to keep that data secure. Consumers must acknowledge they understand the new terms of service related to how their data is used, and companies must offer them the right to have their data removed from those databases upon request. Businesses have a month to acknowledge those requests and comply.

Noncompliance is not only expensive; it can destroy a business.

Fines range from $12 million, or 2 percent of annual gross revenue, whichever is greater for lower-level infractions to ~$24 million, or 4 percent of annual gross revenue, whichever is greater for higher-level transgressions.

Surveys of businesses in the U.S. suggest many firms aren't ready — and even those that are ready aren't entirely sure they're fully compliant. It's been estimated that companies have spent millions on efforts to become compliant to a regulation that they claim is vague and overly broad.

For example, consumer requests to be forgotten are more complicated to execute than it may first seem, since consumer data stored one place may also be stored downstream on multiple servers that were given access to that data to enhance their own. It's not clear who's responsible, who's liable and what's required to comply in a timely fashion.

Consumer requests to be forgotten can also be made by bad guys who have taken over the identity of a legitimate consumer after committing fraud. Merchants say they lack clarity about the rules associated with keeping consumer data on hand in the event of a chargeback. Both situations put consumers and relying parties at great risk of being harmed.

At the same time that Brussels is taking a no-nonsense approach to enforcement, many regulators say they lack the tools and the people to do the actual enforcing.

None of this has stopped activists from claiming violations, criticizing the methods businesses use to advise consumers of their rights and slapping big companies with deep pockets with lawsuits.

In what is likely to become a full-time job for lawyers everywhere, the same day GDPR went into effect, Google and

Facebook were hit with lawsuits claiming $8.8 billion in damages, collectively.

That's surely just the tip of the iceberg — we've not even gotten through the first week.

GDPR advocates say the regulation passed in 2016 was necessary to keep consumers from having their data stored, used, monetized and potentially put at risk by companies without their knowledge and consent. They cite the Equifax breach of nearly every adult's personal data in the U.S. last year and Facebook's data issues related to Cambridge Analytica as Exhibits A and B of what happens when companies play fast and loose with consumer data.

GDPR, they say, was prescient in its effort to anticipate and right the inevitable wrongs that can hurt consumers.

Of course, consumers should have the absolute right to expect that their data is kept secure, kept private and is used appropriately. And when it isn't, there should be consequences.

There already are.

Depending on who you are in the ecosystem, those consequences are severe. Card networks write the rules for how business is done using their rails and enforce them. Acquirers can and do shut businesses down if they don't comply, and card networks can and do prevent violators from connecting. A bevy of regulators take a dim view of companies that have proven to mislead consumers and enforce penalties. That's on top of the dozens of regulations and regulators that financial institutions and payments players must comply with to even get and stay in business.

But there's also a difference between a company like Equifax that keeps consumer data that they can't control and that can be used to harm them and platforms that ask consumers to complete a user profile in exchange for getting access to services they want from that platform.

In the case of Equifax, consumers don't have any idea how credit bureau data is obtained nor how it is updated, nor how the black box formulas work that ultimately decide whether they are creditworthy.

They also have no say.

They know that it's hard and time-consuming to correct inaccuracies and that credit bureau information can prevent them from getting a personal loan, a car or a mortgage and even a job. Since the breach, all of that now comes with the extra sting of having that data shared with criminals via the Dark Web and the looming threat that it will be used to harm them.

Consumers do, however, understand quite well the quid pro quo when asked to establish a profile in return for access to a platform or a website and the services they want to receive from them.

They not only willingly do this, they spend a lot of their time on those platforms getting content and services.

In 2016, it was estimated that consumers spent 437 billion hours consuming content from ad-supported media platforms. In exchange for that time, they received value — and continued to use those platforms for that reason.

These ad-supported business models also made it possible for those consumers to access that content free of charge and even to get other benefits, including discounts on purchases and advance access to special deals. Just like the publisher business models in the days of "Mad Men," advertisers pay those platforms for access to those eyeballs. Today, instead of magazines and newspapers, they are digital platforms of all shapes and sizes.

Consumers also don't seem to mind the trade-off that comes with the exchange of information for putting up with advertising and are fully aware of the choices they're making. And consumers are smart enough all on their own to know when they don't get value from those platforms and vote with their thumbs when they don't.

Consumers were given the option to delete their Facebook profiles in the aftermath of the Cambridge Analytica incident, but only 9 percent did. Since then, 65 percent of people say they use the social media platform as much or more than they ever have.

Of course, any business, especially platform businesses operating in a competitive market, know this too and understand the threat to their business if they lose consumers. They fully understand the dynamics of the platforms they have built and that the eyeballs and their revenue streams can easily move to other platforms if the balance of advertising versus content gets out of whack or too many ads interfere with the content consumers want to access.

Most platforms work hard to strike a healthy balance because they don't want to lose those consumers to a competitor that delivers more value.

GDPR'S UNINTENDED CONSEQUENCES — AND HARM TO CONSUMERS

The EU regulators weren't wrong to take steps to ensure that citizens living in the 28 countries in the EU have the appropriate levels of control over the privacy and security of their data. Nor was it wrong to expect that all consumers should be afforded that right and for companies to work hard to make sure they do.

Where they went wrong is imposing their views on how that should happen and a set of regulations that reflect those beliefs on the entire world — in the absence of a clear understanding of how modern, global, digital markets work.

The world is much larger than the 28 countries that make up the EU.

Forcing compliance to their definition of what's best for consumers absent that understanding will trigger a series of unintended consequences.

Some of which we are already seeing.

Some media sites have shut off access to people living in the EU. The risk of noncompliance and the huge fines associated with it aren't worth it for the readership in those countries. Some gaming sites have shut off access to EU citizens too, citing a lack of clarity over acceptable terms and conditions.

So what, you might say, if people living in Germany can't get The LA Times or those living in Spain can't play video games? Big deal. But those consumers used to, and now they don't and maybe they never will,

depending. Regardless, the EU regulators have denied them that choice.

It's also possible that larger companies are having some of the same conversations with their investors and boards.

The cost of doing business in the EU with any business model that uses data as a monetization strategy just rose by $10 million — at a minimum. That buys a lot of people and technology and expansion opportunities in economies with an appetite for innovators and platform innovation, market competition and expansion like India, Africa and LATAM.

Countries that understand that consumers willingly give up their data in exchange for value, which often includes access to services for free or highly discounted fees, will have an advantage.

Startups that use data to monetize and subsidize services to consumers — and many of them do — may think twice about setting up or expanding in the EU. Even if they don't, investors may force their hand, weighing those opportunities with the $10 million overhang they might have to cough up in the event of the slightest infraction.

At the same time, the EU has announced it is seeking investors to fund tech startups to compete with the U.S. and China.

Good luck with that.

So far, GDPR has delivered the ultimate consumer "benefit": friction. Friction in the form of more spam emails than anyone has ever seen flood their inboxes — ever. And friction in the form of the neverending wave of pop-up boxes on websites requesting an acknowledgement of new terms that no one reads because all anyone wants to do is click the "X" in the corner and get on with what they planned to do on that website.

Yet, thanks to EU regulators, all consumers in the entire world are now subject to regulations made by a central government presiding over 28 different countries that collectively represent less than a quarter of the world's purchasing power.

This could mean, in the end, one of two things.

One, that innovation comes to a screeching halt in the EU.

Companies may decide that risk of operating there will outweigh the returns of being there. Speaking out on ePrivacy — GDPR on steroids and potentially the next shoe to drop — a British member of the European Parliament warns that the EU "will become a digital backwater," citing conversations with tech players with concerns about GDPR and outright opposition to the ePrivacy regulations.

If you were an ad-supported startup (like Spotify was when it began) and had to pick a place to commence operations, it's hard imagine you would pick the EU, where the regulations are oppressive. Almost anywhere else in the world would be better.

Or, second, that the EU is left with only the largest of global players to serve the needs of its citizens, which is precisely the type of company EU regulators seem to loathe.

Becoming compliant and staying compliant with vague regulations, plus paying an army of lawyers on standby to fight back against the lawsuits that are certain to pave the GDPR path, can only be supported by gigantic players with gigantic checkbooks. For as long as they are willing to stomach it.

It makes you wonder what would happen if Google and Facebook pulled a Howard Beale (the character in the movie "Network" who decried that he was "mad as hell and not going to take it anymore") and shut off access to consumers in the EU?

Or how much further Big Tech can be pushed before they do.

Whether GDPR is, in fact, EU's Frankenstein, will be determined by how willing regulators are to recognize that their view of perfection should reflect what consumers want by watching what consumers do.

Whether it's already too late — only time will tell.

The Case For **Contextual Commerce**

Before there was on demand, there was time shifting.

In 1985, cable companies introduced consumers to the idea that they could use their VCRs to record movies airing on movie channels late at night when most people weren't watching TV so they could watch them later.

The pitch was convenience: no more getting in the car and schlepping to the video store to rent a VHS to watch a popular movie.

The introduction of the DVR in 1999 made the notion of on-demand television programming easier, more accessible and more robust.

Consumers were no longer bound to the content tied to a network programming schedule or the selection offered by a particular TV or movie channel. DVRs gave consumers free rein to record any show broadcast on any channel at its usual time to watch later.

This innovation ushered in a sea change for consumers, content producers and content distributors.

By 2012, only 64 percent of consumers reported watching primetime television "live" – down from 83 percent just four years earlier. Millennials loved it even more: Only 57 percent reported watching primetime TV live that year, opting instead to watch prerecorded and/or streaming video or to play video games.

Time shifting was a win for content producers too, who no longer had to bank, literally, on having enough eyeballs tuned in at 8:00pm to watch their show. Not only did this on-demand programming option add a measure of convenience for the consumer, it also expanded the potential audience for shows and, ironically, the time people spent watching television by three hours a week.

Since then, mobile devices connected to the internet have further piqued the consumer's penchant for using technology to consume television and movie programming according to a schedule that fits into their busy lives, instead of one made by broadcast executives.

In 2017, Pew reported that more than a quarter (28 percent) of all U.S. adults

said they mostly get television and movie content from streaming services — Netflix and Hulu — and consume it mostly using mobile devices. That's nearly two-thirds (61 percent) for 18- to 29-year-olds and more than a third (37 percent) for those aged 30 to 49.

MARCHING TO THE BEAT OF "CONSUMER TIME"

In the three-plus decades since consumers were first introduced to a technology that gave them the power to control when and how they access content, innovators have been inspired to use connected devices, new technologies, software and data to power a world now driven by delivering convenience to the consumer.

A consumer who wants a ride now can open Uber or Lyft and get one.

A consumer who wants to read a book now can open Amazon and get it in one click on their Kindle, or listen to it via Audible books.

A consumer who wants dinner delivered now can open DoorDash, pick a favorite restaurant and have the food delivered to their home 30 minutes later.

A consumer who wants a new outfit for a hot date tomorrow night can use Nordstrom's app or mobile site now, pick it out, put it on reserve, go to the store the next day, try it on and walk out wearing it.

Companies understand that having a meaningful and long-standing relationship with consumers means running their business on "consumer time."

Today that means being anywhere on the web the consumer might be when they're looking to buy something a brand has to sell and getting it to the consumer right now, or at least pretty soon.

It's why the next evolution of "on demand" will see innovators enable commerce at a time that's convenient to the consumer, inside new places that are too.

The buzzword for this wave of commerce innovation is contextual commerce.

FROM TIME SHIFTING TO PLACE SHIFTING

Introducing new commerce opportunities to consumers inside the ecosystems they're visiting for other reasons is valuable because those contextual prompts can deliver new, often incremental, sales.

Booking a dinner reservation on Airbnb at a restaurant a consumer might never have found near the house they just rented on that site.

Buying a lookalike of the pink dress Meghan Markle wore to Prince Charles' birthday party after reading a story about it in People magazine from a brand that was unfamiliar to them.

Buying a pair of shoes from a store that a friend shared on Facebook that they'd seen but never tried.

Booking a massage at a nearby spa with great reviews discovered on Google Maps after searching for a place "nearby" with availability.

Whether purchases inside an ecosystem are prompted by the recommendation of a friend or a fashion influencer, or via a vertical aggregator they trust and may have used before, consumers who make purchases this way value it for its convenience, for being able to buy something without leaving a site to do it and for the ability to buy what they want while things are still fresh in their minds.

And because they trust it — and like the experience they have when they make purchases that way.

These are among the findings we uncovered when we asked 2,000 consumers to tell us about their experiences over the last 12 months when making purchases outside the more conventional commerce channels, like retailer sites or traditional commerce marketplaces like Amazon and eBay.

This work, done in collaboration with Braintree, gave us new insight into why and where consumers made such purchases, and what kept them buying — or not.

SHOPPING IN CONTEXT IS HOW CONSUMERS LIKE TO BUY

We were surprised to find that in the overall evolution of commerce-enabling ecosystems that weren't initially set up to power commerce so many consumers have already used them. Fifty-eight (58) percent of consumers said they had, and 84 percent of them were so satisfied they said they'd do it again.

We also discovered that there were five contextual commerce consumer personas, defined largely by how much they spent and how often they shopped this way:

- **One and Done:** the 9.4 percent of consumers who made a single contextual purchase but don't plan to make any more. They're aged 40 to 45, employed, with annual incomes averaging $53,000.

- **Regulars:** the 25.4 percent of consumers who were about the same age as the One and Done consumers but who earned $66,000 annually on average. This group made between one and five contextual purchases over a 12-month period.

- **Evolving:** the 11 percent of consumers who were younger (25–34), earned upwards of $100,000 a year and made between six and 10 such purchases a year, spending more than $50 each time they shopped that way over a 12-month period.

- **Committed:** the 12.4 percent of consumers who also earned at least $100,000, who made between 10 and 12 purchases a year and spent more than $50 each time they did.

- **Observers:** the 41.8 percent of mostly older consumers who've yet to give it a try.

Even more surprising was how diverse those contextual commerce experiences were: Only a quarter of those consumers said they made such a purchase inside the social media platforms like Facebook or Instagram that have become almost synonymous with this concept.

That's not surprising.

Facebook, hands down, is the way in which most consumers have experienced such a purchase — with more than one-third (37.5 percent) of consumers saying they've bought something from their Facebook News Feed. Facebook, and Instagram, is clearly the gateway, if you will, for many of the consumer's contextual commerce experiences.

But that's not where the richest contextual commerce vein is to be tapped.

That belongs to the vertical aggregators and ecosystems like Houzz, Yelp, SkyScanner, Vivid Seats, blogs, Spotify and many other ecosystems that help consumers both discover and purchase items when they're already there. That also often leads to more expensive purchases — a hotel room for a week, two front row concert tickets, dinner for two, a new kitchen table and chairs, band and concert memorabilia, etc.

As consumers reported an increase in the frequency of their contextual commerce experiences, the percent of those purchases done via Facebook decreased as the use of these aggregator ecosystems became more relevant.

Committed users averaged 15.6 purchases a year, spending $56 each time they did, with only 9 percent of those users saying they made a purchase via Facebook one time and the remaining on other contextual platforms.

Evolving users averaged seven purchases, spending $53 each time they did, with only 17 percent of those users saying they made a purchase on Facebook one time, with the remaining on other contextual platforms.

The One and Done users reported spending an average of $43 on that first visit, with 34 percent of those users reporting they made one purchase via Facebook.

This suggests that before there is commerce to be had in these ecosystems, there first needs to be the right context.

Facebook may be the place where billions of consumers still spend a lot of their time every day, but it's not — yet — the place consumers use to find and buy things on a regular basis.

WHY CONTEXT MATTERS

Commerce in context is a new commerce channel for brands and payments players because it offers consumers much more than simply making a purchase online.

Commerce enabling new paths to purchase is the next evolution of commerce — one that satisfies another requirement of today's on-demand consumers: finding something they want to buy fast and free of friction while they're doing something else.

It's perhaps one of the reasons why Reserve with Google reports getting traction and the small businesses that are using it say they are getting thousands of new customers to book reservations since they've signed on. Thirty percent of mobile searches reference location, and more than a quarter of the 76 percent of all searches for "something nearby" result in a sale within a day of the search. Reserve with Google is helping those businesses turn that context into commerce.

And why Houzz, with its 40 million-plus active monthly users, has a market valuation of $4 billion-plus — equal to Yelp's but with half as many active monthly users. Houzz is helping consumers find home furnishings and locate suppliers in the context of a home decorating or remodeling project — and turning that context into commerce.

The demand for commerce to happen outside the more conventional commerce channels consumers may already use but inside an ecosystem they know and trust is driven by convenience and the chance to discover new products or services they hadn't specifically set out to buy. Turning those contextual discoveries into actionable commerce opportunities gives brands a new way to capture a sale along the consumer's very dynamic, and often unpredictable, path to purchase.

Context is what makes these commerce opportunities powerful and important for brands and the ecosystems powering the commerce opportunities for them. Connected devices help everyone connect those dots.

Amazon: QSRs' Big Threat Or Essential Lifeline?

The restaurant industry today is a study in contradictions.

Census data tells us that roughly 44 percent of what consumers spend on food comes from restaurants, rather than groceries for home.

Yet NPD reports that 49 percent of all dinners purchased from restaurants are now eaten at home.

In 2017, the restaurant sector, overall, grew 4.3 percent over 2016 — its eighth consecutive year of growth. Experts predict that 2018 will be another year of growth.

Yet, these same industry analysts report that foot traffic is down 2.5 percent across the board so far this year, and, with the exception of fast casual, so are same-store sales. Profits are reported down too. Some of that decline in foot traffic and profits is attributed to quick-service restaurants (QSRs) and fast-casual chains opening more stores, foot traffic being diverted to other locations and the costs related to expansion.

But that's not a reason to think that all is well in restaurant land.

WHAT'S REALLY DRIVING RESTAURANT GROWTH?

What's keeping the industry — across the board — afloat is bigger restaurant checks, up nearly 3 percent over last year. But those bigger tickets aren't because people are ordering more things when they eat out; it's just more expensive to order from the menu.

Restaurants are raising prices to cover rising costs, including labor and delivery aggregators. Analysts say that if not for the bigger tickets, the restaurant category overall would show no growth in the decade following the Great Recession.

QSRs are the restaurant industry's poster children for feeling the pinch from all sides.

This segment accounts for 57 percent of foot traffic across all restaurant segments, and QSRs have always been the consumer's "go-to" for good food served fast. Convenience, price and food quality are the QSR's main selling points.

Yet, consumer eating preferences are changing — so are the times of the day that consumers now eat their meals.

And so is how consumers think about convenience and their food choices.

HOW DO YOU SPELL CONVENIENCE?

Consumers want to eat breakfast food at 12:30pm, not 8:30am; snacks or smoothies at 3:00pm instead of a more traditional lunch; bowls and smoothies instead of a sandwich or a salad during the typical lunch hour and dinner at 7:30pm or 8:00pm.

QSRs with more traditional menu offerings set times during which they offer those items, and set store hours struggle to keep pace. QSRs also aren't the only choices consumers have today for a quick, convenient, affordable and quality meal.

In 2017, prepared foods and meal kits sold in grocery stores accounted for $35 billion in sales and are expected to grow at a rate 5x that of traditional restaurants, according to NPD. Meal kit options and prepared food selections in grocery stores are expanding to get feet into the grocery store and up the number of visits they make each week from 1.3 to something more.

Convenience stores, focused on reclaiming the convenience mantle they say they were created to fill, are upping their game to get in on the higher-quality prepared foods and meal kit action too.

Not only are the prices of these prepared food and meal kit options comparable to QSRs and fast-casual chains, but consumers can buy and take away food they can heat up or spend minimal time preparing at home to eat with the kids or while watching Netflix.

Remote workers, who used to walk or drive to the nearest QSR to get lunch when they weren't remote, now walk to their refrigerators instead to eat leftovers or the prepared food they picked up the evening before or just had delivered.

NAVIGATING THE SHIFT

QSRs and fast casual restaurants recognize these shifts and are making an effort to respond.

Taco Bell made news when it expanded its hours and menu options to meet the food cravings of the 3:00am to 4:00am crowd, with great success.

At the same time that consumers have decided they want to eat breakfast all day, IHOb shifted its focus to highlight burgers and other "fast casual-esque" menu options for consumers in search of a quick dinner on the way home. IHOb also allows consumers to order ahead from its app so they can walk in and sit down to eat without waiting to be seated and/or to get their food once seated.

That option is something the Applebee's VP of strategy told us he and his team are exploring too — and for the same reason.

Technology is playing a huge part in helping QSRs bridge the digital consumer expectation gap.

ARE QSRS INNOVATION-READY?

Our work with cloud-based POS provider Bypass and Bank of America Merchant Services in analyzing the QSR sector each quarter also reflects an increased emphasis by this sector on using new tech to innovate and remain competitive.

This work, the Restaurant Readiness Index, examines a random selection of 178 QSRs and feeds more than 100 features available at those establishments online or via mobile apps into our statistical models to create an "innovation readiness" metric for each establishment and the sample overall.

Of the more than 100 features we examine to produce the Restaurant Readiness Index, we pay particular attention to the 15 that account for 80 percent of the Index metric value — and, therefore, help to hone in on what makes a QSR innovation-ready or not.

That Index score serves as a benchmark across the establishments we track and helps us identify and analyze trends and patterns. As part of this study, we use eight of the leading QSRs — the big names, including McDonald's, Taco Bell, Starbucks, Dunkin' Donuts — as our control group to add additional context to the benchmarking exercise. The Index score goes from 0 to 100, with higher scores indicating greater readiness.

Our latest report shows a few bright spots, a disturbing trend and another contradiction that could potentially spell trouble.

Let's start with some good news.

THE GOOD NEWS: QSRS ARE FOCUSED ON MAKING IN-STORE BETTER

The bright spot is that QSRs are doing more to make their in-store experiences more expedient and cost-effective.

We've seen an uptick in the installation and use of kiosks to make the in-store ordering process more efficient and, frankly, in effort to contain labor costs. EMV, QR codes and contactless payments all showed an uptick in adoption to keep lines moving, support digital payments schemes and keep fraud in check.

The adoption of cloud-based point-of-sale systems — 61 percent of our sample have them — provide establishments with a greater range of payments and commerce opportunities, even if they don't have all those options in place today, including two of the features that are also important measures of innovation readiness: the ability to create and promote in-store offers and deals and update inventory in real time.

THE BAD NEWS: QSRS ARE PUTTING IN-STORE AHEAD OF DIGITAL

Now, the disturbing trend.

When it comes to delivering the experiences consumers now use to do their own benchmarking of an acceptable QSR service experience, supporting order ahead, dynamic inventory status, beacon technologies and digital wallets are much more important than efforts to offer in-store promotions or displaying static inventory.

QSRs are local businesses, even if they are part of a national or global chain. As local establishments, QSRs have always defined convenience as being a short walk or drive away for a consumer to get good food, fast and cheap, and they do everything they can to improve that in-store experience.

That's a bit like Nero fiddling while Rome burns.

QSRs are doubling down on improving their in-store experiences while those consumers are using digital methods to minimize the time they spend there, if they even venture inside at all.

What our Index shows this quarter — and last quarter too — is that many QSRs remain focused on how consumers interact with them in the store and organize their in-store processes to support that in-store service model.

That's coming at the expense of doubling down on the digital features that can improve a QSR's ability to remain attractive to a consumer with other options to find good food conveniently: including grocery and convenience stores.

THE QSR DIGITAL DISCONNECT

Our Index benchmark this quarter reflects this disconnect: a low score of 38.7 out of 100 across our entire sample, which reflects a slight, but only very slight, improvement over the 38.0 score we saw last quarter.

Top performers did better — but not a whole lot better — averaging 58.1. Bottom performers averaged 17 out of 100, and firms with fewer than 26 establishments were among the worst performers. Those with 26 to 50 performers were among the most improved but still sub-50, with an Index score of 44.

That disconnect puts most QSRs out of step with how consumers define convenience today and expect the QSR establishment to respond.

Convenience now means meeting consumers in the digital environments they use to order their food. Maybe that's still walking into a favorite establishment to place an order and maybe even using a kiosk to do that. Maybe that's also even sitting down in that establishment to eat that food.

But, increasingly, that's ordering ahead to skip the wait — walking in or driving through to pick up food to eat back at home or at the office.

And ordering ahead from their cars using connected devices they bring with them or have available via their car

dashboard. Our Digital Drive study of 2,000 consumers, published in January, reported that $212 billion of commerce is done while consumers commute to and from work, with $66 billion in food and coffee orders alone.

Or ordering from an aggregator that can bring food to where it's convenient for the consumer to eat it.

That creates a rather material dilemma for QSRs: how to go digital in a way that preserves the customer relationship, their brand and their business.

CAN MOBILE PAYMENTS HELP?

The default answer is often a mobile app, and, for larger players, that can make sense. But unless a QSR is one of the big brands with consumer scale, the prospects of a consumer downloading an app once, much less using it beyond that first interaction, is very likely slim and none.

Most QSRs recognize this too — with only a little more than a third of our sample having a branded mobile app.

Then there are the delivery aggregators — Grubhub, Uber Eats, DoorDash, Postmates and others like them — that give these local QSRs a chance to be discovered by consumers looking for the convenience of delivery. This quarter, we observed a more than 5 percent increase in the number of establishments that have opted into a third-party aggregator for that reason.

That decision comes with a downside — actually, two of them.

The first is the risk that loyalty and affinity move away from the establishment to the delivery aggregator, while the blame for service quality remains with the establishment.

Meals prepared by the establishment are delivered by people wearing shirts and carrying bags with the delivery aggregators' logos on them. But if the food is sloshed around, cold or missing something that the aggregator forgot to put in the bag, it's the establishment that gets the blame.

All that said, it's the only option most QSRs have to deliver food at scale.

The second is the complexity and expense of managing delivery aggregators. Managing multiple iPads across multiple service providers is a process and a management challenge, not to mention an expensive service for the restaurant to support.

Many restaurants have reported that aggregators have become the new "Groupon" — they lead to an increase in the volume of unprofitable orders but don't produce a loyal following. And, with it, a degradation in the service quality directed to their regular customers.

Of course, there are ways to use aggregators to make the brand connection and lessen restaurants' dependency on them as the channel to the consumer. Integrating sign-ups to a QSR's website for email promotion or loyalty programs are among the ways that some in our sample attempt to mitigate that risk.

At the same time, aggregators, who themselves are awash in red ink, are exploring new service models to improve their margins by competing against QSRs and the broader restaurant segment.

Warehouses are being turned into ghost or cloud kitchens that delivery aggregators are using to reduce and/or eliminate the dependencies on the restaurant middleman. Participating food operators have the chance to operate delivery-only "restaurants" cheaper than it costs to open a restaurant and see it as a potential win-win.

Time will tell.

Others are exploring options to leverage their expertise in logistics and delivery using a model that gives the restaurant brand more of a consumer presence by white-labeling their services. We observed this quarter across our own sample that many cloud-based QSRs are exploring options to integrate with those who provide such an alternative.

All of this, for me at least, offers an observation and raises a bigger question.

The future of QSRs will rest with their ability to embrace digital and scale; even the largest players are too small to be in all of the channels and ecosystems that consumers will use increasingly to find and order from them.

CONVENIENCE — AT SCALE

Digital payments will be a key enabler to that experience but so will aggregators and ecosystems that can reach a critical mass of consumers — and manage the logistics associated with order, payment and fulfillment.

Many have tried, but few have managed to achieve that scale.

Platforms that have tried to aggregate local restaurants run into headwinds of getting enough consumers interested in a steady stream of QSRs — and vice versa — and solve the logistics conundrum.

Aggregators have a density of consumers and can solve the logistics challenges but haven't figured out how to make delivery alone a profitable business. Their path to profitability is to explore ways to disrupt the segment by disintermediating the restaurant entirely through delivery-only restaurant concepts.

There is one player, though, who checks all three boxes and even offers consumers a complete portfolio of convenient food options.

THE AMAZON EFFECT ON QSRS

Amazon.

Amazon Pay Places, through a partnership with Clover, allows select QSRs running the Clover POS system to offer consumers order-ahead capabilities from their online menus — using their Amazon Pay account to place and pay for the order.

Amazon Restaurants, through a partnership with Olo, gives consumers in selected geographies the chance to order from 200 or more restaurants and have their food delivered using Amazon's Prime Now services — also ordered and paid for using the consumer's Amazon Pay account.

Amazon has also launched its own line of meal kits and, with the acquisition of Whole Foods, has expanded the consumer's options for the convenient online ordering, delivery and pickup of a range of prepared foods — from meal kits to prepared foods.

Today, consumers in the markets Amazon serves can order ahead for pickup from a local QSR, order ahead for delivery from some the largest QSRs and fast-casual chains and order ahead from a selection of prepared foods at Whole Foods and have it delivered to their front door or pick it up from Whole Foods on the way home. Even using Alexa.

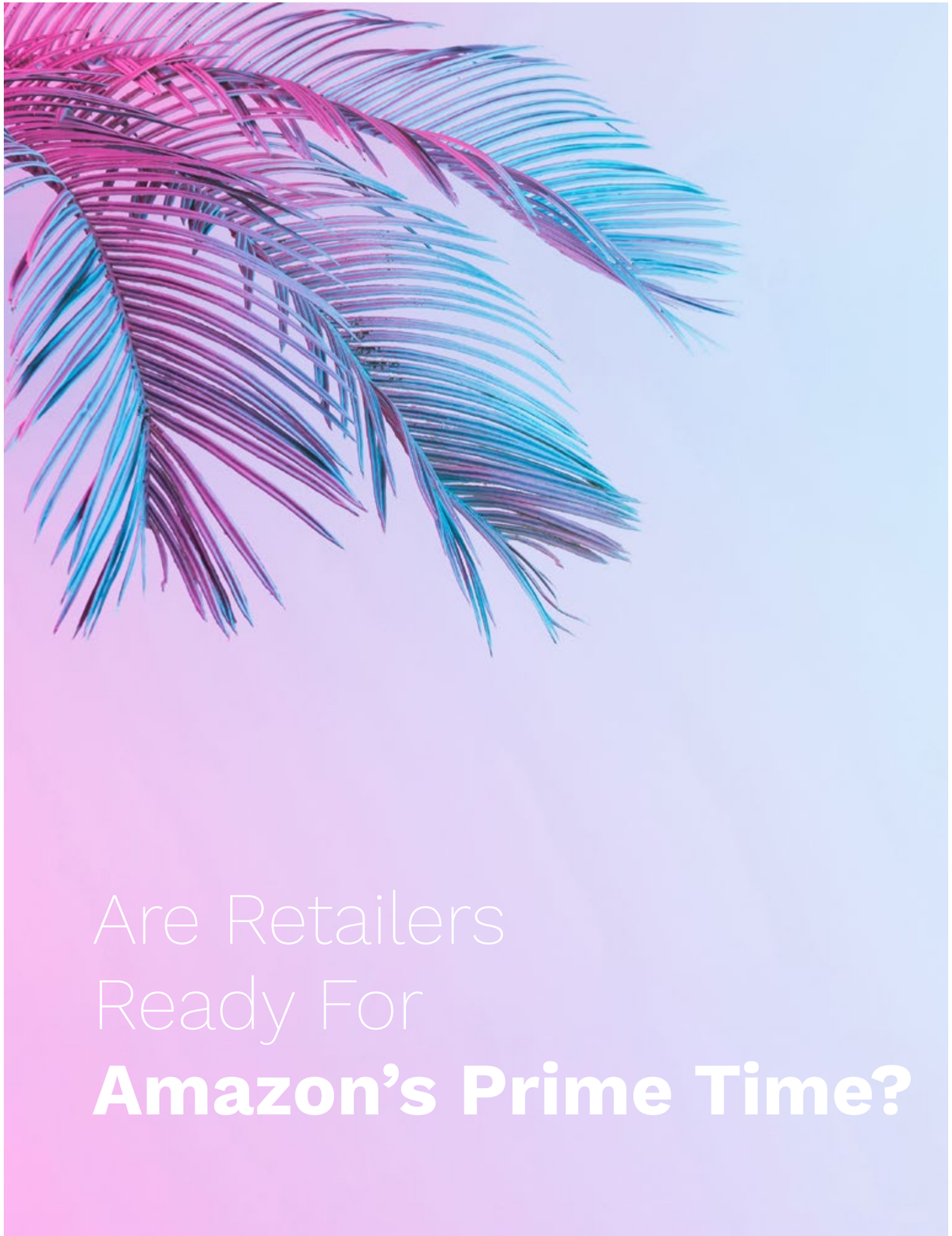
The question is whether Amazon can and will go local — really local — and create with QSRs the same kind of third-party marketplace for food services that it has created for other products that it sells on its platform.

Amazon has the digital assets to do it and the logistics expertise to bridge the digital order with the physical requirement for delivery.

Food also checks the Jeff Bezos box of something that everyone needs to buy, giving Amazon the chance to expand the share of consumer spend it now has on food by blurring the lines between food eaten out and food eaten at home — options already aggregated within the Amazon platform and enabled via Amazon Pay.

QSRs now face the same dilemma as other small retailers: work with Amazon or compete with Amazon.

Neither solution may go down very well.



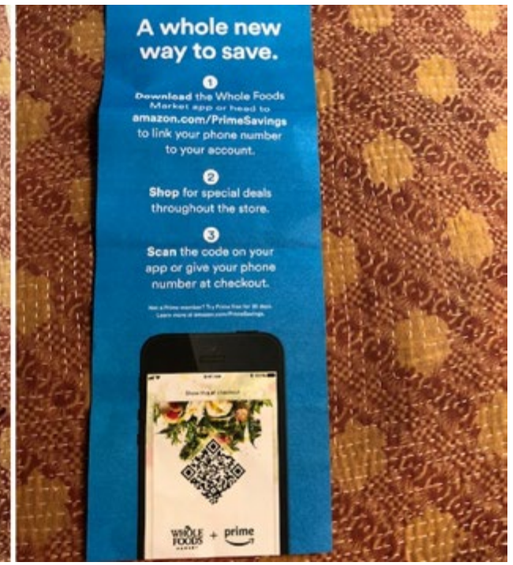
Are Retailers Ready For **Amazon's Prime Time?**

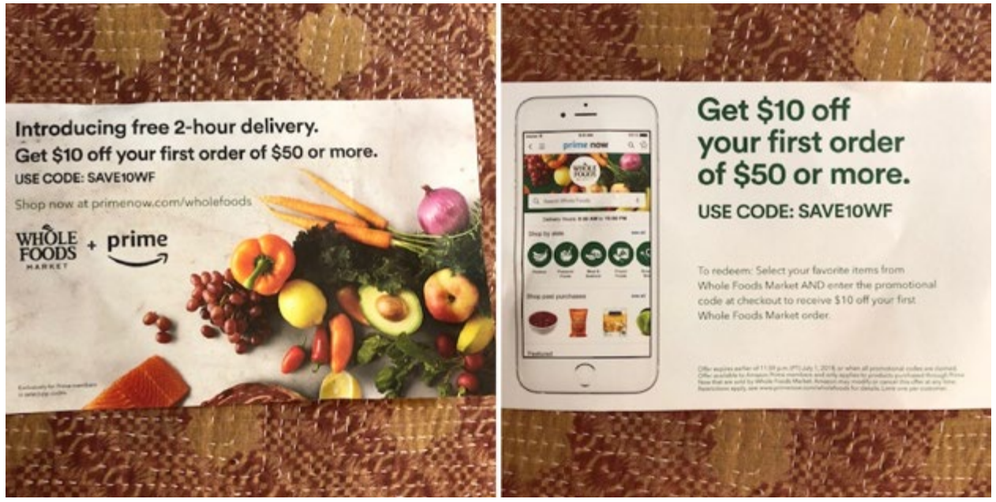
My plan on Friday evening was to write a hard-hitting piece on a services segment with incredible marketplace friction. Then I went to Whole Foods on the North Shore of Boston Saturday morning to do some grocery shopping.

There, right inside the front door, was a nice, young Whole Foods team member, who let me know that the store would soon be offering special discounts to Amazon Prime members who shopped there. He then asked if I would like information about how to become an Amazon Prime member so that I could take advantage of those deals.

When I told him I was already a Prime member, he said, "awesome," and handed me two pieces of paper.

One had instructions for how to identify savings in the store, which he said would vary from week to week, and then how to link my existing Amazon Prime account to get those savings applied at checkout (which is automatic and done via QR code à la Walmart Pay).





Another had an offer with a promo code to get $10 off my first online order, which would be delivered free to my front door in two hours or less once I linked my Prime account to Whole Foods.

PYMNTS has been tracking the impact of the Amazon/Whole Foods acquisition on the grocery store sector since the day it happened, including this latest Whole Foods plus Prime Member Deals program strategy.

I've been writing about the impact Amazon would have on the consumer's grocery shopping journey and disruption to the grocery segment since Amazon introduced Dash buttons in March of 2015.

But there's nothing like experiencing the onboarding experience live, firsthand — and just like any other consumer filing into the store on a Saturday morning to buy stuff for the weekend — to understand the impact.

It's why I am now convinced that Amazon and Whole Foods — and the launch of these Prime Member Deals at Whole Foods — isn't only about converting Whole Foods shoppers into Amazon Prime customers.

It's about creating the flywheel for the physical store version of the Amazon marketplace.

PRIME TIME AT THE GROCERY STORE

I've been a Whole Foods shopper since I moved to Boston 17 years ago for the same reasons that each of you may be too: organic meat, seafood, produce and foods, great bread and cheese and a fun vibe. Grocery shopping is a chore any way you cut it, but there's nothing like contemplating which eggplants look the best with Motown tunes playing in the background as inspiration, not to mention free sample munchies all over the place.

But beautiful produce, nibbles and cool playlists aside, over the course of those 17 years I've shopped at Whole Foods, I never downloaded their app.

The app offered little value and isn't rated very highly in the App Store. More than anything, I didn't need yet another useless app taking up space on my home screen.

What a difference a day makes, as the song goes.

PRIMING THE PUMP FOR CONVENIENCE

Since Saturday, the Whole Foods app has found a new place on my home screen, even though to get the Prime discounts, I didn't have to download it. The Amazon Prime program at Whole Foods also works by linking a mobile number presented at checkout.

As one of the 90 million U.S. consumers who is already an Amazon Prime member, I know the value of a Prime membership, the convenience of the Amazon Pay checkout experience and the ability to get what I order on the same day, the next day or within two days when I order from Amazon.

As a long-time Whole Foods customer, I know, like and trust the Whole Foods brand and the quality of the products they carry in-store.

Asking me to link my (known value) Prime membership account to a store that I also already shop a lot (known value) didn't seem much of a stretch. Particularly when that ask gives me new deals at a store I already shop and free two-hour

delivery when an order is placed online on top of what I already get.

Along with the promise of much more.

I expect that once the program swings into full gear, the products I buy regularly in the store — and order online — will be used to build my in-app shopping list, with specials and deals noted as a way to drive preference or even introduce me to new brands.

Those items may even be linked to new recipes that I might like to try with the ingredients needed to make them added to the list. Amazon has done deals with recipe aggregators Yummly and Allrecipes, so that's not that much of a stretch.

On top of Prime Deals, brands will be able to offer me deals to select their brands over others with special coupons and offers too, just like they do today online at Amazon Pantry.

Maybe I will even get to learn more about some the local, third-party suppliers that have their food in the store to further establish my affinity and brand preference for a store that supports local producers.

I'm sure I'll be able to ask Alexa to add things to my list, including having her place an order to Whole Foods and have it delivered, free, two hours later — so I don't even have to go to Whole Foods to shop when it's raining or snowing or when I don't have time to make a trip. I'll be OK doing that too, since I know enough about the quality of the products to trust that they will pick out good stuff and send it home.

That is, items from the list minus the ones that I buy often enough — olive oil, spices, condiments, paper towels — that Whole Foods will prompt me to set up on auto-refill – a product-by-product subscription service with products sent to me at the appropriate frequency. There will be no need to add those items to the list for me to remember to pick up at the store; Whole Foods and Amazon will do the remembering for me and make sure that when I purchase them, I am buying them from Whole Foods.

If Whole Foods could only send a cook home to prepare it all…

I am only half kidding.

Amazon Pro Services is a marketplace of local home services providers, so let's see how long it takes to find chef services emerging to take the notion of meal kits and prepared foods to a new level.

All tied to Prime membership and Amazon Pay.

Until then, there's Whole Foods and the massive amount of floor space it's now giving to prepared foods and meal kits — and free two-hour delivery — to tide me and the rest of Whole Foods plus Prime shoppers over.

PRIMING THE PUMP FOR WHOLE FOODS SHOPPERS

I'm one of the 60 percent of Whole Foods shoppers who are also Prime members, so that nice young man at the store entrance didn't score a new Prime member for Amazon.

His initial approach though — asking me to sign up for a Prime membership — is proof that the Whole Foods plus Prime program is as much about turning the small percentage of existing Whole Foods shoppers into Prime customers as it is to shifting more grocery spend of the Amazon Prime/Whole Foods customer to their channels.

Prime member-only deals and free two-hour delivery, with $10 off the first order of $50 or more, is the opening salvo and an important appeal to a Whole Foods customer who may allocate only a small amount of grocery spend to that store.

Before the Amazon acquisition, Whole Foods as the "Whole Paycheck" grocery store option was a label it earned the old-fashioned way — because they deserved it.

As all organic, all the time, Whole Foods was among the most expensive grocery stores to shop, with SKUs that didn't include many of the brands that many grocery shoppers liked to buy. That forced shoppers to divide their spend and their time among several stores, adding to the friction of an otherwise friction-filled and time-consuming grocery shopping experience.

In response, grocery shoppers also began shifting spend online to buy things easily purchased that way too: bulky items like paper towels and cleaning supplies and other staples. And their spend to other stores that offered consumers all options — organic foods, name brands and their own private label brands — at cheaper prices.

The PYMNTS Omnicommerce study of 4,000 consumers quarterly on grocery shopping bore that out, reporting that 55 percent of all grocery store shoppers divide their grocery spend between physical and digital channels, and that product and price were the reasons people selected the stores they shopped.

Of the 41 percent of consumers who we reported still concentrate their grocery spend predominantly online, more than a third of those physical shoppers (37 percent of the 41 percent) visit multiple stores in search of "deals" and products not found at their main "go-to" store — and two-thirds of millennials do.

Whole Foods, therefore, needed more than great-looking eggplants, free samples and inspiring playlists to bring people into its stores and allocate a chunk of their grocery store spend shopping there.

It's something the Amazon acquisition of Whole Foods has helped to deliver.

Since the acquisition, Whole Foods has adjusted its prices, while expanding its selection of prepared foods to get more feet into its stores and more shoppers buying. Installing Amazon Lockers at Whole Foods, it's said, has helped to steer more feet in its direction too.

Analysts report that Whole Foods sales have risen 34 percent month over month since the acquisition, and the number of new customers has increased 27 percent over that same period.

Sales per customer in the physical store are down 1 percent — the result of discounting prices to get shoppers in the store.

At the same time, sales of Whole Foods' private label 365 brand are growing online.

Studies report that Whole Foods' private label 365 brand is now the No. 2 private label brand sold by Amazon, a business that analysts project to soon equal the entirety of Macy's revenue, at $25 billion in annual private label sales by the end of 2022.

Whole Foods, Whole Paycheck, may take on an entirely new meaning now.

PRIMING THE AMAZON PRIME PUMP

I am also a shopper who didn't take advantage of Whole Foods' loyalty program when it had one, even though I shopped at Whole Foods and grocery store loyalty programs are mainstay customer acquisition and retention tools. It's not clear how many other Whole Foods shoppers did either, and it wasn't always clear as a shopper how meaningful the rewards were and whether signing up was worth the effort.

This ask, this time, is different.

The guy at the front door wasn't asking me to opt into a Whole Foods loyalty app but a bundle of benefits offered by Amazon Prime — that also happened to include free two-hour delivery on groceries and deals on products sold at Whole Foods.

Those deals are part of something much bigger and much broader than Whole Foods, including access to a library of streaming content that now rivals Netflix for the quality of its original programming, as well as free delivery on items purchased on Amazon.

Putting pen to paper, it's like getting the entire $119 Amazon Prime membership for free, if someone orders more than one grocery delivery a month and wants it delivered in two hours or less. The Whole Foods sign-up inducement of $10 off a grocery purchase of $50 or more brings the annual fee to $109, or $9.00 a month.

It's why I think that Whole Foods plus Prime is just the first in a series of online/physical store mashups that will use Prime as a lever to get consumers to download a store app and/or link their Prime membership to that store to get special deals and two-hour delivery of products.

In a world where consumers now download zero apps, local stores plus Prime could help those merchants get more out of their branded apps and rewards and loyalty programs than other third parties and certainly their own efforts could deliver.

Even the positioning — Prime and Prime Member Deals — is a subtle signal that Amazon would like, at least in this case, for the positioning of the program to be wrapped around Prime, not Amazon. The only reference that the program logo has to Amazon is the Amazon arrow that, in this case, goes from the "P" in Prime to the e at the end.

PRIMING THE LOCAL MARKETPLACE

I am also a shopper, like most, who doesn't opt into store loyalty programs. There are notable exceptions, of course, but the value of most merchant-branded rewards programs are too small to be meaningful.

Consumers know that too: Accruing points with a merchant yields little redeemable value, which is why most don't opt in and even fewer download the apps to get them. As part of our consumer Omnicommerce study, we asked 4,000 consumers each quarter who shopped merchants to tell us the value of merchant store loyalty and rewards points to them, and their choice of merchant.

Both placed near the bottom of the list.

For the Bridge Millennials — those aged 30 to 40 years old who are the first generation of connected consumer with spending power — they barely register.

Amazon, with Prime, could turn that around, just like it did when it launched Amazon Sellers online.

It's plausible that Amazon could use Whole Foods, along with the quick-service restaurants (QSRs) who already opted into Pay Places and Restaurant to expand that program to the local retailers who'd like nothing more than to align themselves, their brand and the spending power of the Prime customer with their brand.

The ask is the same: Ask customers walking into the store to become a Prime member to get deals, or link their Prime account to the store app or store point of sale to get access to Prime member-only deals. Local merchants could ditch spend on third-party apps and loyalty programs that require a huge spend on customer acquisition to get a small number of consumers to convert with whom they could now have a relationship. At the same time, they benefit from the spending power of an Amazon Prime member, who outspends non-Prime members by nearly two to one ($1,300 for Prime annually versus $700 for non-Prime).

Amazon Prime can be an onramp to a local community of sellers who need foot traffic to their stores to compete, ironically, with Amazon. For Amazon, it's a way to add more value to Prime, capture more consumer spend and align with, rather than compete with, smaller retailers who are the fabric of their local communities.

Trust in Amazon Prime and the known value it adds, plus trust in the local merchant the shopper knows and shops, starts to grease the local marketplace flywheel — and redefines the blurring of the online and offline worlds to now include a local retail segment that gets the benefit of a digital customer base with money to spend and an incentive to shop local more often too.

Amazon and its potential to assemble a marketplace of QSRs and local restaurants wrapped around Amazon Pay is a topic I addressed last week and suggested was possible given Amazon's ability to assemble a critical mass of local suppliers, coupled with the logistics expertise to deliver the last mile to the consumer. Logistics is the hardest piece of the puzzle for those merchants. Why not extend the concept of the local marketplace to include non-food retailers too?

PRIME FOR A PAYMENTS SWITCH

I am also one of the Prime members who renewed my Prime membership even though it was $20 more than last year. The studies that suggested 59 percent of consumers wouldn't renew must have it wrong. Prime members are affluent and spend a lot of money on Amazon. Twenty dollars isn't material relative to the value they get.

If there were that much churn, Amazon wouldn't have raised the price and wouldn't have kept doing it.

But what both Amazon and Whole Foods probably do know is that they'll win on the same three fronts my own behavior proved out on Saturday.

They will score new Whole Foods app downloads for Prime members and hook them into using Amazon Pay to checkout when they shop — at the expense of cards and other digital wallets.

They will probably manage to snag more of their grocery spend than they already have since it will just get easier and easier to shop with Whole Foods, which could increasingly mean not even stepping foot into the store.

And, in my case at least, they could even get some consumers to switch from the payment methods they use in the store to those linked to their Amazon Pay account.

When Amazon Pay becomes available at the Whole Foods I shop, it will be bye-bye Bank of America debit card — the way I have paid for my groceries at Whole Foods for the last 17 years — and hello Amazon/Chase Prime Rewards card, the card registered to my Amazon Pay account.

Without thinking about it at all — not even for a nanosecond.

Grocery stores may not be the only ones feeling the impact of the Amazon Prime plus Whole Foods proposition.

Has **Unbundling** Lost Its Cool?

Is unbundling the future? So it would seem.

Banking is being unbundled.

Open banking, set in motion globally by a regulatory fiat called PSD2, gives licensed third parties access to banking infrastructure so that they can make their services available to existing bank customers. The intent of the regulation is to level the playing field for innovators by offering consumers an expanded number of point solutions that are different than what's offered now by their existing bank.

Television programming is being unbundled.

Spurred on by a generation of cord cutters who decided it was better to cut and run instead of paying for 85 channels of programming to get the 16 channels that an ex-FTC commissioner once remarked consumers cared most about, content providers are unbundling their services to compete with streaming services like Netflix and Amazon Prime. YouTube, Amazon and Twitter already offer unbundled access to NFL games, and analysts say that by 2022, four short years from now, pretty much all TV networks will offer consumers the option of à la carte programming through a streaming option — something that nearly two-thirds of consumers surveyed in 2017 said they wanted.

Digital music has been unbundled since the iPod and iTunes got a head of steam in 2001.

Music is sold by the song — for those who still buy digital music — but more likely those songs are streamed, one song at a time, from services like Spotify and Apple Music. Today, producing and then selling a bundle of songs called an album as a prerequisite to becoming a top-selling recording artist is as anachronistic as James Patterson and Bill Clinton using pencils, paper and a typewriter to write their latest bestseller.

They didn't.

Album sales in all forms were down another 17 percent in 2017 to $169 million, compared to $939 million in CD sales alone in 1999. Album bundles have given way to a whole new bundle: the album/concert bundle. Experts say

that but for Taylor Swift's own bundle of her new album plus a concert ticket, Swift would have struggled to sell the 1.9 million copies of "Reputation" that made it last year's top-selling album. It was concert ticket sales and endorsements that earned Swift $170 million last year, making her one of the industry's wealthiest performers.

Newspapers have been unbundled for a long time too.

When was the last time you handed a $10 bill to the newsstand guy to buy The New York Times just because you needed your weekly fix of the Sunday Style or Sports section? Once upon a time when newspapers were making money, the physical newspaper business model was all about packaging and selling a bunch of themed sections together — with lots of advertising in those many printed pages that people were willing to wait all week to read. The theory of the newspaper bundle was that everyone who bought the paper got something that was of interest to them while maximizing newspaper profits. Today, many people, if they read the Grey Lady at all, open Apple News or Flipboard and get a selection of articles, including some free ones from the New York Times. Or they just check out articles at PYMNTS.com.

Shopping, which used to be bundled at malls, has been unbundled by the internet.

Weekends used to be defined by the ritual known as shopping: packing the kids in the car and heading to the mall to make one stop to buy a variety of things from the variety of stores there.

Not today.

Call it by whatever term you wish, but aside from those in affluent city centers, malls are either dead or dying. All of the things that stores and malls used to aggregate are available at one of literally thousands of places online, where they can be bought and shipped home, one product at a time, when and wherever the consumer's impulse to purchase strikes.

Credit is being unbundled from the traditional line-of-credit, card-based products.

Store-based installment plans have existed for decades, but now point-of-sale credit innovators offer consumers the chance to finance the purchase of individual products in-store and online, via white label or branded solutions. Consumers are extended credit based on their ability to repay the cost of the $349 handbag on Tradesy in six easy installments over six consecutive months — not whether they are creditworthy enough to get a $2,500 line of credit with a traditional credit card issuer.

And so on.

Unbundling, experts say, is the future — the ultimate in giving consumers the choice to pick and choose products that are suited to their own needs, preferences and comfort zones. Optionality is the new norm, and consumers will take their business to those who can give them choice on their terms.

Consumers, today, have the right tools, quite literally, at their fingertips to help them find those options: their smartphones.

A study published earlier this year by USC Annenberg reports that consumers now spend 24 hours a week online; 82 percent of that time is online via a mobile device — playing games, stalking friends, sending texts and looking for things to do, places to go, things to buy. That's 24 hours of sheer, unadulterated capacity to use mobile devices to hunt, peck, tap and swipe for anything they might want to buy. In case you were wondering, only three hours of that online use each week is at home, and 10 hours is at the office on non-office related tasks (so much for workplace productivity). That leaves 11 hours a week online via the mobile — while mobile — where the lines between on and offline really blur in the search for that perfect anything.

All of this is the perfect recipe for a perfectly unbundled world.

All except for one thing: Most consumers often don't really like living in an unbundled world. And really successful businesses these days are figuring out how to give consumers better bundles — not unbundles.

THERE'S BEAUTY IN THOSE BUNDLES

Twelve years ago, I co-authored a piece with David Evans on the architecture of product offerings. It was published a year later in the *MIT Technology* Review.

Time flies when you're having fun.

The product offering architecture, or POA, framework was created after examining how product bundles were constructed across a number of industries and by researching the impact of those bundles to the overall performance of those products — measured by profits and not by sales.

The POA framework breaks product design into four key strategies for creating the optimal product bundle across a spectrum for how product features could be packaged, priced and presented to the consumer:

- **An "à la carte" product strategy** gives consumers the ability to create their own bundles from features they make available to them. Alexa and Echo come bundled with access to basic services. Adding skills from Alexa's skill library allows consumers to create bundles of features that best suit their needs and use cases for Alexa.

- **A "specialization" product strategy** offers only one feature. To get other features to expand the breadth of the offering in that same category, consumers must buy other features from other companies and expand the bundle themselves. LinkedIn is a networking site for professional comings and goings, but to keep up with any of the personal comings and goings of LinkedIn network members who might also be personal friends, consumers go to social networks such as Facebook, Instagram or Snapchat.

- **The "all-in-one" product strategy** offers only the features together. Buying that product means consumers get all the features regardless of whether they use all of them. Buying a digital subscription to The Economist means a consumer gets access to everything it publishes, not just the quarterly "Technology Review" section.

- **The "and/or" product strategy** offers a combination of features plus one or more features à la carte. This is a common cable and/or software product development strategy in which bundles of features are wrapped into the base software package, but options such as enhanced security/malware upgrades or premium stations are also offered for an extra fee.

Our thesis then, and now, is that all products are bundles, incorporating features most consumers want in that product that make it easy for them to buy and profit-maximizing for the producer to sell.

Savvy product developers, we pointed out, understand how the strategic use of features to test consumer demand can inform how innovative bundles can be constructed by incorporating certain features into the products as a standard part of that product bundle once demand matches supply chain efficiencies.

Profits, not sales, are POA's success metric.

So is something else that's perhaps even more relevant today than it was 12 years ago: the value of the consumer's time.

Consumers like bundles because too much choice among unbundled features costs them time and creates uncertainty over how things might turn out when choosing among them.

And time and uncertainty can cost businesses sales, since people tend to stick with what they know, rather than buy an unbundled something they don't know.

FAMILIARITY BREEDS SALES

Barry Schwartz introduced us, in his classic book, "The Paradox of Choice," to the downside of an unbundled world with seemingly unlimited choice using his own experience when buying a new pair of Levi's.

In the book, he describes going into the store and giving a salesperson his measurements. She then asks him the following questions about the jeans he wanted to purchase: stonewashed, acid-washed or distressed? Faded? Zipper or button fly? Straight leg or boot leg?

Just regular jeans, he wrote in the book, the kind that used to be the only kind.

At least Schwartz had already narrowed his option to Levi's.

Today's consumer shopping for jeans doesn't shop for jeans; she shops for denim among dozens, maybe hundreds of brands offering endless permutations of makers, styles and finishes across any number of online and in-store options.

That's a problem for consumers, denim producers and the stores that sell them.

Too many choices introduce risk by increasing the level of uncertainty consumers have with making a purchasing decision. Too many choices also chews up too much of the consumer's time getting and absorbing information, comparing and contrasting all options before making one.

Which shade of faded is really just right when faded now comes in five different shades? Is the fit with my usual size in this brand of jeans the same in the same size with another brand? Distressing that produces holes, holes that have been patched or holes that aren't quite holes yet? Will a stepped hem still be in vogue next year, and should it be frayed? Does distressed plus a frayed hem on a boyfriend style just look too messy?

Rather than experiment, I'll buy the same pair I have now.

This endless aisle of unbundled choices may give consumers more options, but it may not optimize the one thing that consumers value more than they ever did: their time.

Consider the unbundled digital-only bank.

The anecdote to the millennial's so-called hatred of traditional banks hasn't really taken off as investors envisioned. Even the largest and oldest digital banks have only converted a few million customers.

Turns out that consumers, even millennials, want more from banking services then just a prepaid card that works just like a debit card product offered by their bank. Why? Because there are many other services wrapped around debit products that consumer's value — peer-to-peer payments, bill payments, alerts, to name but a few that don't always come "standard" with a digital banking product but do with what most banks provide with a checking account.

So, traditional banks, like Chase, are launching their own mobile/digital "banks," which include offerings that leverage the robust set of services they have now — just tailored to a mobile-centric user, which today is nearly everyone.

At the same time, these digital neo-banks have come to realize that bundling services is the only way they can optimize their own profits and are exploring features that would make them look more like a traditional bank. Even though it's true that most consumers have multiple financial services relationships, particularly if they have a mortgage or a car or a personal loan, unless consumers have access to a dashboard that keeps things organized, too many options requires too much of the consumer's time to monitor and track.

It's why consumers, as Schwartz's own anecdote shows, often default to what they know or decide not to decide and stick with the status quo.

Or buy bundles wrapped around a value proposition that gives them a more curated set of choices that eliminate uncertainty and optimize their time.

They just aren't called bundles.

A BUNDLE BY ANY OTHER NAME

The **irony of video streaming services** is that they are big bundles of individual programming options from which consumers can pick. The user interfaces make selecting those options less friction-filled, and the pricing of those bundles reduces the risk and uncertainty that consumers have in worrying that they'll run out of things they might want to watch. It's the newspaper bundle theory on steroids, gone digital, with something for everyone.

Music streaming services, of course, operate the same way. They, too, are an enormous bundle, since a single subscription gets you access to most of the recorded music in the world. Instead of buying Taylor Swift's latest album, you

get access to all of Taylor Swift's albums and everyone else's. Then, if you want smaller bundles like CDs, you can get that too.

Streaming services don't call those bundles. Instead, they call them playlists, and consumers can create their own and share them. Music streaming services offer users suggested playlists based on their music preferences and the vast library of songs available. Seventeen percent of users on music streaming platforms opt to listen to these curated playlists, up from 15 percent the year before. Spotify not only lets consumers assemble their own playlists and suggests ones that might suit them, it also lets users buy branded gear from the artists they are listening to without leaving the site. That enriches the bundle for everyone: consumer, artist and Spotify.

Embedding commerce into discovery platforms offers consumers the chance to assemble their own bundles in the context of their visit. Google Maps now offers restaurant recommendations based on where consumers are when searching — and allows them to make a reservation at that restaurant. Travel and event sites bundle related services to the event or the trip that a consumer may want to take. Wedding and parenting sites offer specialized, one-stop ecosystems where features like content, travel experiences, registries and relevant products can be assembled and reassembled based on a couple's or a parent's needs and preferences over time.

Online fashion sites, the good ones anyway, also recognize the perils of the endless pages of products begging to be bought. Outfit views on sites like Net-a-Porter show would-be buyers the item they may be looking for on models, styled with other items. Fashionistas can buy the skirt they really wanted, with a top, jacket, shoes and clutch — a collection of features that creates a bundle called a new outfit, makes a sale for those designers and reduces the time and risk of creating a new outfit.

Stitch Fix and Amazon Fashion actually create the outfit bundle for consumers based on preferences and past purchases and returns.

Speaking of a collection of features that come in a box, meal kits **and prepared foods** take the risk and uncertainty out of organizing dinner. Why spend the time reading a recipe, building a shopping list and then shopping for the ingredients and making dinner when a chef in the know has done all of the hard work by creating a bundle of the right ingredients to prepare it? Meal kits and prepared foods are bundles wrapped around convenience in a world where making dinner is often a friction-filled experience.

Walmart's "Buy the Room" feature is a curated selection of home furnishings arranged by stylists that give consumers the benefit of a decorator's touch without having to hire one. Consumers can see how a collection of items looks in a room and then select the items they want without spending the time themselves figuring out which lamps and accessories would look great in their living room — or wasting money on things that won't work.

Nike opened a pop-up store in LA last week that curates training experiences with education with the sale of gear that supports those athletic pursuits. These bundles of Nike gear plus complementary services that help athletes reach peak performance give consumers access to things that a brand they trust has assembled for them to experience and buy.

Credit cards that come bundled with rewards programs show the power of that bundle too. Consumers eschew merchant-specific loyalty programs for those that come with the cards they like and use the most. Even the Bridge Millennial, the first generation of connected consumer that we profiled, said merchant rewards don't move the needle — in fact, it ranked near the bottom of the list as features they valued most in the stores they shopped.

Amazon's product recommendations — people who bought this, also bought that — give consumers the option to create their own bundle of related products, without the time or the risk in hunting down what other products may complement that purchase. The option to then add some of those purchases to an auto-replenishment system locks in the purchase of that bundle going forward.

PayPal's Checkout with Smart Payment Buttons was created to give consumers a payment choice when buying cross border, while minimizing the integration requirements for merchants that want to offer that choice. In addition to the PayPal button, consumers will see their local payment method offered, instead of a long string of logos from which to pick.

I think you catch my drift.

PLATFORMS AS BUNDLERS

An unbundled world sounds great in principle, but it's unwieldy by design. That's not what consumers value nor what most businesses can support profitably.

In a world where consumers place a high price on their time, they also value choice — but only to a degree. Too much and it's paralyzing; too little and it's limiting. Businesses that feel compelled to offer an endless supply of unbundled options may end up driving consumers away by giving them more of a reason to stick with what they know rather than to take the time to sort through options that they don't know.

In an era of unbundling, choice and unlimited options, platforms are natural enablers to creating bundles that consumers value.

Platform ecosystems give buyers the chance to discover suppliers in the context of their own needs, create their bundles from a vetted selection of suppliers and then make a purchase. Suppliers get to see what consumers value and adjust their products and strategies accordingly.

Platforms will use technology to narrow those options further and payments to close the sale. Vertical ecosystems will emerge — in fact, they already have — within existing platforms that leverage a critical mass of consumers with suppliers that offer use case expertise or products. Voice-enabled platforms will outsource the friction of endless searching for features and bundles online by making Alexa or Google do it for them. Predictive analytics will suggest features and products that become bundles, and options to replenish them will eliminate the need to find and create new ones.

Consumers can get the best of all worlds, an option without the risk or friction that an unbundled world creates for them. Businesses win by profit-maximizing the features they take to market to the consumers who really want to buy.

The platforms that enable that experience securely and without friction will win by making it possible to bundle the things that innovators have spent the last five years pulling apart.

They just won't call it bundling. Instead, they will call it success.

Long live the bundle!

How **Uncertainty** Kills Commerce

Scientists say that humans have a lot in common with mice.

Both species, a new study conducted by researchers at the University of Minnesota Medical School has found, express profound regret over how much time is spent waiting for something to happen.

The study examined the behaviors of humans and mice before each were given an option to wait and receive reward (food for mice, videos for humans) and then after making the commitment, while waiting to receive it.

In both situations, the researchers found that mice and wo/men kept waiting and waiting — stalwart until the bitter end, even as the wait became longer. The concept these researchers were testing in economic parlance is that of sunk cost.

Sunk cost is the unwillingness to consider other options — including cutting their losses and running — after making a commitment to a decision — that is, sinking time and money into making it.

Economists have long recognized this as the sunk cost fallacy. What's better, they say, is once you sink a cost, you should forget about it and just focus on future costs and benefits.

THE SINKING SHIP OF SUNK COSTS

The notion of sunk costs not only bedevils humans — and mice, we now know — but businesses too.

Companies that invest time, money and corporate reputation in something can become so invested in the end game that they keep waiting for better results, even in the face of headwinds and data that suggests those better results won't materialize.

These execs rationalize that since the big investments in money and time have already been made, they might as well stay the course — since waiting for better results doesn't cost that much more. And, who knows: The market may catch up — one day, eventually — and make the wait worth it.

In the dynamic environment in which the world operates now — one in which time

is one of the most valuable currencies there is — the sunk cost fallacy can crater businesses in one of three ways.

It can sink the business entirely by refusing to deviate from the "bet the farm" strategy that won't materialize in the timeframe needed to survive financially.

It can marginalize future opportunities, since waiting for that "next big thing" becomes so much of a distraction that there is a lack of resources available to explore other options.

Or the decision to cut and run comes too late to capitalize on what the market really wants.

On a more pragmatic level, this study and the notion of sunk cost speaks to one of the biggest frictions that consumers and businesses — and mice too, if they had to shop and pay for stuff — face across the commerce landscape.

Uncertainty.

Let's face it: Sunk cost wouldn't be so sunk if an outcome had certainty, even if it meant waiting, when waiting was an acceptable option.

The fact that you've sunk a cost means the payoff from waiting a bit longer is high. It's the uncertainty of the outcome combined with the uncertainty of when that outcome could pay off and the decision to keep waiting that can sink the business ship.

Uncertainty also creates enough friction for consumers and businesses to take their business elsewhere and sink those ships too.

In the study, humans and mice knew going in that they would get a reward. Knowing that, humans and mice moved forward after taking time to deliberate the costs/benefits of waiting to get it. They were also given signals about how long the wait might be to get the outcome they wanted.

It could be that one of the reasons both mice and humans waited and continued to wait is because to get that reward they knew they'd have to wait. Each accepted waiting as part of the bargain to get what was promised.

Even with the wait, for those that participated in the research, there was enough certainty of the outcome to make waiting an acceptable option.

Yet certainty — and the ability to deliver it — isn't how the commerce ecosystem talks to businesses and consumers today when describing the value of their innovations.

Maybe it's time we should.

THE DEMANDS OF ON-DEMAND

We live in an on-demand world.

And, in an on-demand world, there's nothing worse than waiting.

Today, consumers and businesses spend a lot of time waiting for things.

Waiting is the breeding ground for uncertainty.

Consumers wait for buses and trains and in traffic for the roads to clear. Consumers spend time waiting for a customer service agent to answer their questions, to be seen by their doctors and in security lines at the airport. Consumers spend time waiting in checkout lines at stores. Consumers spend time waiting for websites to load.

Timex did a study that quantified how much time U.S. consumers spent waiting.

As it turns out, a lot of time is wasted. A full six months of consumers' lives, in fact, are spent waiting for things to happen. That amounts to a little more than 37 billion hours a year.

Businesses spend a lot of time waiting too.

Businesses wait to be paid by their buyers — not knowing when the money will actually be received, if it is good funds and sometimes how much they'll get.

Buyers spend time deciding when to pay those suppliers based on how long they have waited — or are waiting — to be paid by the buyers of their services. This wait is especially pronounced when trading partners do business across borders. Both parties spend a lot of time waiting to see where in the world, literally, their money is.

The uncertainty of the wait costs businesses in many ways.

It makes it impossible to manage and forecast cash. This uncertainty often forces businesses to find and access sources of working capital to fill the gaps, which comes at a cost.

This waiting game for consumers and businesses has only fanned the flames of our on-demand world.

Retailers and commerce players know consumers will shop where they can get what they want when they want it —and that consumers are loyal to whomever can deliver convenience wrapped around a value proposition of speed.

Our own studies of thousands of consumers when shopping across in-store and online channels makes this point too: Consumers value convenience more than price in many cases. It's not surprising that retailers have invested in making speed and convenience the hallmark of a great consumer experience.

On the commercial side of payments, the world has been fixated on making the concept of real-time payments a reality for more than a decade. Today, more than two dozen (globally, this is a puny number) faster payments schemes are in various stages of design and rollout, all with the goal of making payments happen faster between banks and corporate customers.

Here in the U.S., we have been talking about faster payments in earnest since the Federal Reserve organized a 500-person task force to study it in 2015. That effort aims to create a standard for making payments and settlement happen in real time across the entirety of the U.S. banking system. The task force published its recommendations in 2017, the same year NACHA went live with Same Day ACH across all of the banks in the country.

But why settle for same day when we can spend billions and wait who knows how many more years to make payments happen even faster than that?

Since faster and faster and faster is all that matters.

But does it really?

THE CERTAINTY OF CERTAINTY

I conducted a keynote fireside chat at an industry conference last week on the state of global B2B payments. As part of that session, I did some electronic polling of the corporate bankers and FinTechs in the audience.

One of the questions I asked was about the most important feature of a modernized B2B payments system. I gave the audience five choices: cost of payments, security of payments, speed of payments/settlement, data that travels with the payments or the transparency of the payments process.

The answer — overwhelmingly — was transparency of the payments process. Transparency defined by having certainty about where payments are when moving from bank to bank across borders.

While we are asking banks to spend billions ripping apart and replacing their existing systems to make payments happen in real time, banks count certainty about when those funds will arrive as priority No. 1.

So do their corporate customers: certainty that there are good funds and certainty about when they can access the money.

It makes perfect sense.

Without those two pieces of information, banks and corporates can't plan, manage and optimize their cash.

Speed of payment is also of little benefit when most corporates don't have real-time systems and can't accommodate real-time settlement.

What they can accommodate is real-time information.

The most important attribute of a modernized, global payments system isn't real time.

It's certainty.

That's not to say there aren't use cases for on-demand payments — we know there are — and delivering payments faster to end users soon won't be an option.

But faster needs definition – and use case-driven context.

And incumbents and innovators are making those faster, real-time, contextually driven use cases possible by enabling the certainty of payments without asking corporates or banks to rip out their own payments infrastructure today to deliver it.

THE WEIGHT OF THE WAIT

On the retail side of payments, it's certainty that increasingly drives consumer choice.

Skipping the line using order ahead is fast and convenient — provided the experience is as advertised and is consistently delivered.

Just ask Starbucks. The promise of speed and convenience is only as good as the certainty that it is fast and convenient and predictable.

Buying from Instagram's feed is a convenient way for consumers to discover new, cool things to buy — fast. Provided that the checkout experience is friction-free across all shoppable ads.

Clicking the "Shop Now" button only to be confronted with shipping and billing and payment information to fill and promo codes that require typing in and then getting an email promo code to get 10 percent off the first order is enough to plant the seed of uncertainty in the mind of the consumer who sees other shoppable ads. The return on the consumer's contextual commerce experience is only as good as the certainty of knowing that it's easy, secure and consistent across the platform.

Knowing that Walmart will save consumers time and money is why consumers shop Walmart and why Walmart invests heavily in features that economize on the consumer's time and pocketbook. The certainty of everyday low prices is what brings more than 100 million feet into Walmart stores in the U.S. — 270 million worldwide — every week.

Certainty of delivery is probably a major factor in why Amazon captured nearly half of all eCommerce sales in the U.S. in 2017. The certainty of what it means to be a Prime member is why consumers are (and remain) members of a club that now costs them $119 a year to join.

There's a reason consumers start and end their product search on Amazon. They're certain Amazon has the depth and breadth of selection, and its one-click, two-day/same-day/two-hour delivery and checkout experience is consistent and the service experience reliable every time they use it.

That sense of certainty is why consumers now turn to Alexa as their virtual commerce assistant and gives Amazon the authority to expand its commerce wings into grocery, apparel, healthcare, household services, household furnishings, quick-service restaurants, prescriptions, medical supplies and the many other commerce segments it now touches. And have consumers follow along.

Consumers are certain Amazon will deliver.

And certainty breeds trust.

THE CERTAINTY OF CERTAINTY

The famous mathematician and MIT professor Claude Shannon once said that information is the resolution of uncertainty. His name may not be well-known, but his contributions to the field of cryptography, artificial intelligence (AI) and information technology are.

Shannon is regarded as the father of the Information Age and is credited with the first AI learning device — a magnetic mouse trained to move through a labyrinth of his own creation that got smarter with each trip.

Consumers and businesses make tradeoffs every day about waiting or not waiting based on the options available to them and the context in which those decisions must be made.

Information provides that context.

Certainty, though, is the cornerstone of creating a trusted commerce relationship.

Information — relevant, accurate and actionable — presented to consumers and businesses when they're making their decisions is what will build trust. That

information will help them decide when waiting is okay, when it is not and when a wait is too long and other options look more viable.

When sunk cost is, indeed, sunk and it's time to cut and run.

Innovators that power solutions that provide that information, create context and enable certainty will earn the trust of the business, the consumer and the many members of the commerce ecosystem they touch.

That's my hypothesis.

Now let me round up some mice and men and test it out.

Why Household Finances Under The Hood **Don't Look So Good**

Paul McCartney and The Beatles may have told us that money can't buy us love, but new research claims that it can certainly buy us happiness.

And how much money consumers need to be happy.

A recent Gallup World Poll tells us consumers whose households earn between $60,000 and $75,000, on average, have reached the highest level of emotional wellbeing, and more income won't make them happier.

That means, based on the latest published research of 50,000 households and 135,000 individuals by Sentier Research, many U.S. consumers should be dancing in the streets.

In May, the median household income for Americans stood at $61,858 — the highest since January 2000, after adjusting for inflation. Median household income, which had dropped to $58,829 in June 2011, has consistently increased since the summer of 2014. May 2018's household income numbers were up nearly 2 percent from last year, they say, due largely to increases in base compensation resulting from a tightening labor market.

Consumers, these data points conclude, should be positively zen-like relative to their household income situation.

Yet, you might not think consumers are so happy if you look under the hood, as we have done.

Are the more than a third of U.S. consumers falling behind on their bills happy?

Or are the 27 percent of the population — those high-income Bridge Millennials and Gen X-ers with college degrees who are steps away from financial catastrophe — happy, even if they do report feeling more positive about the stability of their financial situation than they did this time a year ago?

Those are just two of the findings from our quarterly report on the relationship between credit, credit access and the financial performance of U.S. consumers.

Each quarter, with the support of Unifund, we survey 2,000 consumers who statistically represent the adult population in the U.S. and ask them questions about their current financial situation: their income, the bills they pay, how they pay them, their access to all forms of credit, how they use those forms of credit — questions designed to gauge their financial stability and the steps being taken to improve it. We literally look under the hood of household finances.

We then organize these consumers into personas that reflect their financial and credit performance.

We use statistical methods to analyze their responses. What we found this time, we think, is as insightful and hopeful as it is foreboding.

- No collections or delinquencies in the last several years
- Pay all bills on time, but may have an occasional late bill or missed payment
- Have bank or credit card accounts, or may have chosen not to open them

- Have had one or more collection or delinquency event
- Have bank and credit card accounts, or are not able to obtain them

- No collections or delinquencies in the last several years
- May not have credit or debit cards because they have elected not to have them
- Struggle to pay many bills each month, and often live paycheck to paycheck

- Have had one or more collection or delinquency event
- Are unable to obtain bank or credit card accounts

THE ROSE-COLORED CONSUMER CREDIT GLASSES

To look at the results across the population at large is to miss the nuances of the financial picture of important swaths of it.

On balance, the U.S. appears to have a population that has its financial act together in the aftermath of 2008's Great Recession.

And it seems it mostly does.

The average credit score reported of the U.S. consumer is 695, with a third of the population stating that their own score had improved over the last year. Our sample, whose average age is 45, is one in which 60 percent of the population is employed. These consumers earn an average income of $70,000.

Individuals in the $50,000 to $75,000 range report the largest increases in wages over the last year. That sounds pretty good in a market in which wages are stagnating — with base comp rising at 0.5 percent and pay (including bonuses) decreasing by 0.3 percent, despite unemployment levels residing at their lowest levels in 23 years.

Perhaps then, not surprisingly, 83 percent of consumers report that their financial circumstances have improved or stayed the same since last year.

Yet digging deeper exposes some problems.

Despite these seemingly sound, strong financial fundamentals, more than a third of consumers report falling behind on bills, up 6 percent from this time last year, in an economy that is booming with inflation rates below 2 percent for more than eight years.

And that's not a "Geez, I forgot to pay the credit card bill since I was away for a week" late paying the bills situation.

No, this is different and more concerning — telltale in an era when auto bill pay makes paying bills automatic and being late can reflect a conscious decision to delay or skip a payment entirely.

Those delinquencies also seem to have little to do with income or educational

stereotypes: Those with some of the highest incomes and educational levels are among those with the most precarious financial circumstances.

In fact, when you look closely, those most at risk of a financial crisis appear more like those who are totally shut out of the credit markets due to chronic delinquencies than a cursory review of their financial profile might otherwise suggest.

FROM "NO WORRIES" TO WHY WE ALL MIGHT WANT TO BE WORRIED

The most interesting part of any study like this is finding the stories inside the pile of data that comes back from the field.

It's what led to the creation of the four personas that we track consistently to gain important insights about the financial performance of the American consumer. Simply looking at age bands or income levels doesn't do it justice.

We always knew we'd find the extremes — and we did.

There are **the "No Worries" personas** — the high-earning, highly educated segment of the population that pays their bills on time; 70 percent report putting money away for a rainy day. They're about 50 years old and earn, on average, $77,000 a year.

They have access to credit, have mortgages, home equity and car loans. They have and use PayPal accounts to buy things and pay bills. They have and use store cards and say they pay student loans (probably at that age for their millennial kids). Less than a third — 30 percent — report living paycheck to paycheck.

At the other end are **the "Shut Outs"** — those so chronically delinquent they can't get the credit they say they need and would like to have. Only 4 percent of Shut Outs report having a credit card.

At 41 years of age, on average, they earn $50,000 a year, and less than half — 47 percent — are employed full-time. Seventy-eight (78) percent of Shut Outs lack a college education and less than 40 percent of them own a home. Since they find themselves shut out of the traditional credit markets, access to credit is predominantly through loans from friends, family members or pawnshops. Not surprisingly, 86 percent of Shut Outs say they live paycheck to paycheck, and only 14 percent say they are able to save money.

Together, these two groups represent about two-thirds of the U.S. population — No Worries at 58 percent, Shut Outs at 7 percent.

Then, we always knew we'd find those who fell somewhere in between.

The "On The Edge" persona appears to be a solid financial citizen: roughly 42 years of age, earning an average of $64,000 a year. More than half, 53 percent, own a home, and 41 percent are college-educated. Seventy-one (71) percent of the On The Edge personas say they are better off financially this year versus last, despite 36 percent reporting working full-time. If we had to guess, we'd say this group consists of gig or freelance workers who don't work full-time for any one employer, but who do project-based work for many and like it that way. In fact, this is consistent with data from our Gig Economy Index and the percent of U.S. consumers who report doing only gig work.

This group has access to credit but doesn't use it because they don't like or want to. Their key to feeling chill about their financial circumstances is that they don't report having debt payments larger than their monthly income.

Fewer than 7 percent (6.8 percent) say they like and use credit cards regularly. Despite being college-educated, only 5.4 percent report having student loans. Only 43 percent of them say they live paycheck to paycheck, and more than half — 57 percent — say they save money. They were given the mantra "On The Edge" since they straddle the consumer credit market; they can get credit if they wanted to but, for their own reasons, have chosen to opt out.

Then there are **the "Second Chances"** — the persona group that has had a shock to their financial situation typically through a job loss or divorce. That shock caused them to lose credit, and then, after getting out from under that shock, they've been given a "second chance" at

reestablishing that credit on the basis of their profession, current income and earnings potential.

The On the Edge and Second Chances represent more than a third of the population — Second Chances at 27 percent and On The Edge at 8 percent.

What we didn't know, until this last study, was how similar financially the Second Chances are to Shut Outs — for as different as their demographic profiles suggest they are.

And the ticking time bomb that the Second Chances may be for the lenders, merchants and the economy as a whole if they and we don't do something to intervene.

MEET THE SECOND CHANCES

By all accounts, Second Chances look like the American Dream.

They are 42 years old and earn $63,000 a year. Sixty (60) percent of them own their own home and are employed full-time. Forty-one (41) percent have college degrees. Sixty-six (66) percent have credit cards. Seventy-seven (77) percent report they are better off or the same, financially, as they were last year.

Yet, 79 percent of them also report living paycheck to paycheck.

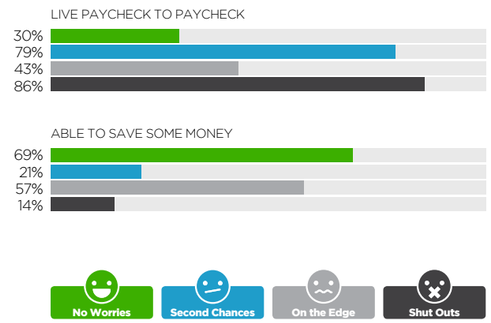
Half (50.6 percent) of Second Chances say their monthly bills are larger than their monthly income, with the other half reporting that most of the time bills outweigh their monthly income. It's not surprising, and perhaps even predictable, that 50 percent also say they will either fall into delinquency (22 percent) or struggle to pay (28 percent) their bills three months or less from now.

That's an even more pessimistic view than their Shut Out counterparts — only 7 percent of whom expect to face a similar uptick in delinquencies over that same timeframe.

It's also not surprising that only 21 percent of Second Chances report being able to save any money at all.

Perhaps the better way to state this is that, on the face of the data, it's remarkable as many as 21 percent can

WHICH PERSONAS ARE SAVING AND WHICH ARE NOT
Financial situations, by persona



save any money at all — despite an income that is 20 percent more than Shut Outs, 14 percent of whom report an ability to save money, and one that is more or less consistent with their On The Edge counterparts, 43 percent of whom say they are saving money.

What accounts for the difference in self-reported financial stability and the ability to save despite positive employment and income prospects?

Their use of consumer credit products.

While credit cards and store cards were two of the top three financial services products used by our sample (the third was PayPal), Second Chances were far more likely to use personal loans from non-banks, online lenders or loans from family or friends to cover their expenses. This group was far more likely to use pawnshop loans to cover short-term expenses and credit cards to cover the cost of day-to-day living expenses.

The Second Chances group also reported favoring MoneyGram as a way to pay their utility bills. Why? It's the only way to pay bills the same day, using cash, and avoid having service shut off.

This group also has a heavy student loan debt burden — nearly 41 percent report they owe money to their alma mater.

That college education, though, is one of the reasons this group remains optimistic about their future financial prospects.

Eighty-five (85) percent of Second Chances believe they can earn enough to cover their financial expenses.

Provided, of course, that they find a way to survive while getting there.

And provided, of course, the economy keeps humming.

WHICH FINANCIAL PRODUCTS ARE FAVORED BY WHICH PERSONAS?
Financial product usage, by persona

	No Worries	Second Chances	On the Edge	Shut Outs
CREDIT CARD	66.9%	26.1%	6.5%	0.2%
PAYPAL	61.0%	25.7%	6.8%	5.8%
STORE CARD	67.1%	24.8%	5.9%	2.1%
AUTO LOAN	60.8%	30.4%	4.0%	3.9%
MORTGAGE	67.3%	25.7%	3.8%	2.8%
PREPAID CARD	43.7%	35.3%	10.8%	9.6%
STUDENT LOAN	49.2%	40.9%	5.4%	4.2%
HOME EQUITY LOAN	56.3%	32.6%	4.9%	4.9%
LOAN FROM FAMILY OR FRIEND	28.9%	46.5%	7.0%	16.9%
PERSONAL LOAN OR CREDIT LINE	31.2%	52.5%	4.3%	12.1%
ONLINE LENDERS	27.8%	64.8%	3.7%	3.7%
MONEYGRAM	32.1%	52.8%	1.9%	13.2%
PAWNSHOP LOAN	15.2%	60.9%	2.2%	21.7%

MEET THE FINANCIAL INVISIBLES

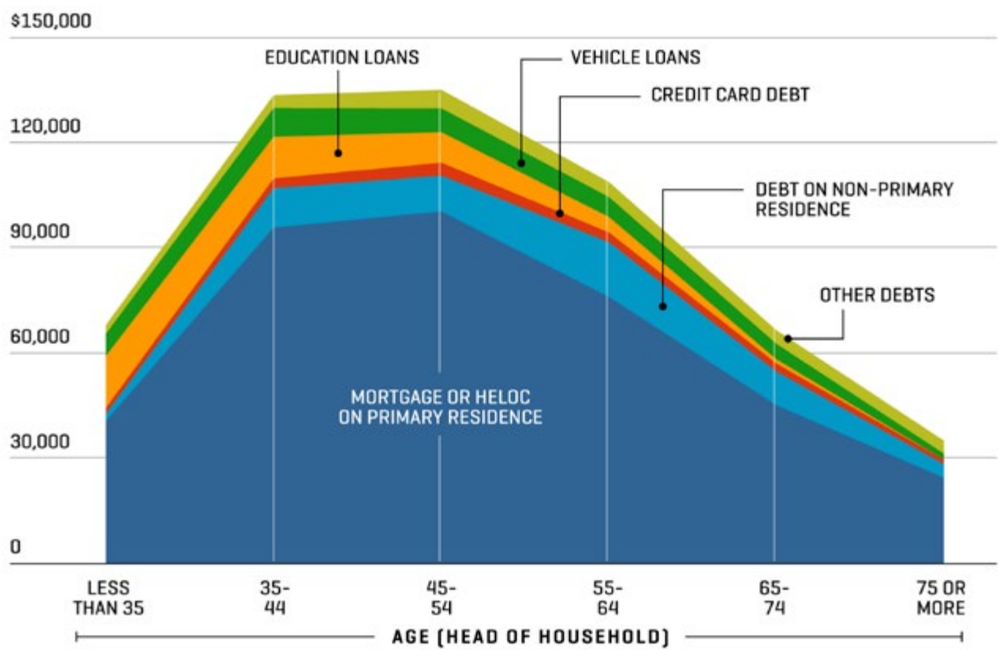
The economy sure is humming now.

The Commerce Department reported that May retail sales in the U.S. rose 1.3 percent — the largest increase in retail spending since the fall of 2017. Economists predict that June retail sales will increase by .5 percent over May's impressive retail spending performance. That's a big deal, since consumer spending drives more than two-thirds of U.S. GDP.

At the same time, the Federal Reserve quarterly study of consumer debt says consumers are racking it up. Today, U.S. consumers owe roughly 26 percent of their annual income to debt, up from 22 percent in 2010. That amounts to $13.2 trillion, up 18.5 percent since 2012.

Ten (10) percent, the Fed says, of household income is allocated to debt payments for automobiles, credit cards, personal and student loans. Debt service on credit cards has declined, even as credit cards as a percent of debt has

AVERAGE DEBT PER AGE (ENTIRE POPULATION)
Figures here are averaged across all households, whether they carry debt or not.



Source: http://time.com/money/5233033/average-debt-every-age/

been on the rise. Balances on credit card debt declined by 2.3 percent last quarter, as have delinquencies on that debt.

What's driving up debt and debt service, the Fed reports, are the balances on student debt, mortgage and auto loans which have increased by 2.1 percent, 0.6 percent and 0.7 percent accordingly and will likely rise more as interest rates rise further.

Perhaps recognizing that, these Second Chances say what they need most is more access to credit, since that's the only way to pay the bills. And once traditional options have been tapped out, they'll turn to alternative players — maybe some good, maybe some not so good — to make ends meet.

But this group, more than any other, also has a strong interest in financial

education to improve their future financial prospects, their credit scores and the ability to gain access to cheaper forms of the credit they feel they need to move beyond the stress of their paycheck-to-paycheck existence. Tools and tips to help them manage their way through their current situation are seen by this group as highly valuable.

Like every other aspect of their lives, they want tools that make it easy and convenient to create certainty in one part of their financial lives that may not be as certain as it might otherwise appear.

There are a number of creative innovators developing schemes trying to do that. Some offer kinder, friendlier versions of short-term, small-dollar credit and consumer-friendly debt consolidation programs.

Some are making it possible for employers to offer earlier access to wages earned and proactive suggestions on how to manage the money they have earned with the bills they need to pay.

Technologies are making it possible for money to be pushed to consumers and used within seconds of it being sent, including for employers who'd like to pay their workers on the weekend.

Card issuers are getting more creative too about the design of their credit products by offering generous cash back on purchases to offset spend, allowing reward points to be turned into money to pay for things, and even offering the option to finance specific larger-ticket purchases separately from payments on monthly balances.

It's a start.

Perhaps most interesting about these Second Chances is that they don't look like they're in trouble. They have good jobs. They wear nice clothes. Their kids probably go to summer camp, and they take family vacations. Walking by them on the street or working in the cube next to them would never foreshadow the stress of their daily financial situation.

They are the Financial Invisibles in search of a solution, although they don't appear, on the surface, to need much of one at all.

The Second Chances are a big driver of the economy and a bellwether of our future economic prospects.

Some may say they're living beyond their means, and maybe some of them are. But most may be at the same point in their lives that their parents were at their age — married, kids, house, car and dog.

But without some of the things that their parents had: the certainty of a steady job, pensions, guaranteed raises and bonuses year after year, savings, a house with equity that could be tapped into to pay for big expenses.

Unless we sort this out as a payments financial services ecosystem, we'll be talking about things a lot more serious than a bunch of consumers feeling stressed out about paying their bills but managing to pay them somehow, some way, even if they're late in paying them.

Of course, maybe the Financial Invisibles are happy, as Gallup would have us believe, because they've reached this bliss point of income. Looking under the hood of their household finances, they look like they should be worried, and if they aren't now, they easily could become very worried with the next downswing.

Which, as we all know, is inevitable.

And yes, the economy is definitely humming, but most people are still living paycheck to paycheck and facing financial stress.

Money can't buy love, but at least for now, it helps to take the kids to Disneyland.

Could **Grubhub** Become The Amazon Of Restaurants?

Grubhub made news a couple weeks ago when it simultaneously delivered a very strong Q2 2018 earnings report and announced the acquisition of LevelUp.

The focus then and the subsequent coverage since has been on the positive impact of the LevelUp acquisition on Grubhub's ability to diversify its platform offerings.

With LevelUp, Grubhub can now offer restaurants that are part of its network order ahead/pickup in-store and new CRM/loyalty initiatives to their mobile wallets using LevelUp's white-label tech.

As for Grubhub's core business of online order and delivery, LevelUp's integrations to most of the cloud-based point-of-sale (POS) systems that power quick-service restaurants (QSRs), including many of the leading players — Toast, ShopKeep, NCR, Clover, Revel, Oracle/MICROS — will undoubtedly help Grubhub's migration from tablets on counters to features inside those cloud-based POS systems.

All great synergies, but perhaps not the biggest part of the story.

The real play now for Grubhub, with LevelUp, is to emerge as the leading aggregator for food ordering across all of the channels through which consumers might like to interact with those eating establishments: online order and delivery, online ordering for pickup and maybe even, down the road, online ordering of a place in line at fast-casual, sit-down restaurants.

And to become the mobile payments platform that powers it across all those channels for those restaurants: supported by a platform-based loyalty play that keeps restaurants and consumers interested and sticky.

When asked, mobile payments as an aspect of the acquisition was downplayed on the Grubhub earnings call. My bet is that it will become an incredibly powerful pillar in Grubhub's evolution as a preeminent restaurant ordering platform.

Remember, before Grubhub bought LevelUp, Chase put a few tens of millions into them as the technology partner that would ignite Chase Pay acceptance at QSRs.

Source: https://chasepay.thelevelup.com

LevelUp is front and center on the Chase site as its partner for online ordering using Chase Pay and Chase Commerce Solutions (aka Chase Paymentech). It's where I grabbed this image, in fact.

Chase Commerce Solutions is the third-largest merchant services company in the U.S.

And before there was Chase, there was LevelUp, the branded mobile payments platform that used those same cube-shaped readers to enable QR code payments at the physical POS for consumers with the LevelUp app. The uniqueness of the LevelUp app was the loyalty component that tracked consumer spend across all restaurants and rewarded users with cash back when spending thresholds were met.

The silent player in all of this news is Chase and the role it could have in powering what could become one of the most interesting and disruptive plays the restaurant POS space has seen.

The Amazon of Restaurants.

THE EVOLUTION OF GRUB

To understand why I think this way requires a reflection on the evolution of Grubhub over the years.

Grubhub founders Matt Maloney and Mike Evans wanted to solve a simple problem in 2004: make it easy for consumers to order food from local restaurants and have it delivered.

At that time, ordering food for delivery was hit or miss — mostly miss.

Not every restaurant had a website — most didn't back then; and those that did were hard to navigate, and most didn't keep their menus up to date. Just like in the days before OpenTable aggregated available restaurant inventory and enabled online reservations, consumers dialed for delivery from the places in their 'hood they knew delivered food and hoped they didn't get a busy signal.

Building a site to aggregate restaurant menus that would give consumers one place to find restaurants that could deliver food and then place an online order for delivery seemed like a no-brainer. It was also something Maloney and Evans felt restaurants would value enough to pay a subscription fee to be a part of.

They didn't.

So, they didn't.

Grubhub's value to those restaurants changed when Grubhub's business model changed. Instead of charging restaurants to be featured on a site that may or may not drive traffic to them, Grubhub began charging restaurants a percent of the orders they generated. That shifted the burden to Grubhub to be an effective lead gen platform for restaurants and to be rewarded when an order was converted to a sale.

That model — aggregating menus from local restaurants in one place and enabling easy online ordering from that online platform — remained Grubhub's mainstay over the next decade.

Over that time, Grubhub grew both organically — market by market — as well as through a series of acquisitions to gather more hyperlocal restaurant inventory for their platform. Back then,

consumers ordered online from Grubhub, but their favorite restaurant showed up with the order. Grubhub was the enabler and got a commission on every order that originated from its platform.

In 2015, Grubhub extended its model and stepped into the delivery business, first through the acquisitions of local platforms that both enabled online ordering and offered delivery services and later through the expansion of its own delivery capabilities — recruiting drivers and building out tools to support the delivery side of its business.

In February of 2018, Yum! Brands made a $200 million investment in Grubhub, in part, to accelerate the build out of its delivery platform and to create more favorable delivery economics for its restaurant brands.

It made perfect sense.

Making great food and delivering great food requires two distinct skill sets with radically different cost structures and customer service requirements, particularly as online ordering volume grows.

For Grubhub, taking on the logistics of delivery for local restaurants left restaurants to do what they do best — make great food — while leaving the mechanics of the order-to-delivery process to a platform that was engineered to do what it does best: optimize the online customer journey and the economics of delivery across all the restaurants served in those local markets.

Grubhub claims that restaurants that use Grubhub delivery services generally see a monthly increase in takeout revenue of 30 percent as a result of having more exposure to consumers on its platform and the ability to support more delivery volume. Grubhub also reported that in Q2 of 2018, the average order size was up 3 percent: People find it easier to add to their order when they are looking at a menu online, instead of standing in a line or from memory.

Not all restaurants have bought in, including, reportedly, some of the Yum! Brands franchisees who are now being asked to get on board the Grubhub delivery platform.

Some restaurant operators believe Grubhub as an end-to-end online ordering and delivery platform has changed the relationship dynamics between their establishments and their customers — and not always for the better.

Consumers go to Grubhub to order from Joe's Burgers. They pay for that order via Grubhub. They get their food delivered by a guy wearing a Grubhub shirt carrying the Joe's Burgers order inside a Grubhub bag. If that burger arrives cold or soggy because the driver got lost or was late to pick it up, Joe's takes the heat.

Now, maybe Joe's would have gotten that heat anyway if it were up to them to handle the delivery. Or maybe Joe's might not have ever gotten the order but for Grubhub's ability to have Joe's as part of its platform for millions of consumers to see and order from.

Regardless, some restaurants now view Grubhub as very different from the helpful online aggregator that drove volume their way, that also put them in control of managing those orders and then delivering them to their customers.

BIG, LITTLE ONLINE MARKET SHARE

Grubhub may be the big dog in the online ordering/delivery space, but it's a space with a lot of room to grow.

Grubhub's CFO said during its last earnings call that the delivery business is worth roughly $200 billion in the U.S., with online orders maybe reaching $20 billion, or 10 percent. That means 90 percent of restaurant orders are still placed in a physical establishment, and nearly half, 46 percent, of all orders for delivery are still phoned into the restaurant.

But like the shift from physical to online retail, online ordering is a space that's growing rapidly, driven by the consumer's desire for convenience — regardless of whether that online order is delivered or picked up and taken out of the restaurant to eat somewhere else.

Technomic reports that 86 percent of consumers order online for delivery or pickup at least once a month, with a third of those consumers saying that's more than they did a year ago. The delivery side of that equation is expected to grow double digits over the coming five years, they also say, fueled by those Bridge

Millennials who will soon start families and turn to online order and delivery to minimize the friction associated with cooking at home and to maximize the opportunity to still eat at home.

And, as Grubhub's data shows, all with the potential for an incremental lift in the value of those online orders and that digital consumer.

Grubhub today has an $11 billion market cap with 15.4 million active diners on its platforms — 70 percent more than this time last year and 125 chains from which those diners can order. Those diners place 423,000 orders a day for delivery. Grubhub is also now integrated into Yelp's platform, which gives Yelp users the chance to order from Grubhub's network without leaving the Yelp platform. To that, LevelUp adds 100,000 daily orders for pickup and 200 live establishments.

Grubhub is also the online ordering and delivery engine for restaurants that aren't really restaurants as we think of them today.

Ghost kitchens that prepare food for delivery only have struck exclusive partnerships with Grubhub for delivery in key cities. Those restaurants appear as options when consumers search for a particular type of cuisine and may even include an incentive on the first order to try it. Consumers don't know it isn't a restaurant they can eat in or even order and pick up from, and if the food is great and delivery their MO, they probably won't care.

This new restaurant paradigm is catching on as consumers' penchant for delivery and convenience is increasing as quickly as the costs of operating a restaurant are.

Ninety percent of food orders may still be placed in the physical store, but only 10 percent of them are eaten there. QSRs, in particular, pay a premium for space and staff that the vast majority of consumers don't use for storefronts in prime locations that carry higher rents.

Green Summit operates several such virtual restaurants in New York and Chicago, and Grubhub competitor DoorDash is opening its own virtual kitchens to give restaurant operators a more economical onramp to opening a restaurant in big cities.

THE AMAZON OF RESTAURANTS

If any — or all of this — sounds somewhat familiar as a platform storyline, perhaps it is because it is.

Amazon started out as an online bookseller that aggregated book titles, later CDs, and made it easy for consumers to go to one place, browse, order and pay for those items online — and have them delivered.

That strategy allowed Amazon to build a critical mass of consumers and more inventory for books and music and then lots of other things too that got their own flywheel going.

Those lots of other things were courtesy of third-party sellers, which ignited Amazon as a true marketplace and now accounts for more than 50 percent of the items sold on the Amazon platform. Those sellers have a love/hate relationship with Amazon: They love the sales but don't always like playing second fiddle to the Amazon brand.

Amazon's private label brands have also captured huge share, first in important categories like batteries and diapers and later in apparel and accessories. With the acquisition of Whole Foods with its own 360 private label brand, private label sales on Amazon will only continue to grow.

Those private label sales happen right alongside brands, including via branded Dash buttons: Consumers search for and with those Dash buttons, allowing them to subscribe to their favorite branded products and be replenished regularly.

Prime membership is the fuel that now feeds this Amazon engine and now offers consumers a variety of benefits that extend well beyond free shipping, which remains the core of the Amazon value proposition. Amazon Prime member spend is twice that of non-Prime members, and there's little evidence so far to support significant Prime defections since its $20 price increase.

Partly, Amazon Prime members now have a lot more things that come bundled with that Prime membership. Prime members get discounts at Whole Foods and free two-hour delivery, discounts on car rentals through Avis, a free subscription to The Washington Post, free Kindle books, free access to the Amazon-

branded suite of baby products and access to Alexa and her growing set of skills and streaming video and music.

All, of course, tied to its online mobile payments platform, Amazon Pay, and made even sweeter for those with an Amazon Prime Chase Rewards card linked to it, which offers 5 percent cash back on Amazon purchases, including now at Whole Foods.

Which brings me full circle to Grubhub, LevelUp, Chase and the Amazon of Restaurants.

THE AMAZON OF RESTAURANTS

The one place Amazon hasn't made much real traction, yet, is online ordering and delivery for restaurants.

Yes, there is Amazon Pay Places and Amazon Restaurant, but both lack much local density outside a few deals with a few larger chains in a few big cities.

That's because a restaurant is a hyperlocal business, and there are thousands of small local establishments to get on board with which to integrate POS systems. Grubhub, LevelUp and its Chase connection could power the Amazon of Restaurants.

This trifecta — with the two-sided network Grubhub has become — has the ability to get restaurants on board and give them a fully integrated POS experience, complete with a fully integrated suite of online ordering solutions.

There is the opportunity, leveraging LevelUp's white-label tech, to make the branded mobile wallets of individual restaurants more robust and complete with those capabilities, including the ability to tailor localized offers and promotions to users.

Of course, this mobile wallet tech is also certain to introduce new features into the Grubhub mobile app, including tracking of individual orders and preferences for recommendations across the Grubhub network, as well as for those that users like and visit frequently — opening up new revenue opportunities for Grubhub and marketing partnerships for brands to influence consumer spend on those orders.

All perhaps sweetened along the way with a Grubhub network-wide loyalty program to keep restaurants and consumers sticky, powered by a mobile payments platform in very much the same way that Amazon Prime member benefits are linked to Amazon Pay. Chase Pay anyone?

It's maybe not as crazy as it sounds, particularly given Chase Pay's interest and investments in the restaurant dining space.

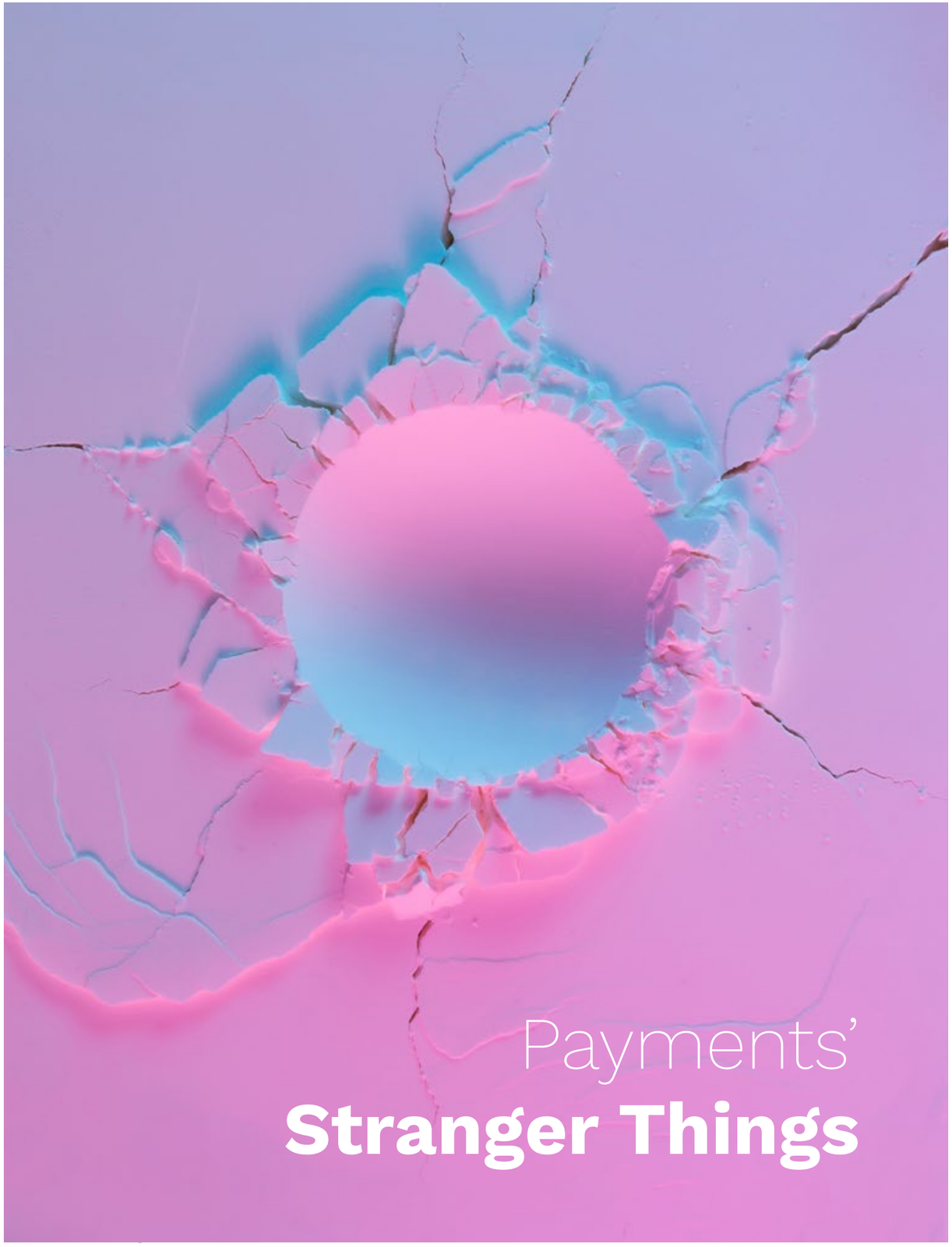
And particularly the group of players who all seem aligned around the Grubhub brand to drive innovation in the space — traditional players like Yum! Brands, online aggregators like Yelp, emerging disruptors like Green Summit and financial services players like Chase with 93 million cardholders and the incentive on the part of the Chase team to ignite Chase Pay as a mobile payments platform.

Whether it's Grubhub that will emerge as the Amazon of Restaurant Ordering or Amazon or another player, it's a space worth claiming — and a space that will be interesting to watch over the next several years.

What I've laid out here is the product of my own independent thinking based on my own brainstorming with me, myself and I on how this incredibly dynamic restaurant ordering space could evolve.

Because if I had any insight from any of the players mentioned or knew for sure, you'd have just finished reading a takedown of the Starbucks/bitcoin deal.

For that, there's always next week.



Payments' Stranger Things

The payments world could very well be living in the Upside Down.

The Upside Down is the fictional parallel universe controlled by a hive mind and humanoid predators called Demogorgons, made popular by the 2016 Netflix smash hit "Stranger Things."

The Upside Down looked sort of like the real world, but much spookier and a lot scarier. Some who entered the Upside Down never made it out alive — and those who did were never the same.

The first two seasons of "Stranger Things" were all about the efforts of Eleven — a paranormal psychic — and the townspeople living in the fictional town of Hawkins, Indiana, to keep the hive mind from turning the real world into their upside down.

Over the last couple of weeks, there have been a few developments that suggest there could be some stranger things lurking in our own upside down, payments parallel universe.

FACEBOOK WANTS ACCESS TO USER BANK ACCOUNTS

Talk about the upside down.

Facebook has reportedly had conversations with banks about giving Messenger access to user bank accounts. The premise of the ask, according to a Facebook spokesperson, is to give Messenger users a convenient way to check alerts and "not have to wait on hold with the bank" to get transaction information.

At first blush, the reports of this development almost seemed like fake news in my News Feed.

Never mind that Facebook — a company more than half of U.S. consumer now distrust with their personal data and still dealing with the ongoing fallout from Cambridge Analytica — would think nothing of asking banks for a feed to one of the only pieces of private information Facebook doesn't have: user bank account details.

A recent Ipsos/Reuters poll found that 59 percent of U.S. consumers don't

trust Facebook to keep their personal information private.

And never mind that consumers aren't sitting on hold for hours these days with the bank waiting to get updated information on transactions and account balances.

Banks have invested time and money into creating their own virtual assistants to give consumers access to their bank account information via their mobile phones. Mobile banking apps are one of the top three apps that consumers use regularly and tens of millions of people use them to check balances, pay bills and send money to each other.

And they get alerts on their mobile phones.

The Fed reported that in 2017 about half of all people with bank accounts used their bank's mobile app to conduct transactions. That trend is only increasing — and those who may not use mobile bank apps use online channels and even self-service options at ATMs to do those same things.

Facebook's ask seems driven less by the need for consumer convenience and more by the need to deliver on the promise that Messenger could use chatbots to drive a new revenue stream.

Messenger's vision, under the auspices of Messenger Chief David Marcus, was to become the yellow pages of messaging apps by enabling more consumer-to-business interactions inside the messaging platform. Over time, those interactions would be monetized.

Today, four years after Marcus left PayPal to ignite the Messenger platform, Messenger has roughly 1.3 billion monthly active users worldwide, roughly 100,000 chatbots and literally zero revenue from any of them.

During Facebook's Q2 quarterly results last month, Facebook COO Sheryl Sandburg said monetization beyond advertising across all of the platforms that Facebook operates, including Messenger, was still "early days."

Sandberg mentioned that Messenger was the closest to monetization — but not because chatbots were taking off. The monetization strategy, she explained, was about testing ads inside the app to drive traffic to a business chatbot page in the hopes of getting them to take off.

Financial services is now seen by Messenger as the big chatbot monetization honeypot.

Banks, for their part, seem uninterested.

As they should be.

For Messenger's chatbots to take off, they need to solve a problem that other apps and ecosystems haven't or don't and be a trusted player in filling that gap. That's unlikely to be transactional banking services — not just here in the U.S., but in large developing markets where other established competitors have a healthy head start.

Banks are the trusted stewards of consumer financial information, and it's not clear that even before the data privacy scandal the ask of Messenger would have been viable.

But today, and under the circumstances, it's clearly a very strange thing.

OVERSTOCK AS BITCOIN/BLOCKCHAIN UNICORN

Last week, Overstock's blockchain subsidiary, tZERO raised $270 million from a Chinese private equity firm, valuing the company at $1.5 billion. As part of that capital raise, there was also a commitment to buy an additional $30 million in tZERO tokens to be used inside the blockchain/crypto-enabled ecosystem that Overstock, with its tZERO subsidiary, is creating. That firm, GSR, previously invested $160 million in tZERO tokens during its ICO in June.

On the heels of that news, Overstock's shares spiked 20 percent.

The token has been in existence since December 2017, when it launched a presale and reported taking orders for more than $100 million in tokens in its first 12 hours. Overstock's shares jumped to $75.80 a share that day; three months earlier, it was trading at $23.65. A year before that, the stock was trading at $15.81.

Today, at $41 and change, the stock is down from that December high but nearly 3x what it was this time last year.

But not because the fundamentals of its eCommerce business are strong and getting stronger. In fact, Overstock CEO Patrick Byrne has said publicly he'd like to sell the eCommerce business.

Why wouldn't he?

It's tough slogging it out these days as an online retailer with a value proposition based purely on selling stuff cheap. It's far easier to talk about how bitcoin and blockchain are more revolutionary then the internet and watch your stock price — and market cap — double and triple in value. All in the space of just a few months' time.

All of this talk, of course, masks the myth that blockchain and its bitcoin-powered rails have the capacity to "humanize" and "democratize" money.

Bitcoin today has two primary use cases: as a speculative investment and for financing criminal activities. Even Overstock — among the first, if not the first, to accept bitcoin as a payments currency on its site — reports that a measly 0.25 percent of its sales were attributed to that payment method.

More than that is the narrative that somehow blockchain, with bitcoin as its processing platform, will become the world's financial operating system — more or less the internet of money. This ignores the fact that the processing rails for this system — bitcoin — is concentrated in a handful of miners in China and the exchanges used to turn bitcoin into the real money that people can spend are routinely hacked.

It can also take days to get that crypto converted into spendable, fiat currency — all while the value of bitcoin swings in the wind.

This narrative also glosses over how the internet really works — something I detailed a few years back — but nevertheless people use it as a comparison to hype the impact they say a bitcoin-powered blockchain can have on moving money around the world.

Ten years after the world wide web and http was introduced, we had a powerful internet economy driving trillions of dollars in positive economic activity.

Ten years after bitcoin and blockchain, there's not much to show for it other than a spike in cybercrime financed by bitcoin.

Blockchain-based systems have little value outside a reliable, secure, regulated infrastructure to process transactions.

To think that it is or could be bitcoin is pretty upside down.

SCOOTERS AS BILLION-DOLLAR BABIES

Speaking of unicorns, who'd have ever thought that motorized scooters would become our next multibillion-dollar business sector?

Well, they are, according to venture capitalists in Silicon Valley who've collectively poured tens and tens of millions into companies like Lime and Bird. And these young businesses — young as in less than a year old — have now raised capital based on multibillion-dollar valuations.

Bird, a motorized scooter company based in Santa Monica, California, raised $400 million in just four months and is now valued at $2 billion. Uber invested in Lime in July as part of a $335 million capital raise that valued the company at $1.1 billion.

Investors say that motorized scooters, and Bird in particular, will fundamentally change how people navigate that hard-to-travel last mile. Comparisons to Uber and Lyft abound: a disruptive way to reimagine transportation.

"Genius" is how one Bird investor described the company and its business model.

"Nuisance" is how most cities now describe these motorized scooters.

Scooter graveyards litter cityscapes as riders paying the princely sum of $1.50 to ride a few blocks think nothing of tossing scooters wherever they feel like it, whenever they feel like it. In some cities, helmetless riders take to riding them in bike lanes in the streets — serious accidents waiting to happen.

Scooter companies came into cities without permission with thousands of scooters to spread around. Cities,

unprepared for the urban blight, absent any regulatory framework to guide their conduct, have shut things down or restricted the number of scooters dramatically that these companies can bring into a city.

Some cities are even rethinking how or if they belong at all.

Even China, the birthplace of shared bikes with a serious urban mobility problem to solve, is now grappling with mountains of abandoned bikes that are no longer used but a very and new flavor of urban landfill. A "disruptive" innovation that birthed a few billion-dollar babies, but whose future is also uncertain.

As for that last mile and those motorized scooters, outside an alternative way of scooting around college or corporate campuses in good weather, what problem do these scooters solve at scale for consumers?

It seems that now the stranger thing is walking, driving or taking an Uber or Lyft or the commuter rail that last mile.

PUTTING CAPS ON INNOVATIVE COMPANIES

While city planners are properly examining how to best navigate the pros and cons of motorized scooters, New York City has decided to put a cap on transportation's real innovation — and in one of the world's busiest cities.

Last week, under pressure from taxi unions and under the guise of wanting to study road congestion and driver pay, New York announced it would halt the number of new ridesharing licenses granted for the next year.

The stories of the big dent that Uber and Lyft have put into the taxi universe are well known.

A medallion that once sold for $1 million in New York in 2014 now fetches a little more than a tenth of its value. A recent batch of medallions at auction there averaged $175,000 each.

There's a very good reason for that: Uber and Lyft provide a better service, and people like using them.

And that's because, until they entered the scene, getting a taxi in New York — or anywhere — was a big ball of uncertainty.

Would you get a cab between 3:30 PM and 4:30 PM to make it to the airport, or would dozens whiz by with their "out of service" light on?

Would you get a cab on a rainy day without walking blocks or waiting half an hour on the street waving your arm?

When you finally got one, would you get into a cab that smelled like last night's garlic-infused dinner?

Would that cab have a "broken" card reader and make you pay cash?

Or would the driver get huffy and argumentative when you refused and called their bluff?

With Uber, then Lyft, not only did people know they'd get a car, they knew when it could come, they knew it would be a nice car and they knew that they could call the driver if they wanted a more precise ETA.

And, of course, using the app gave users that magical experience of getting out of the car without the friction of payment at the end of the trip.

The taxi union didn't like Uber cutting in on their turf. Some independent drivers didn't like the competition from other drivers.

The stranger thing here is thinking that caps on ride hailing services and studying the situation will make taxis more innovative or consumers want them more. Or reduce the demand by those consumers for more on demand ride-hailing services. The appeal of on demand is, being able to reliably get a car on demand.

If the competition from Uber and Lyft didn't inspire innovation over the almost 10 years they've been in existence, a cap is unlikely to be the taxi's magic elixir in the next 12 months.

As for the upside down?

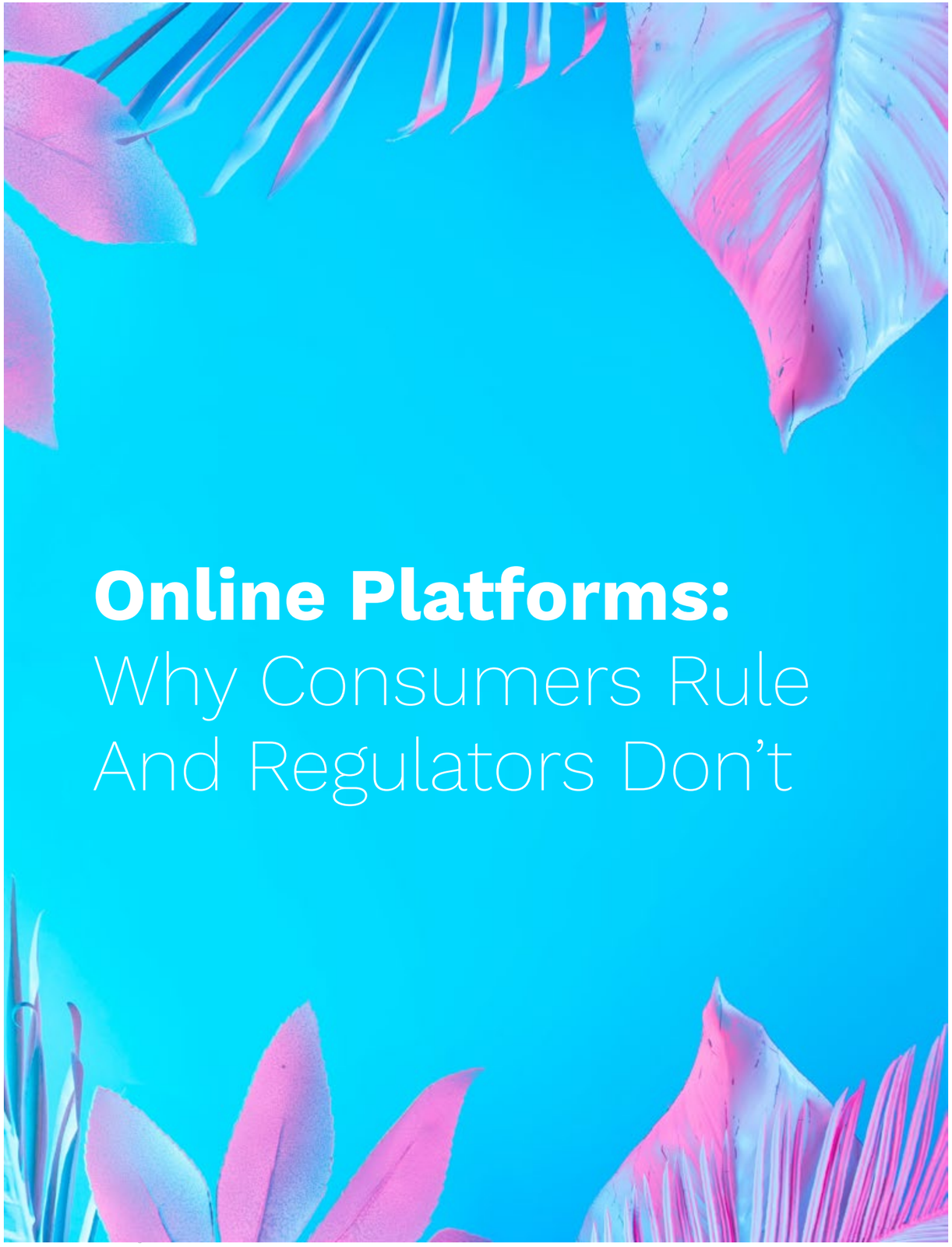
That could be New York commuters' daily life for the next year unless something else happens.

Like taxi drivers accepting bitcoin payments and launching an ICO to fund the tCoin. They expand into the Yellow Scooter business and decide to brand Lemon. They build a bot on Messenger and connect to user bank accounts to enable payment and get alerts.

Overnight, the value of taxi medallions could supersize and the taxi business could turn into a multibillion-dollar unicorn.

Everything, then, would be fine, and they could leave Uber alone.

Only then would we know for sure we were living in the Upside Down.



A few weeks from now will mark the 72nd anniversary of a federal court decision that found grocery store chain The Great Atlantic and Pacific Tea Company and its founders, George and John Hartford, guilty of engaging in anti-competitive behavior. That story is the subject of a terrific book written by economist Marc Levinson, "The Great A&P And The Struggle For Small Business In America". It's a great read and the source of several of the data points quoted in my piece.

That decision caught many by surprise, including the Hartford brothers.

The case against them, and the decision it rendered, deviated sharply from the traditional Sherman Act cases that accused companies of using their market power to raise prices to the detriment of the consumer.

In 1946, the year the verdict was reached, A&P was the country's largest retailer and, obviously, its largest grocery chain.

But here's the rub: The guilty verdict was made on the basis of A&P's use of supply chain innovations to lower prices to consumers.

Yep. Lower prices.

The plaintiffs in the case weren't the families living on Main Street, U.S.A., who benefited from those lower prices — in fact, they loved shopping at A&P and weren't the ones complaining.

Those who did and brought the case were the independent grocery stores who said they could no longer compete when A&P came into their town.

These independent grocers further alleged that their inability to compete led to the destruction of the mom-and-pop stores that were the economic underpinning of those towns and those cities. Shutting those stores, they claimed, risked compromising an important driver of the local economy.

The verdict didn't do much to stop the A&P train — at least for a while. The company thrived and grew for another three decades after the courts handed down its decision.

However, today, A&P no longer exists.

The firm that a White House lawyer once referred to as a "giant bloodsucker," that hit a (staggering at the time) billion dollars in sales in 1929, that was valued at a billion dollars in 1959 and that reinvented the grocery store experience for consumers sold a 42 percent stake to a German investor in 1979 at a $190 million valuation.

By 2009, A&P had shrunk in size and became a modestly sized regional chain.

By 2015, it had closed its doors.

Regulators didn't destroy A&P in the end.

A&P destroyed A&P.

Its failure to keep innovating in the face of new players that did was A&P's downfall.

A&P's grocery playbook — the one the company wrote in the early 1900s and that changed how consumers shopped for groceries — was now in someone else's hands.

And those small grocery stores seeking protection?

Most of them failed too.

There's a lot that can be learned from the A&P story.

A TRIP DOWN GROCERY SHOPPING'S FRICTION-FILLED AISLES

If you think grocery shopping today is a big pain, think about going to the grocery store in the late 1890s and early 1900s.

What might sound like a fun, quaint shopping experience — bopping up and down Main Street between the cheese shop, the butcher, the fishmonger and the dry goods purveyor, picking up food to stock the pantry — was friction wrapped around a very pricey experience.

Not only did the consumer have to visit separate shops to buy different things, which was time-consuming, but once inside, it took forever to get what they came in for.

There was no picking up stuff and putting it in a basket to check out.

Shopkeepers behind counters measured things with those lovely antique scales that some of you may have adorning your kitchens today as decorative accessories. Measurements were imprecise (by accident and sometimes even on purpose), and consumers could only buy what the shopkeeper had in his store. A consumer out of flour or short on milk never knew for sure whether the shopkeeper had either until they walked inside.

Speaking of selection, it was limited to whatever the shopkeeper could display, which further influenced what and how much of what consumers bought. Refrigerated displays were nonexistent, limiting the supply of goods even further.

And since there wasn't home delivery, shopping was also limited to what the lady of the house could carry or push in a small cart home. Most of the time shopping for food was a daily ritual and consumed a big chunk of her time.

About the only thing that was valuable about the whole experience was the ability for the consumer to put things on account to pay later.

Having credit extended by those merchants was a huge convenience for two very good reasons.

One: No one had to schlep piles of cash up and down those Main Streets to settle their grocery tabs.

And, two: Buying groceries was very expensive.

Back then, consumers spent more on groceries than they did on their house payments — about a third of their income.

That's because the grocery store supply chain was incredibly inefficient, and those costs were borne by the consumer.

By the early 1920s, there was roughly one grocery store for every 51 families — literally a grocery store on every corner. Supporting those stores was a massive cottage industry of wholesalers and distributors that supported a huge network of fragmented food plants and suppliers. There was one wholesaler for every 43 mom-and-pop operations.

Each hop from supplier to wholesaler to distributor added costs. The shopkeeper

layered on his margin, including the cost of extending credit to his customers.

Those costs all added up.

The Great Atlantic and Pacific Tea Company would change all of that.

An establishment that started in 1859 as a wholesaler of tea and coffee soon became a wholesale and consumer-facing business that revolutionized the grocery store supply chain and, with it, the grocery store experience. For the first time, shoppers could walk into a store with hundreds, then thousands, of items to buy, inspect what they wanted to buy before buying it and then take those items to a cashier to checkout.

A&P's stated mission was to create and then use its supply chain efficiencies to be the cheapest grocery store in every local market in which it operated. The Hartford brothers who owned and operated it decided it was more important to sell large volumes of goods at a lower profit than to sell fewer things at a higher margin. They saw low prices as a way to bring customers in the door who, when there, would fill their baskets with more things to buy.

A&P created cost efficiencies by displacing wholesalers and dealing directly with the manufacturers, offering them the certainty of an order and guaranteed payment terms. It eliminated credit for consumers — taking cash and check only for payment. It vertically integrated its supply chain, building plants so that it could make and sell its own branded products at lower costs. Despite being the lowest-priced grocer, it paid its employees a competitive salary.

In its day, A&P was the largest coffee buyer in the world, and its Eight O'Clock coffee was a household staple. A&P's 35 bakeries produced 600 million loaves of bread each year along with other bakery confections, more than all but one bakery company in the U.S. at that time.

The Hartford brothers lived and died by data, analyzing sales by store and by product and eyeing the competition to make decisions on everything related to store operations. They used data to negotiate better deals with suppliers and where and when to push the pedal down

on selling their own branded products instead of other brands. The brands that wanted access to the A&P shopper and were willing to play ball were rewarded. In 1926, A&P stopped making chocolate in favor of stocking and promoting the Hershey's brand.

That strategy kept A&P's growth engine humming and customer base growing. The logic that seems obvious by today's standards was revolutionary at the time: Bigger stores with more products for consumers to buy at cheaper prices that were open longer hours would be a more valuable retailer across all financial measures because it was more valuable to the consumer.

Under the stewardship of the Hartford brothers, A&P expanded its store footprint to become the world's largest grocery chain during the 60-year period between 1915 and 1975 and the nation's largest retailer across all categories until 1965.

A&P operated 16,000 locations in all but nine states in the U.S. and reached $1 billion in sales in 1929. It operated 70 factories and 100 warehouses. Its sales were twice that of any other retailer. A&P was reported to have sold one-tenth of all the sugar in the U.S., one-eighth of all coffee and more butter and cigarettes than any other retailer. Of the 32 million households in the U.S. at that time, it was reported that 5 million of those consumers walked into one of its stores every day.

A&P's urban locations and low prices were of particular importance to lower-income consumers and the ethnic minorities living there who once only had more expensive local markets to shop. Economists estimated that A&P's low prices raised the standard of living between 2 percent and 5 percent for consumers. They also estimated that consumers also ate more — 10 percent more — since their grocery dollar went farther.

Despite all of that, A&P never dominated consumer spend on grocery.

At the time the antitrust claims were being made, A&P's sales drove 9.3 percent of grocery sales and a little more than 7 percent (7.3 percent) of consumer spend on grocery.

A&P's profits were also lower than other retailers at that time: 1.3 percent compared to 2.1 percent to 2.7 percent for most retailers.

And yet, the court made its decision, and with it signaled that tradition and status quo was worth preserving at the expense of the innovation that made things more efficient and better for the consumer.

And all because the status quo couldn't keep up.

Somehow, the courts, spurred on by the merchant's claims, surmised that if the mom and pops wouldn't compete, then at some point, the consumer would get harmed — even though consumers had more money in their pockets because of A&P's low prices and could shop other retailers with that extra money and buy other things. A lot of economic value was unleashed when suddenly consumers weren't spending a third of what they made to feed their families.

It's easy to understand the Hartford's brothers' confusion over why the case was brought up in the first place, never mind the court's decision.

But, what ultimately destroyed A&P was A&P's inability and unwillingness to innovate in the face of growing competition.

After the Hartford brothers died, new management pivoted and decided to invest in bulking up its margins at the expense of being the low-cost player.

At the same time, new entrants emerged with a new vision: suburban "supercenters" that would sell food plus lots of other household items at low prices. Kmart and Target emerged and began taking share. A&P faltered and could never regain its footing — out-innovated by the innovators who learned at the feet of the A&P master.

Eighty-two years later, as a famous American philosopher would say, it's déjà vu all over again.

Innovators are emerging and disrupting traditional industry segments from retail to media to advertising to content. Their platform business models remove friction between consumers and those new innovative endpoints and come with better service, a better selection and

a better economic proposition for the consumer.

Consumers willingly get on board because the status quo no longer fits their needs.

Regulators and policymakers are revving their engines and are today taking — or threatening to take — action against innovators that, like the Hartford brothers and A&P in their day, are using technology and new business models to give consumers a better experience, and often at a lower price.

Because consumers are complaining?

Nope.

Because lots of competitors are feeling the pressure from innovation and complaining that the innovators are "unfair."

If you don't believe me, read almost any article now about how the online platforms need to be investigated, castigated, broken up, etc. The consumer will be missing-in-action in the story.

Then look at who is going to the legislature and regulators looking for help in blunting the online platforms.

It's almost always a downtrodden competitor who can't keep up.

FAANG — a reference to Facebook, Apple/Amazon, Netflix and Google — is the pejorative term some use to refer to the new "A&Ps." Sometimes they are referred to as the frightful five (Amazon, Apple, Facebook, Google and Microsoft).

Either way, they are the new "bloodsuckers" some eight decades later.

Aside from not liking online platforms, the critics can't seem to get their stories straight.

Why is Netflix on the list?

I thought this was still a cuddly company that was taking down the cable guys — you know the ones with the big bill and lousy service?

And Microsoft — aren't these the folks that managed to lose the next big thing in

personal computing — the smartphone — to Apple and Google?

Google has been double-whacked, most recently for requiring smartphone manufacturers to install Google's highly desired apps in return for getting a free license for Android, and before that for innovations in displaying product ads that consumers really like.

All the other successful online platforms are in line for a shellacking just like A&P.

They can take two lessons from the history of A&P.

Consumers ultimately decide who wins and who loses.

A&P kept drawing in customers for years after it got whacked by the antitrust courts. People didn't want to go back to the high-priced inefficient old ways. So online platforms can take their public flogging and keep moving on just like Google and Microsoft have done after their public shaming by Brussels.

It's easy to lose those customers if you don't keep innovating. And, even if you do, someone else might just come up with something you've never thought of.

A&P ultimately lost its edge and was overtaken by innovative companies. That's what happened to Microsoft in smartphones and could happen to anyone else too.

Of course, A&P and Amazon have a lot more in common than beginning with the letter A.

Loyalty's New **One Percenters**

Throw out everything you've ever learned about what makes a consumer loyal to a brand.

Consumers, over the last 10 years, have turned loyalty on its head.

And they've done it in ways so subtle that it was almost imperceptible as this loyalty evolution was taking shape.

It wasn't the coveted Gen Z'ers, millennials or even the Bridge Millennials who drove this shift.

Rather, this loyalty redux is age- and generation-independent, income-independent and geography- independent.

In other words, it's the result of how all consumers are buying and sticking with just about every retail purchase they make.

This shift also wasn't influenced by the de facto coupon, promo code, discount loyalty program triumvirate long revered as retail gospel and enshrined on the pages of loyalty playbooks.

In fact, these loyal consumers pay, on average, 3 to 4 percent more for the products they love and are consolidating even more of their product purchasing power on those brands than before.

And those brands?

They aren't the uber-mega-superstar brands with national acclaim, the ones that come with big TV ad budgets and category leadership that typically defined how loyalty was measured — in market and audience share.

Instead, consumers are pledging their loyalty to those long tail brands that enough shoppers like enough to make and keep as their "go-to."

Today, consumers like finding and buying new products, even if they're more expensive than the product they're replacing.

Now that's loyalty.

That is, until these consumers discover the next new product that suits them more.

THE RICHES IN THE NICHES

These are some of the findings of a new piece of research, published in May of this year by Professors Brent Neiman and Joseph Vavra at the University of Chicago Booth School.

Neiman and Vavra studied Nielsen receipt data from 160,000 households and 700 million transactions for the decade between 2004 and 2015.

Their analysis revealed that consumers are loyal all right, but not to the usual suspects. The long tail of retail products is what increasingly drives brand preference and loyalty — without regard to price.

As in, consumers — all of them — will pay more and do to buy those products: 3 to 4 percent more, on average.

Neiman and Vavra also found that consumer loyalty can't be bribed.

Contrary to popular belief and pervasive best practices, Neiman and Vavra discovered that this new flavor of brand loyalty isn't influenced by sales or coupons to incent trial across 91 of the 107 product categories they examined over that 10-year period.

That would be just about all of them, including many categories once regarded as fungible "commodities." In price-sensitive categories like soda, butter and laundry supplies, Neiman and Vavra reported that household spending on those product categories, specifically, increased by 6 percent.

Consumers, they found, don't appear to be as price-sensitive as once thought and don't mind paying more to get what they believe best meets their needs.

Neiman's and Vavra's research also suggests that all consumers are as diverse in their brand loyalty as they are in just about every other aspect of their lives. Sure, it's always been that way — what's in one person's shopping cart differs widely from what's in someone else's.

What's different is the diversity of those items across all of those shoppers.

Consumers may still only buy more or less the same 150 to 250 grocery items in any given year, but those baskets today are curated from a selection that is nearly five times larger than those same stores carried on their store shelves just 20 years ago.

In a world in which this level of consumer and product diversity reigns, mega brand status at a national level isn't required for success — and certainly isn't a precursor for tapping the consumer's loyalty vein.

The riches for consumers, brands and the retailers who've introduced them to those brands are in the brand niches. Provided those niches have enough loyal consumers who keep buying.

It's probably one of the reasons why grocery shoppers at Walmart can choose to pay $22.99 for a pound of Kerrygold Irish butter from grass-fed cows ($4.99 plus $18.00 in shipping) from Walmart.com or pay $5.64 for a pound of Land O'Lakes at a Walmart store. Recognizing those different strokes for (enough) different folks is why Kerrygold butter remains an option on Walmart's virtual shelves.

To meet the needs of loyalty's new one percenters.

ROLLING WITH LOYALTY'S NEW PUNCHES

What appeals to loyalty's one percenters is the opportunity to find innovative new brands that add value or remove a friction, regardless of whose name is on the package, whether that consumer has ever heard of that brand before or whether it costs a little more to buy than what's occupying that space currently in that consumer's pantry, closet, living room, bathroom or kitchen.

Retailers are where these consumers go to find these new products. That makes product discovery coupled with product innovation retail's new playbook.

It's why savvy online retailers have an edge — those with marketplaces that give long tail sellers an opportunity to be discovered and find those loyalty one percenters. It's where technology, machine learning and artificial intelligence (AI) are used to find buying patterns and inform purchasing and pricing decisions — almost in real time.

Discovery and product innovation is why many vertical marketplaces are becoming lifestyle ecosystems that help consumers discover things to buy in context. Houzz isn't only a place to find inspiring ideas for the home but to discover new products and related services in a context that makes it easy to buy — and all from one gigantic marketplace in which inventory is replenished daily.

Farfetch, which will soon go public with a reported $6 billion market cap, is a marketplace of products from designer boutiques all over the world. The site aggregates that product inventory and makes it searchable. Sales are no longer limited to the tourists in that city or the residents who live in that town but to loyalty's many one percenters who will stumble upon a new brand to buy and buy more from later.

Diversity, discovery and product innovation is where savvy brands are focused too.

Coca-Cola isn't just about Coke and Diet Coke anymore. Coca-Cola today is a company of 350 brands and 5,000 products. It's one that, after nearly 17 straight quarters of declining carbonated beverage sales, beat analyst's expectations last quarter.

Coca-Cola may be a smaller company than rival Pepsi, which also produces salty snacks in addition to beverages, but it's one with higher operating margins (27 percent to Pepsi's 16 percent) and roughly the same projected annual growth rate (7.23 percent to Pepsi's 7.54 percent) on the basis, analysts say, of price increases and operational efficiencies.

Enough of loyalty's one percenters are buying enough of those 350 brands to drive their top- and bottom-line growth.

It's why some traditional brick-and-mortar retailers are quickly rewriting their own consumer loyalty playbooks to reflect this shift and becoming platforms for new designers and capsule collections of limited inventory to create urgency and exclusivity.

At full price, but not necessarily at haute couture price points.

It's the concept that Target and H&M popularized years ago when they introduced limited edition designer brands in their stores — cranked up a few decibels. Barney's introduced The Drop earlier this year and Nordstrom introduced The Space — both efforts to entice a brand-loyal, not discount-driven, consumer into their storefronts.

All of this should be good news for retailers who dream of brand-loyal customers who are price-insensitive.

And for all of the innovators who want to be that next new product with which consumers will fall in love.

The question that remains unanswered is what happens once these loyalty one percenters find their new go-to brands.

Will they remain loyal to the retailer who helped make the match?

Or will savvy brands use technology, new business models and payments flows to cut out the retailer middleman and deal direct?

Or will new middlemen emerge, like Alexa and Google Assistant, to help consumers discover the brands in entirely new ways that reduce the importance of the more traditional retail discovery channels?

What Neiman and Vavra's research concludes is that once consumers find a brand they love, they'll stick with it.

Of course, the flip side of this is that when consumers find a new go-to brand, it means they dumped another. So that means the competition to come is with another niche product that can steal their love.

And that's what's driving competition among manufacturers.

And finding those niche products that enough consumers love is what's making the difference between retail success and failure — regardless of where those retailers play.

Viva la difference!

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What Innovators Can Learn From **Uber Cash**

Long before innovators began talking about the power of ecosystems to transform commerce, scientists spent centuries studying them under microscopes in their labs.

Biologists wanted to better understand how to keep the human body's ecosystems from being devastated by disease, so humans could live longer, healthier lives.

Ecologists wanted to better understand the relationship between living things and their environment to improve the health of Mother Earth.

Marine scientists wanted to better understand the health of Mother Earth

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Source: https://io9.gizmodo.com/incredible-historic-pictures-of-early-science-labs-485796493

and its impact on the ecosystems living in the oceans miles beneath it.

Today, payments innovators want to better understand how their innovation could make existing ecosystems stronger and healthier, destroy them on the way to creating something different (and they think better) or blunt their ambitions entirely.

It's a useful metaphor for examining one of the latest payments and commerce ecosystem moves: Uber, with Uber Cash.

AN ECOSYSTEM BY ANY OTHER NAME

As different as the ecosystem pursuits that scientists and innovators may have, success means addressing the complex, and often intractable, challenge that cuts across all of them: finding the balance that keeps ecosystems healthy.

Creating and then keeping that balance today is no different than what scientists in their labs learned long ago: managing the delicate interdependencies of the four characteristics that all ecosystems share — and doing that in near perfect harmony.

Ecosystems need an energy source that gives producers the fuel to create the things that consumers want and need. Absent an energy source, the ecosystem dies. Decomposers are the ecosystem wild card. These ever-present wild cards can tip the balance of an ecosystem one way or the other — sometimes by working quietly under the surface for long periods of time to fortify its health and keep the balance intact. Sometimes working quietly under the surface to mount a surprise attack that is too large for the ecosystem and its existing energy source to fight back and survive.

It's why the word ecosystem, when used to describe the payments and commerce segment, is much more than just a buzzword.

Substitute producer for buyer or supplier.

Consumer for the end user.

Decomposer for innovator large or small, established or emerging.

Fuel source for that singular feature or function that ecosystems use to create the value that keeps producers and consumers on board — and deflect or embrace the actions of emerging innovators.

It's why the fuel source is the ecosystem's unsung hero and secret weapon.

THE ECOSYSTEM'S UNSUNG HERO

The story of Uber and the massive disruption to the century-old regulated taxi industry it created when it launched is well-documented. The nuances of that disruption, however, may not be.

Yes, of course, Uber upset the balance of power in the taxi ecosystem by giving consumers a better "taxi" experience using, at first, idle black car drivers and then later, just about anyone with a newish-car and a driver's license.

Uber rode the tailwinds of smartphone adoption, app stores, well-developed technologies like GPS and (at launch) well-established mapping software provided by Google to blend the online and offline worlds around a consumer experience that before lacked certainty and reliability.

But the fuel source that ignited the Uber platform wasn't the smartphone (although that surely helped) but payment cards and the card networks. It was how Uber used them both that really helped ignite its platform.

A consumer could pop open the Uber app, request a ride, be messaged via the app that the driver would arrive in three minutes at her doorstep, watch the driver's progress, contact the driver if needed — all things that were a monumental improvement over standing in the street hoping for a taxi.

But it was the experience of hopping out of the car upon reaching that final destination without having to pay that defined what would be forever known as "The Uber Experience": The experience of having the card registered to that rider's Uber app automatically charged for the cost of that ride, including a tip for the driver, without the consumer having to do anything at all other than leave the car.

The magic of Uber was the payment experience — an experience that consumers valued because, well, they never had to experience the act of payment at all. It was an invisible payments experience made possible because consumers already had cards in their wallets they could register with the app.

Without the ability for users to register a credit or debit card to their Uber app and experience that now infamous "Uber Experience," Uber would be little more than a more predictable taxi service in a nicer car that smelled better.

The "Uber Experience" helped ignited the Uber platform, city by city, and built the habituation that its ease of use created. Uber reported in July of 2018 that it had completed 10 billion trips, with Uber users spending, on average, $50 a week with Uber. Some spend much more in cities like Boston, New York and San Francisco.

But that's just one side of the Uber ecosystem.

FLEETS AS THE FUEL

Uber created an entirely new vocabulary word and category of transportation service called ridesharing and a new way of describing their drivers — gig workers.

Uber drivers used their own vehicles to "share" rides with passengers willing to pay them more than a basic taxi ride for getting them from point A to point B because of the better experience that Uber provided. Uber's platform paid those drivers — all independent contractors — for those services. Uber drivers had the flexibility to clock on and off when they wanted to work, be paid for the rides completed on those shifts and build their own businesses on top of the Uber platform.

Over the years, Uber's ecosystem grew and thrived: a base of consumers with the Uber app and a base of drivers with the Uber app too who could be matched with consumers wanting a ride. Over the last nine years, Uber has built a thick supply of drivers and equally thick demand from consumers for their services in the 814 cities in which it now operates.

Over those nine years, Uber developed another valuable fuel source: its fleet of drivers.

Just like the original notion of giving idle black car drivers an opportunity to fill in the gaps between appointments with a few gigs, those drivers now powered a local fleet that could leverage its logistics expertise to expand the Uber ecosystem and power new services.

One of those is Uber Eats, which launched in 2014.

Uber Eats is an online delivery aggregator that links an existing Uber consumer's account credentials with a service that delivers food to consumers from local restaurants.

Uber Eats took off, despite launching a decade after Grubhub, three years after Postmates and a year after DoorDash. Uber entered the food delivery arena with a decided advantage: an ecosystem powered by a density of users with registered card credentials and a fleet of drivers with an incentive to earn more money and the capacity and logistics expertise to deliver restaurant orders and keep restaurants front and center in the food delivery game.

Uber used both to get restaurants on board and keep its users and drivers on board too.

Today, many call Uber Eats the company's secret weapon.

Since its launch, Uber Eats has built a network of restaurants in some 280 cities and, according to CEO Dara Khosrowshahi, a business with a $6 billion run rate in 2018 that has grown 200 percent over the last year. That compares with a roughly $3.7 billion run rate for Grubhub.

It's been reported that Uber Eats' users spend, on average, $220.37 a year — far more than is spent on competitors such as Grubhub — and are loyal to its platform. Uber Eats users concentrate 53.6 percent of their food delivery spend using it.

CLOSING THE LOOP

In 2016, Uber launched Local Offers with Visa, and in 2017, it launched the Uber co-branded Visa card issued by Barclays.

With Local Offers, users that register a Visa credit and some debit cards to the Uber app and use it to pay for goods and services at participating stores accrue rewards points. Those points could be used to pay for Uber rides and orders placed via Uber Eats.

The no-fee Visa Barclay's card provides 4 percent cash back rewards when the card is used for dining, including at Uber Eats, and 3 percent when used for travel.

The Uber Cash card launched last week is now the repository for those rewards, credits and gift cards, a stored value account with balances that can be spent on services inside the Uber ecosystem. Using Uber Cash also earns more rewards for users. Uber is kicking in cash to get users to establish an Uber Cash account and attach a funding source to keep it topped up: $5 on a $95 load to get the Uber Cash account balance to a nice round $100, for example.

Uber says that Uber Cash simply organizes, in one place, the various credits and rewards that Uber users already have available to them today. Giving users that visibility is also an incentive, Uber hopes, to use it more — creating the strong network effects set in motion when consumers accrue rewards and can use rewards to pay for services as easily as they can using any other payments method.

In addition to offering users a one-stop shop for Uber credits and rewards, Uber says that it's getting a nice economic bump from having access to the float that these balances generate — more material now as interest rates inch up.

All fueled by payments and payments cards.

FUELING THE ECOSYSTEM PUMP

The fuel that powers ecosystems is usually obvious — hiding in broad daylight — but essential to igniting an ecosystem and keeping it healthy. It gives life to ecosystems and helps them grow. It can also become the basis to build new value inside existing ecosystems — or leveraged by others to destroy its value.

Uber is hoping that Uber Cash is the fuel that will keep its own ecosystem in balance.

Lyft is out to eat its lunch and is making inroads in the ridesharing part of its business. So, too, are the regulators in some cities who are working overtime to make it difficult for Uber — and, in some cases, Lyft now too — to operate within them.

Scooter and bike-sharing apps are multiplying like rabbits in the spring in hipster cities with their (incredulous) multi-billion valuations and cheap-as-dirt fares. Uber's CEO said buying JUMP bikes is a way to blunt that impact, even if it means taking a hit on margins across its ridesharing platform. Rumor has it that Uber is close to offering scooter services as well. The Uber app now makes it easy for users to switch and pay using their Uber credentials between ridesharing options.

Meanwhile, Grubhub, DoorDash and Postmates aren't twiddling their thumbs, watching Uber eat their food delivery lunch either: All three are pursing very different strategies to strengthen their own ecosystems in an effort to destabilize Uber's.

Uber, with Uber Cash, appears to be doubling down on the fuel source that ignited it — using payments to create a new Uber Experience that it hopes will

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keep the Uber ecosystem healthy and fend off ecosystem threats. That new payment experience offers more value to users each time it's used to pay for the services its users already consume on a regular, even daily, basis.

With and without them.

Today that includes the many flavors of ridesharing it offers and food delivery via Uber Eats. Soon, that ecosystem will include alternative transportation options, including bike and scooter rentals that are now part of the Uber ecosystem.

And tomorrow, although Uber minimized this in my conversation with them last week, a wallet that could be used to pay for goods and services that are a contextual part of that Uber experience: order ahead for pick up at the same restaurants that may be part of the Uber Eats delivery network today or may want to be down the road.

Uber isn't the first to use payments as the fuel to ignite a powerful, sticky ecosystem. PayPal and Amazon used the power of an easy way to pay two decades ago to create and grow powerful commerce ecosystems.

But payments, by itself, isn't enough.

Hiding in plain sight is the experience wrapped around the payment that builds healthy ecosystems and keeps producers and consumers sticky — and makes it much harder for ecosystem destroyers to take root.

The lesson of Uber, PayPal and Amazon is that payments is but a means to that very powerful end.

Why **Certainty** Rules Payments

I needed a few outdoor cushions earlier this season and hired a local upholstery shop to make them. This small business is a really small business: a guy working out of a teeny tiny storefront in a little town north of Boston. The shop came highly recommended for the quality of his work and high service levels. The sole proprietor is a hard-working immigrant who's been in business in this town for 20 years.

He delivered my cushions, as promised, about a month ago. The product was exceptional. The handwritten invoice he left with my cushions included his name, his mobile phone number and the payment methods he accepted: cash or check. Like many small businesses (SMBs), he doesn't accept cards. The invoice amount was less than $500.

He's still waiting for his money: not because I haven't tried to pay him over the last month, but because how I have tried to pay has failed him, and me.

When I got the invoice, I panicked a little. I haven't had paper checks in the house in more than a year, and no one would be back at the house for another week to give him cash. So, I called and asked whether he would accept payment via my bank app and his mobile phone number.

He seemed confused at first — obviously no one had ever tried to pay him this way — but I explained how it would work. I also told him it was easy — once he got the message via text, all he needed to do was click on the link and he would be given instructions for how to accept the deposit.

I had a sense there might be a problem when I was notified via text a day later that he had not picked up the money. I texted to remind him to click on the message and follow the instructions. He said he needed to go to his bank to get help since when he clicked, he didn't know what to do.

In the meantime, I gave him a few more items to upholster, which were delivered this past weekend, along with a new invoice for that work — plus the balance from the first invoice.

He said when he went to his bank — a small one — to ask for help, he was told the bank didn't support this type

of payment and to return the next day when the manager was back. This was not a payment going to a business bank account but to his personal account, which probably does double duty as his business bank account for all I know.

Neither he nor his bank could figure out how to connect his account in order to accept my payment. Zelle hadn't yet reached this small bank, and the instructions for how to enable that deposit weren't clear enough for he or his bank to navigate. At least that's what I understood from the conversations he had at the bank and relayed back to me.

Since he had other options for how to receive payment from me, he dropped it with his bank.

He has a PayPal account, so that's how I'll pay him today.

All of you reading this probably bank at one of the 18 big banks that are part of this network and are thinking, "What's the big deal?" and "You must be dealing with someone pretty unsophisticated who banks at a podunk little bank."

That would ignore the fact that there's a huge swath of SMBs who operate just like him and bank at one of the 13,198 banks that have not yet connected to the Zelle network — lots of them very small.

I tell you this story not to criticize the Zelle network — I use it, and it's great when it works — nor the efforts on the company's part to create efficient ways to pay, nor to minimize the slog that it is to connect to every single small bank in the country to create those easy and seamless experiences. Or to buff up PayPal.

But to remind all of us that payment innovations are only as good as the certainty those innovations deliver to their intended users.

Uncertainty, particularly when it comes to people's money, creates confusion, and confusion creates distress.

Distress creates friction.

And when that happens, humans default to what they know is certain — whether they are running treasury ops for the biggest company in the world or a little

upholstery shop on the North Shore of Boston (out $500 now for a month).

THE DISLIKE OF THE UNKNOWN

It's easy to assume from my example that ubiquity and certainty are two sides of the same coin, but that's not my point.

Like most adults in the U.S., my upholstery guy has a bank account and, in theory, sending him money via a peer-to-peer (P2P) network that can enable receipt across any bank in the U.S. seemed like a no-brainer.

But it's not that simple, at least not yet. And the outcome is far from certain.

Knowing that one out of every two people with bank accounts will likely encounter enough friction if their bank isn't part of the P2P network to abandon the transaction creates uncertainty for me — and probably other senders like me too who may have had a similar experience.

Lots of people worldwide may have PayPal accounts — 250 million at last count — but many more have bank accounts: About 230 million adults in the U.S. have a bank account — some 93 percent of the adult population.

The outcome, however, using PayPal, is more certain for both the sender and the receiver. People with a PayPal account know how to accept money and then transfer it to their bank account if that is what they choose to do.

People with a bank account that's not attached to the Zelle network may not have that certainty, even if they have a way to enable their bank account to accept a transfer of funds.

So, when someone I want to pay has PayPal, we both know it will work. When someone I want to pay has a bank account, neither one of us knows, just from that fact, that it will work.

That lack of certainty will guide my decision about what to use when sending money to people going forward. It means the question I might ask (instead of whether I can use their mobile number to send money to their bank account) is whether they have a PayPal account I can send money to instead.

When there isn't ubiquity, which creates certainty, uncertainty rules.

CERTAINTY AS A CATALYST FOR CHANGE

Ubiquity, of course, is payments nirvana. It's why Visa and Mastercard are such powerful global brands. Consumers know that payment methods bearing their brand are accepted at tens of millions of merchants globally and that when they use those products, they work reliably.

That creates certainty.

Retail payments innovators have tapped into that ubiquity-driven certainty to enable new use cases that extend their reach.

PayPal and Amazon enable users to attach Visa- and Mastercard-branded payment methods to their accounts and to use them as the funding source when transacting on sites where their buttons are accepted, eliminating the need to enter card credentials on sites they may not know. Seeing those "buy buttons" on websites is a cue that on websites and within the marketplaces where those buttons are accepted, the payments experience is certain and secure.

Processers enable push payments via a debit card as an alias, giving companies new options and the certainty of getting money instantly into the bank accounts of their customers.

We see similar dynamics at play in the B2B payments space around the notion of real-time payments.

Every business has a bank account, and big businesses have many more than one. The bank account is the ubiquitous funding source used by trading partners to pay each other.

The notion of moving those funds faster between the bank accounts of those trading partners is driving a slew of innovation and investment across bank and non-bank network rails today.

But all else equal, that's not what treasurers and cash managers say they value the most today. Certainty of good funds is what they need to plan their cash position, as is the certainty that the funds moving across the networks are secure.

Ubiquity can also be redefined by certainty.

Innovations that provide that transparency, predictability and security today are valued just as much, if not more than, the speed at which those funds move.

Banks, knowing this, are working through the cost/benefit analysis of making investments in real-time systems when the corporates they are serving have prioritized other things as more pressing. This is happening at the same time that other payments options are emerging — or have emerged — that enable a more certain, faster payments outcome in a more cost-effective manner.

Just like we're seeing on the retail side of payments, innovators are leveraging the ubiquity of the business bank account to build solutions that deliver the certainty that corporates say they want and need when making and receiving payments from other businesses and making those funds move faster as well.

Same Day ACH leverages existing rails to enable same-day funds availability, discussing options to expand their settlement windows. Innovators are using existing rails, new technologies and new fraud and risk models to push funds into merchant accounts the instant sales are made. Others are taking on the heavy lift of integrating with messaging standards and financial institutions so neither they nor the corporates they serve have to do so.

MAKING THE UNKNOWN CERTAIN

Certainty can also build the trust that can become the catalyst for change.

It's been proven scientifically that most people dislike the unknown — sometimes so much so that it becomes debilitating. Some people thrive on the unknown; they like the risk, love the thrill. But most of us don't. Aside from the occasional trip to Vegas, we like certainty in our daily lives.

Often people rely on people they know and trust to get them over the hump. Their own experiences, of course (good and bad), are the final judge and jury.

I've been writing and speaking about the significance of certainty and payments

innovation for the last five years. It's a concept that's often marginalized by many innovators, even downplayed by the incumbent players who've been the source of that certainty for many years.

Innovators often think that most people will see past their fear of the unknown because their new way of doing business is modern and high-tech and delivers a better outcome.

Only if that better outcome is also one that delivers certainty.

There will always be those who embrace uncertainty as the motivation to try something new.

But the more innovative the experience, the less likely people — business people and consumers — are willing to try it unless it's connected to a brand they know and trust for enabling a reliable, safe and secure similar experience.

It's why people are willing to use a voice-activated speaker powered by Alexa for commerce: They know and trust the Amazon brand for delivering a reliable commerce experience.

It's why consumers default to paying with plastic in a store even if they're holding a mobile wallet in their other hand.

It's why more than half of all B2B payments in the U.S. are still made using a paper check.

It's why, regardless of whether you're a sole proprietor who makes cushion covers or the treasurer managing the cash position of a Fortune 500 company, your appetite for payments innovation is the same: Show me the certainty, and I'll show you the money.

Who's Going In The **Connected Car** Driver's Seat?

Before there was Alexa, Bixby, Siri and Google Assistant, there was Emma Nutt.

Emma Nutt, born in 1860 in a small town in Maine, was hired by Alexander Graham Bell in 1878 to be the world's first female telephone switchboard operator. When Bell's invention — the telephone — was first introduced, phones were sold in pairs, and calls could be made between those two parties only.

To ignite adoption and use of telephones, Bell knew he needed to create a network that could connect all telephone users with each other. Getting that going would require someone to make those connections, since there weren't automatic switches back then.

At first, that intermediary was a bunch of boys tasked with intercepting calls made to a central switchboard. When a call came in, they would ask who the person wanted to be connected to, then they would physically scramble up and down the floor-to-ceiling boards of telephone lines to plug and unplug phone lines to connect those callers. That turned out to be less than ideal. The boys' physical dexterity was overshadowed by their pranks and less than customer-friendly behavior.

That was when Bell decided women would be better suited to serve in that role.

The job description Bell reportedly posted was interesting: qualified candidates must have long arms — switchboards were tall — and be unmarried, since it was a 24/7 job. To accommodate that schedule, Bell would install switchboards into the homes of his female employees.

His first hire was Emma Nutt in 1878.

It turned out to be a stroke of genius and a turning point for Bell and the telephone.

I'll spare you the infamous Margaret Thatcher quote about the need to hire a woman if one really wants to get something done…

THE POWER OF (A WOMAN'S) VOICE

Customers of Bell's network lauded Nutt's soothing, friendly voice and technical expertise. Based on that success, Bell hired Nutt's sister and more women after that. Bell discovered that women could handle the physical aspect of the job and brought a more pleasant demeanor and reliable service level to the role.

Over the years, of course, long-armed women were replaced by the automated switching systems that evolved to become the backbone of the telephone switching systems that are in place today.

But it was Nutt, with her voice, that became the intermediary that helped ignite the telephone network we know and use today. She stayed with Bell and the Boston Telephone Dispatch Company for more than 30 years until her retirement.

At the end of her three-decade-plus career, about 25 percent of the U.S. population had a phone in their homes.

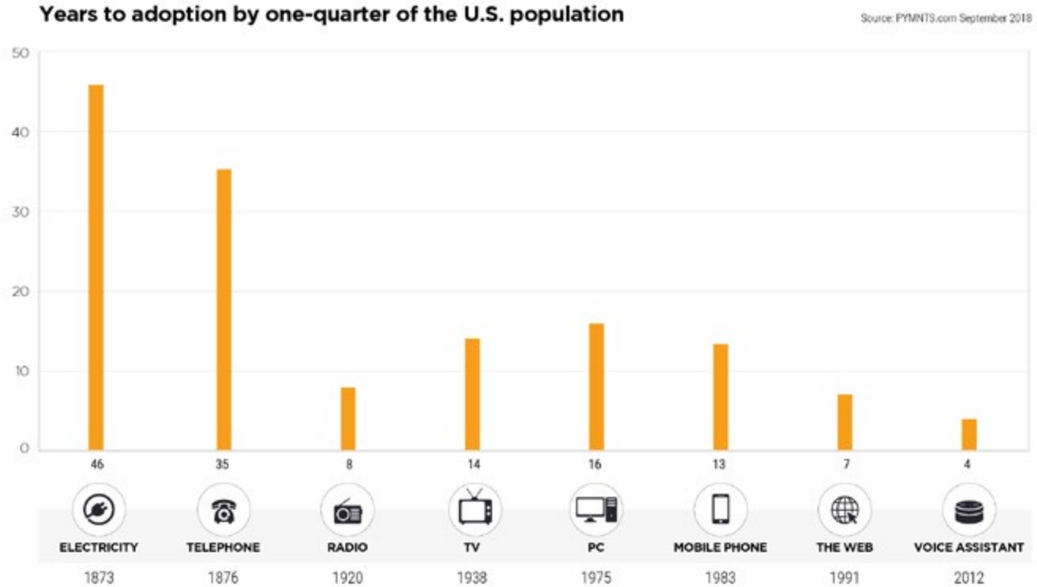
VOICE AS INTERMEDIARY 139 YEARS LATER

One hundred years later — 139 years after the introduction of the telephone — another pleasant female voice has emerged to ignite the next generation of voice-activated networks: Alexa.

It's only taken Alexa, her voice and the voice ecosystem that she and others have since spawned four years for 25 percent of the U.S. population to own a voice-activated device, many of which are powered by Alexa. That rate of penetration is astounding.

Amazon with Alexa wasn't the first to leverage the consumer's interest in using voice instead of typing and swiping as a way to access content and services. But Amazon has used a pleasant-voiced intermediary to create, and ignite, a voice-activated ecosystem.

That ecosystem today includes developers who create skills powered



by Alexa, SDKs (software developer kits) for third parties to use to incorporate Alexa into their own devices and a suite of Amazon's own hardware devices that consumers can purchase to bring Alexa and her skills into their homes and offices.

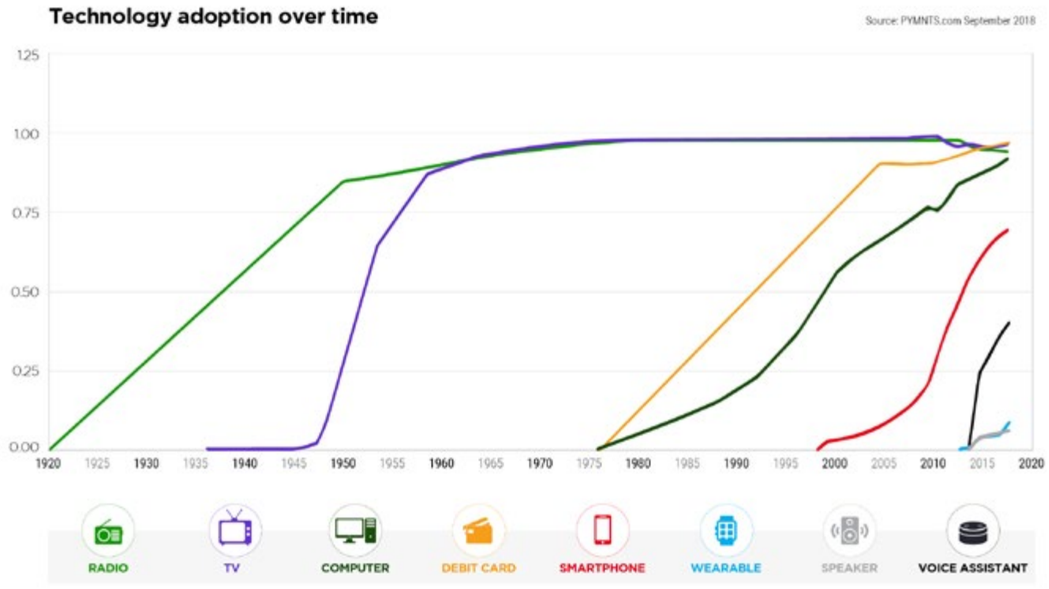
And cars.

The launch of Echo Auto last week, on the heels of the August release of the Amazon Auto SDK, makes it clear that Alexa wants to ride shotgun in the U.S. consumer's automobile.

Every one of them.

Google's recent announcement makes it clear that it isn't about to let Alexa hog the road.

Google reported last week that it has reached a deal with the Renault-Nissan-Mitsubishi alliance to use its Android operating system as the in-dash operating system for the OEMs (original equipment



manufacturers) that collectively sell more cars than any other auto OEM in the world — last year, some 10.6 million vehicles.

That deal starts in 2021. It's a long way in the future, but it positions Google for the new 5G world in which connected cars will become more important.

Still, it's three years off.

Consumers, of course, want it now. And have figured out ways to get it now.

THE VOICE-ACTIVATED ROAD RACE

Cars have recently become a consumer-connected device even though they've been a powerful connected device in the fleet and transportation world for a long time.

Telematics have been used by fleets for nearly 20 years to improve vehicle performance and driver safety and to track freight and driver performance behind the wheel.

Cars have become a connected device not necessarily because of what OEMs have done to make them that way but because of the devices consumers have brought into their cars to create those in-car connected experiences.

Consumers use Bluetooth to connect the now nearly ubiquitous smartphone to their car's in-dash system to make calls and listen to their Spotify playlists. The not-so-very attractive (but oh-so-very functional) suction windshield/dashboard phone mounts have made it safer for drivers to access navigation and other apps while behind the wheel, including the apps that drive (pun intended) commerce.

We did a study last year in collaboration with Visa that identified some $212 billion of commerce initiated by drivers in the U.S. during their commutes to and from work each year. Consumers now order everything from coffee in the morning to groceries or dinner for pick-up on the way home. They use apps to find, and sometimes even pay for, gas at the pump — as well as to find and pay for parking.

Car OEMs want in on all of that action. The question is: Can they, and will consumers let them?

Fearful of giving up ground to a tech intermediary — Apple, Google, Amazon — many OEMs are working with third parties to develop their own branded apps and connected in-dash experiences.

Ford has created its own system even though Alexa can be found in some Ford models. Mercedes-Benz announced it will use a third party to create its own. Xevo today powers 25 million vehicles with an in-dash platform that gives OEMs the opportunity to create a custom-branded experience that starts the moment a consumer buys a new car. Xevo says dealers use the new car buyer "onboarding" process to get car owners to download its branded app that connects the user to maintenance and other car-centric alerts. An impending use case includes linking car telematics to driver profiles to enable commerce and new use cases, such as usage-based insurance.

Consumers will have to buy a new car or a used car new enough to have this in-dash experience and join the ecosystem.

That might take some time.

Did I mention consumers want connected cars now?

Consumers are keeping their cars longer than ever before.

In the U.S. today, there are roughly 272 million cars on the road. The average age of those cars is 12.1 years. Two years have been added to that lifespan over the decade spanning 2007 to 2017.

Roughly 17.1 million vehicles were sold in the U.S. in 2017. Roughly 6.7 million of those were cars; the rest, light trucks and SUVs.

Consumers are keeping their cars longer for many reasons. New cars are more expensive than many people can afford, so they are opt to buy used cars instead. Used car sales in the U.S. are more than double that of new cars.

Cars are built better than they ever were, so they last longer. Many models also change very little in terms of look and feel from year to year, which makes keeping a car more aesthetically acceptable, too. And people just aren't driving as much.

That's not a problem for phone-based apps, which have been connected to many cars for a long time via Bluetooth.

But it makes getting a critical mass of OEM-branded, in-dash app users a very long-term prospect — and the prospects of engaging an ecosystem around those apps a long-term prospect too. That assumes, of course, that consumers want to pop open a separate app that is only about their car and what they do in that car using that app.

But that's not the connected car experience consumers have and use today.

For OEMs to capture that experience, they might just have to share the road with the tech giants — two in particular.

ON THE ROAD TO THE CONNECTED LIFE

I've been writing about the impact of voice and commerce ever since Amazon hit the scene with Alexa in 2014. It was Alexa, not Siri — despite being a part of the iPhone experience since 2012 — that put voice on the map as a powerful consumer access channel.

That's because Amazon put her — and the devices that powered her — into the center of the consumer's universe — in homes at first and later in smartphones that are carried everywhere. Today, Alexa has captured roughly 62 percent of the voice-activated market and has more than 30,000 skills for consumers to tap.

Alexa started out as a voice on the other end of a cylinder that sat on the kitchen counter that told jokes, played music and got the weather forecast on demand. All those things got consumers comfortable with talking to an inanimate object and getting reasonably coherent responses in return on a series of low-risk commands.

It also gave Alexa the chance to learn from consumers, better understand what they were saying and give her context.

Over time, consumers got more comfortable making Alexa their home command center, and Alexa got smarter in her responses. Today, consumers use Alexa on their phones and via the devices they have in their homes to control lights and security systems and locks and curtains and appliances using only their voices.

Even from their cars.

But Amazon didn't build Alexa to serve only as a voice-activated on/off switch.

Amazon was built for commerce. Its marketplace is the digital intermediary and payments network that connects a shopper with a product to buy. The ecosystem it has created over the last two decades is about optimizing those commerce opportunities for its users and the sellers that wish to reach them — now on and off its branded marketplace.

Alexa was built as a layer on top of Amazon's commerce platform — first connecting consumers with information, then tasks, then access to information and services that led to commerce: ordering flowers, calling an Uber, ordering pizza for delivery.

Alexa also wasn't built to be device-centric, channel-centric or use-case centric. Alexa was built to go where her

users take her — including while driving in their cars.

This isn't to say that Alexa and Amazon have car commerce sewn up, nor even voice-activated commerce in the bag.

Google and Google Assistant has its roots in search and commerce too, and consumers are used to "asking Google" a lot, including where to buy things. Google has also introduced a line of hardware devices that have captured more than 25 percent of the voice-activated market and is assembling a cohort of merchants, including Walmart, that would like to give Alexa a run for her money. In the car, Google's Waze and Maps are the driver's go-to's that are also integrated with connected commerce experiences, including a growing number of order-ahead options at quick-service restaurants.

But this is to suggest, and suggest strongly, that the race isn't about OEMs wanting a spiffy in-dash, voice-activated, OEM-branded experience and being fearful of big tech getting into their space. Big tech is in their space because the consumer has put them there.

The voice-activated, connected device experience those consumers are taking into those cars is just one stop on the connected journey consumers take every day. Consumers don't want an experience that connects them to a device, but one that can connect them to their lives.

And they want it now.

At $29.99 (soon to be $49.99), the Echo Auto can put Alexa behind the wheel of every car on the road now. It will likely be under many Christmas trees this holiday season. For Alexa, connecting the car to commerce is first about connecting the consumer to commerce, then giving her the ability to take that experience on the road, wherever it may lead.

Still, I wouldn't count Google out. It has significant strengths and a powerful Android-based ecosystem. Or, for that matter, Apple, which is pretty much nowhere today when it comes to a voice-activated ecosystem — a 4.1 percent share — but has all the incentives and the money to fight its way back into the game.

But this is going to be a race between tech giants who can power rich ecosystems inside of the car and out — not the car OEMs who don't want today to share the road.

And at least one of those tech giants is using a pleasant, female voice as the intermediary that connects those many endpoints for the consumer.

Bitcoin: 10 Years Of Smoke And Mirrors

The end of this month, Oct. 31, 2018, will mark the 10th anniversary of the day that a link to a paper, authored by Satoshi Nakamoto, describing the digital currency called bitcoin was first publicly circulated.

Jan. 3, 2019 will mark the 10th anniversary of the first bitcoin block that was mined by Satoshi, giving birth to the notion that a digitized, anonymized currency sent over a permission-less, distributed ledger could democratize how money would move between people and parties around the world.

Ten years after PayPal launched, it was operating in 190 countries and had 60 million users.

Ten years after Amazon launched, it was nearing 70 million users and had just launched Amazon Prime.

Ten years after Visa and Mastercard launched, they had each licensed their tech to thousands of banks that had cards in the hands of millions of consumers, who were using them to buy things at millions of merchants.

Ten years after Apple launched the first iPhone, it had sold 1.2 billion of them, and had firmly and fully ignited the mobile commerce revolution with the notion of apps and a robust developer ecosystem.

Ten years after bitcoin launched, it remains the go-to currency of criminals and a way for cybercrooks to wash their money. Well, that's when it's not being bought by speculators as a digital lottery ticket. Seventy-five percent of bitcoin transactions are the result of miners moving money between themselves and speculators trading it — the transactions that it powers are nefarious in nature, at best.

Bitcoin's processing operation is highly concentrated within a handful of miners in China — which is getting more concentrated now, since the price of bitcoin has crashed and fewer players can afford to keep the lights on (literally, since bitcoin processing requires a massive amount of electricity).

Bitcoin exchanges are routinely hacked, and those funds are usually lost forever.

Bitcoin is anything but free and, in fact, it can be pretty pricey for senders and receivers. Miners, despite eschewing capitalist regimes, as it turns out, like the capitalist way of being paid for their services.

Sending money over the bitcoin rails is also anything but fast. Despite very low transaction volumes, it can take as long as an hour or more to take a round trip on its rails.

Yet, what's amazing to me is that we are still, as an industry, talking about it — bitcoin, now crypto, blockchain — as if its potential to revolutionize our global financial system, and the way money moves between parties around the world, is just around the corner.

It isn't because it won't.

The innovation touted 10 years ago, that has garnered billions of dollars of venture capital (VC) funding, hasn't turned out to be the "internet of money" as advertised.

Nor is it now (nor will it ever be) the single digital currency that will democratize the movement of money from anyone to anyone for free — or free from the centralized regimes that bitcoin enthusiasts said only made money more expensive and out of reach for the underserved in developing economies.

Only recently has the media started waking up and piling on.

But only because it has to now.

OF FADS AND FRAMEWORKS

I've been writing about bitcoin, blockchain and the smoke and mirrors of their promise to change our financial system since 2014.

In those pieces, I acknowledged bitcoin as an interesting, even fascinating, innovation. But as the salvation of our global financial system, not even close.

At least once a year, I reprise the theme, mostly to remind everyone that the innovation that truly has the power to change the world is built on a framework that respects — and reflects — how networks work and how they scale. Those frameworks have launched thousands of successful platforms and tubed many thousands more.

The design principles of these complex networks are the subject of many articles that my colleagues and I have written about for a decade or more — and captured in two books that were published by Harvard Business School Press in 2007 (*Catalyst Code: The Strategies Behind The World's Most Dynamic Companies*) and 2016 (*Matchmakers: The New Economics of Multisided Platforms*).

Those frameworks start with finding a problem that needs to be solved by eliminating friction or adding value to platform stakeholders. The platform becomes the source of that value. That value is used to build those networks using sound business models, with strong, principled governance that builds the trust that delivers scale.

All of that turns out to be really important, and has proven to be time and time again, when it comes to moving money.

The corner that bitcoin/crypto and blockchain have boxed themselves into now, a decade later, is that innovating financial services and payments is impossible without them.

It's becoming a more problematic box, too, that has raised only more doubts about their viability.

Especially now that we see how little payments innovation they have ignited and how much progress has been made without them.

INNOVATION BY ANY OTHER NAME

Satoshi's innovation was a distributed ledger network powered by bitcoin. Bitcoin's use cases — enabling criminal activities and fueling speculation — helped it build critical mass as a processing platform for distributed ledger tech (DLT). It's why bitcoin and blockchain are inextricably used — and often conflated. You can have distributed ledger tech without using bitcoin rails, but you can't have bitcoin without blockchain technology.

Bitcoin's unsavory nature gave rise to alternative distributed ledger schemes,

powered by new cryptocurrencies such as Ethereum, XRP or Lumens.

All of these cryptocurrencies are now trying to build their own networks on top of uses cases that move money between parties via a distributed ledger protocol — using the need to innovate financial services and payments as the hook and driver of the need.

It's a curious position to take.

The only reason for using those cryptocurrencies, and the more than 1,000 that have followed in their footsteps, is to avoid using the financial services networks that exist today — and the fiat currencies that underpin them.

It assumes that innovation of financial services globally is only possible outside of the existing financial services infrastructure, using a new cryptocurrency as its exchange of value — essentially, the processing rails to move money between parties.

And now, in the face of the Great Crypto crash and burn, using stablecoins tied to the stable USD to hedge against crypto volatility and create the stability needed to make everything, from lattes to Louboutin's, buyable using crypto.

That means we are now funding and creating cryptocurrency innovations to make other cryptocurrency innovations that haven't worked more viable.

Only in America.

WHEN FACTS GET IN THE WAY

Here's the really big news flash: Money has been digital and moving around the world that way long before most people started talking bitcoin, crypto and distributed ledger tech.

Take developing markets.

M-Pesa's original use case was to digitize the paper currency that was once sent back home to villages via paper bags and busses. A decade later, it has more than 26 million users who've sent and received more than 184 billion ($1.8 billion USD) Kenyan shillings over the last 10 years, using nothing more than a feature phone. Money is exchanged instantly when people want and need it to be.

China has, in effect, digitized money with Alipay and has cracked down hard on crypto exchanges. It, like every other government in the world, doesn't want to aid and abet money launderers inside its proverbial "four walls."

India is using QR codes, existing rails and its own fiat currency to enable digital payments between people in the aftermath of its demonetization, on the road to establishing digital payments.

Western Union moves money all over the world — and into developing economies — and has for more than 160 years without needing cryptocurrencies. Western Union CEO Hikmet Ersek has gone on record, stating that Ripple's XRP, which the company piloted, saved Western Union absolutely no time and no money.

MoneyGram, Xoom and PayPal move money all over the world, too, without crypto. So, do banks and innovators that leverage those rails to create payments innovations that remove big frictions for buyers and sellers.

THE TALK OF THE BLOCKCHAIN TECH

Today, blockchain tech has pushed bitcoin off its perch at the top of the innovation hype cycle. We're about to release a new study that documents the degree to which the hype machine has been pinned on blockchain tech's claims of reinventing everything, from moving money to making sure that our food supply is safe.

Over the last 18 months or so, we found more than 140 announcements about blockchain tech pilots, many of which relate to use cases in payments and financial services.

Only four of those announcements have ever been followed by stories describing further development or success — or that money has been raised to double down and do even more.

At the same time, investments in blockchain tech are positively puny.

It's been reported that investments in blockchain and blockchain tech by the enterprise, worldwide, are expected to reach a whole $2.1 billion in 2018 — twice as much as last year. Investments in

cybersecurity measures, by comparison, are expected to reach nearly $97 billion this year.

A study done by Juniper suggested companies that have spent $100,000 to pilot blockchain experiments reported they would likely match that investment in the year to come. A whole $100,000 — most likely in response to the board that pressured the CEO to "do something" with blockchain, for fear of missing out.

Call me underwhelmed.

Hardly anyone — okay, maybe there's someone — is exactly betting the farm on blockchain tech to power their futures.

That also happens to reflect the reality of business.

The conversations the media wants us to have now about bitcoin, cryptocurrencies and blockchain tech have lost sight of the problem that needs solving, as we examine the evolution of global financial services and the networks that power them. And what's needed by all the parties that rely on them today to move money safely between them.

No one will argue that things could be more efficient, that networks could be more interoperable or that standards should be more consistent globally.

And in the B2B payments arena, money that moves more transparently and quickly than it does now.

Initiatives that address those issues are under way by innovators and incumbents alike. And, the ability to digitize, secure and make that process smarter is a concept worth exploring, and has a great potential upside.

But we don't need bitcoin — or one of the thousand cryptocurrencies issued by unregulated entities that all need entirely new rails and enabling ecosystems — to do that.

While bitcoin and crypto garner the headlines, innovators are taking the best of distributed, permissioned, secure and private ledger tech, and digitizing assets issued by regulated financial services companies and governments to clear and settle transactions in near real time, globally, at scale.

And they are doing it within the existing, secure and regulated environments, using the fiat currencies of the endpoints in between those transactions.

If it sounds a lot like how global card networks and bank rails operate today, it should.

As global networks, Visa and Mastercard both coordinate the operation of decentralized, permissioned and distributed networks of issuers, cardholders, merchants, acquirers and processors to enable the settlement of transactions between anyone on a global scale in real time.

Neither Visa nor Mastercard felt the need to rebuild the bedrock of the financial systems around the world to do that — even though both networks are, today, making big investments to make that process and their rails even more efficient.

They used technology and computing power to connect and secure — and digitize — those transactions, and created the framework for the payments ecosystem that now powers trillions of dollars of global commerce every year.

Those rails and that ecosystem have also given rise to vibrant ecosystems of innovators who've built on top of those networks to enable better end-user experiences, including operating their rails in reverse to now move money between parties instantly and on a global basis.

When Steve Jobs launched the first the iPhone in 2007, he didn't feel compelled to rebuild mobile broadband to do it. He leveraged existing ecosystems and that infrastructure, and built on top of it. As the iPhone gained momentum, those ecosystems and that infrastructure did, too — from 3G to 4G, and now soon 5G to remain relevant and to monetize their own place in that ecosystem.

Jeff Bezos didn't feel compelled to reinvent the internet to launch Amazon, but leveraged the application layer that runs on top of it to create the app that now accounts for more than half of all eCommerce sales — and has since ignited the sales for millions of small sellers who leverage it to get distribution.

Over the 10 years that bitcoin has been alive, the billions that have been invested in ventures, promising to create an ecosystem that would ignite a new global payments revolution, have failed to deliver even a modicum of its promise.

Bitcoin has failed because it doesn't solve a problem that enough people have — except for criminals and country dictators who want an unregulated, anonymous currency with which to do business out of the public eye.

The cryptos that have emerged, to become the processing rails to build alt payments networks, don't solve a problem that anyone has either.

The distributed-ledger promise in innovating how payments move between people and businesses is nascent, and the jury is still out as to whether it will ever emerge as the powerful global payments elixir that its hype portrays it to be.

Some say, be patient and give it time. But time can be an innovator's curse. Too much time means that others with a better solution gain traction, making what could have been, well, what could have been.

So today, while bitcoin and blockchain tech get much of the press (and as much of the media still waxes on about how revolutionary it all is), the hard work to solve real frictions in payments — the vast majority of that innovation — is happening much more quietly using the rails and institutions people and businesses trust.

Those who can, do. Those who can't, issue a lot of press releases.

In the meantime, the bitcoin bubble really hasn't burst, and the hype goes on. At this rate, I might get to recycle this article in another 5 years, or maybe even 10.

The Roil Over B2B Payments Rails

B2B payments innovators and Warren Buffet have something in common: They are both obsessed with rails.

Warren Buffet made rails sexy again when he bought a railroad in 2009.

That was the year Buffett took a 77 percent stake in Burlington Northern — in what he described as a "bet on America" and its resilience in the aftermath of the Great Recession.

Omaha, Nebraska — Buffet's birthplace — was the home of the First Transcontinental Railroad, which made railroads an important part of the Omaha economy. Buffet's expertise in the economics of railroads grew out of his childhood fascination-turned lifelong interest in them.

Travel by train was a mode of transportation perceived by many as outdated as the horse-drawn carriages that first pulled rail cars on them, but Buffet observed the role that railroads played in driving economic growth because of the efficient, low-cost and reliable way they moved goods across the country. He began investing in them long before he bought one.

Rails and railroads, Buffet wrote in Berkshire's 2016 Annual Letter, are four times as fuel efficient as trucks, requiring only a single gallon of diesel fuel to move a ton of freight 500 miles. That efficiency reduces the cost of transport and truck congestion on the road, which reduces highway gridlock and carbon emissions produced by those trucks.

Largely immune to external threats like weather, driver fatigue and driver shortages, railroads can also mitigate delivery delays and uncertainty.

In 2014, the last time data was publicly reported, U.S. railroads were responsible for $274 billion in economic activity and employed 1.5 million workers. More than 42 percent of the freight that traveled across the 140,000 miles of track in the U.S. were related in some way to international trade.

The economic impact of railroads isn't felt only in the U.S. and isn't favored only by one of the world's richest men who happens to buy and invest in them.

A recently released MIT study reports that the 40,000 miles of railroad tracks built in India between 1870 and 1930 increased the incomes of farmers there by 16 percent. Railroads that could move goods 400 miles a day opened trade opportunities that were once a 20-mile-a-day trek using animals and improved those trade opportunities there and in other countries that — according to the report's author, David Donaldson (the winner of the prestigious John Bates Clark Medal in economics) — other technological advances since then have not.

MAKING B2B PAYMENTS RAILS HOT

Today, a host of innovators are making B2B payments rails sexy again too.

Many believe reducing the friction in B2B payments isn't about riding existing rails à la Buffett, but by building new ones. Why ride the existing rails when the B2B payments equivalent of the Hyperloop can make the trip more modern, faster and cooler, even if it costs more and only connects a few places?

Others want to make the trains that ride the existing rails slicker. They like the existing tracks because they connect all the relevant endpoints, are tried and tested and can be enhanced to do new things, including run in reverse. Rather than rip and replace, they'd like to use software to modernize the payments experience over those rails.

This payments debate — old rails/new rails — is not new.

It may have started in 2007 when the U.K. launched its Faster Payments scheme, after the regulator said the banks had to comply, but has amped up ever since, as regulators in a few other countries have followed in the U.K.'s footsteps.

Here in the U.S., the debate has gained its own head of steam over the last five years — ever since the Fed formed its Faster Payments Task Force and convened 300 companies and 500 people to devise a framework to make payments faster in the U.S. And that was after several years of talk and studies and consultants and published working papers.

Last Thursday in New York, we had that debate, live, as part of the closed-door B2B Payments Summit hosted by PYMNTS.

Over the course of an hour, six panelists debated several topics that are at the core of this B2B payments rails/innovation debate.

It was a lively discussion, and it, like the conversations over the course of that day, was held under Chatham House Rules. You had to be there to experience the rather spirted exchange of insights.

But the energy around the debate inspired me to add my own two cents to those topics, presented below as they were by the debate moderator to the panelists.

The responses are my own thoughts, and all center around whether you think B2B payments' biggest pain point is the payment itself.

Topic One: B2B Payments — yeah, it's not perfect, but, all-in-all, it works pretty well — even across borders.

It's a bit hard to argue that point given the volume of B2B payments made between trading partners annually — some $120 to $127 trillion depending on the source you believe most. Those payments are made largely over rails that have been in place for decades: the bank, ACH and wire rails and via a payment method that has existed for centuries — the good, old-fashioned paper check.

All that is to say that B2B payments today work well in the same sense that landline phones worked well in the 1970s — everyone is connected by a process and via networks that have been built up over time. Those networks are used to make a payment to a supplier anywhere that supplier happens to be. The network is valuable because it connects all the end points to which those payments must be made and complies with the regulations that assure the secure movement of those funds.

Could that process be more efficient? Yes, it could.

Does it work? Yes, it does.

Could it be better when moving money across borders? For sure.

But today, that process of moving the actual money is a very small, but obviously very important piece of the B2B payments process — but a pain point that is less acute than others. It's everything that happens before and after the payment is made that causes the B2B payments pain.

And where corporates really want our help.

Topic Two: Banks — sure, they're boring as all get out, but they are innovating. No, maybe they can be part of the dumb pipes that us real innovators can rely on; no, they are useless, and we can just forget about them in time.

This debate rests largely on the expectations we have for banks as "innovators" — the role we want them to play in enabling the safe and secure movement of money within the B2B payments ecosystem and the payments problems we expect them to solve.

Banks have earned the trust of people and businesses because they keep the money stored within them safe and keep the integrity of our financial system intact. They do that very well. We like our banks conservative, and we sleep well knowing that they are bound by regulations that keep that balance in check. We have all seen the horrors of what happens when banks deviate from that playbook and people are scammed into setting up accounts without their knowledge, are denied access to their funds or, worse yet, lose them.

So, it's hard to complain about banks not being innovative when we don't want them — and therefore shouldn't expect them — to be on the bleeding-edge of delivering the next new thing. If our banks started talking about the creating the SpaceX of payments, most of us would immediately move our money to someplace boring.

That said, we do expect banks to leverage their assets and their reputation for trust and security to innovate in ways that speak to the value proposition we value the most: keeping the funds there secure, and access to them secure, yet friction-free.

That's also where we've seen banks innovate.

Banks use deposits kept there as a key platform asset upon which other value is created to keep customers sticky and those deposits in their vaults. On the retail payments side, online and mobile banking have transformed how accountholders access and action their money while keeping that access and those actions secure — and that accountholder relationship sticky. P2P has made it possible for accountholders to transfer money using only their mobile phone number to do so — and do it safely.

So, to say that banks don't have a role to play in enabling B2B payments is saying that businesses — and people — don't want to keep their money there, and that seems highly unlikely for many, many years to come.

That, then (by default), makes banks a central player in the B2B payments innovation ecosystem — but playing a different role. Rather than being innovation's tip of the spear, banks are an important enabler and distributor of innovations that FinTechs have developed to address the pain points for the corporates with which they do business.

What will make banks the dumb pipes of B2B payments is their inability to monetize the role they play in allowing access to those relationships and to enabling that innovation.

Or being too late to recognize the opportunity and take action before their inaction becomes a huge threat.

Topic Three: Existing rails aren't so bad, and it costs a fortune to replace them: best strategy is to work with the rails and build better trains — that is, apps and other solutions that can use what's there already.

Just like the railroads that haul freight across the country, the economics of the existing payments rails make using them attractive. They are low-cost, efficient, tested and regulated. From a B2B payments perspective, they connect everyone who needs to be connected.

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The economics of the freight railway system allows railroad operators to divert money into modernizing rail cars and partnering with innovators who can add features and functionality to the cars that ride their rails. Freight railways also leverage their size and scale to add new routes that extend the journey to new endpoints where there is demand and operate hubs that make it easier for those connections to be efficiently routed.

That's what's happening today inside the B2B payments arena. The regulated and compliant rails that have been in existence for decades move money globally between trading partners. Corporates even have options for the rails they might want to use depending on how fast they need the money to move and where it needs to travel.

The rules of the existing rails have been modernized too.

ACH rails now settle same-day, three times a day. NACHA is examining additional windows for weekends and has increased the limits for how much money can be sent over those same-day ACH rails. Card rails that run in reverse can push payments from corporates to consumers instantly and are being used to push loan proceeds from alternative lenders and sales from acquirers to SMBs in real time too. Limits have also been raised for those payments.

The payments piece of B2B payments is getting done, but it isn't the real source of corporate pain.

Instead, it's a lack of certainty that good funds are on the way — and when they're expected to arrive. Without that certainty and visibility, it's impossible for corporates to manage and optimize their cash flow.

Without a single view of those payments flows, it's impossible to identify and correct payment inefficiencies.

Without moving the right data with the payment, it's impossible to reconcile payments with outstanding invoices efficiently.

Without a simple way and a compelling value proposition to onboard suppliers and get, vet and keep their payments details secure, it's hard to convince those suppliers to accept a new way of being paid.

Without the ability to manage the currency risk of international payments, it's hard to avoid the margin-eroding hits caused by that volatility.

These uncertainties that surround the movement of payments have driven innovators to leverage the existing rails and the connections they make between trading partners to devise solutions that address the real B2B payments problems between them.

They've done that by offloading many of these B2B payments frictions from corporates onto themselves, developing the software and middleware that makes the first and last mile of that payments journey less onerous.

Therein, of course, lies the dilemma.

Better isn't free, and the rails that exist today globally enable the cost-efficient innovation that adds value to corporates for payments that ride securely on top of those rails.

It's tough to convince anyone to invest in new rails when corporates aren't screaming for the biggest value proposition that they offer – speed. And, in the case of cross border payments, haven't convinced them that we have addressed fully the global messaging failures that compromise the secure movement of those funds.

Topic Four: Existing rails are like taking the stagecoach on dirt roads when you fly — blockchain and crypto are the future; no, speaking of flying, crypto rails will never fly with corporate treasurers, FIs or regulators; and blockchain is mostly talk, little action.

The innovators who are convinced that crypto is the future haven't talked to enough corporates and FIs and regulators to know that it's really, really not.

And, thinking that the banks — those trusted custodians of money — will embrace crypto and open crypto rails as the catalyst for innovating B2B payments is like thinking they'd be okay with putting Jesse James in charge of payments worldwide.

Not hardly.

Crypto exists to sidestep most — if not all — that is regulated about how money moves and to whom it moves, and that simply won't fly. Yes, I know the VC-funded cryptos will say, "What? That's not us."

But c'mon, there's so much funny business going on with these rails that it is, well, not funny. End of that story.

That said, digitizing assets issued by central banks and governments and clearing and settling those digital assets across private networks is what the card networks and other regulated private networks like Western Union have been doing for decades — safely, securely and in compliance with regulations worldwide. Leveraging those networks to enable bank account to bank account payments clearing and settlement is being piloted today to support cross-border payments efficiencies. But even that is a slow-moving train today and will take time to scale.

As for blockchain, I think you know how I feel about that topic.

Banks and corporates are investing small sums of money into pilots to learn, but based on our research, no one is betting the farm or their future payments success on it — at least not now.

Blockchain is a protocol, like any other middleware, that its fans say gives companies more visibility into transactions. Maybe it's the only way; maybe it's the best way; maybe it's one of the better ways by which B2B payments' frictions can be solved.

Then again, maybe something else has or will emerge to do the job that the hype says blockchain does today. But who's to really know?

It's essentially impossible to wade through the smoke and mirrors, with all the hype playing in the background, to figure out what's hype and what's not.

What we do know is that, like anything else in payments, for it to work, it must operate at scale. And that seems a long way away.

Topic Five: Real-time — businesses don't care much. It's about certainty, security and taking out more of the frictions in payments. Well, no, real-time is the foundation for a great new world of payments, and, like many innovations, people can't envision how great it's going to be.

Let's first define what we mean when we say real-time. In this context, real-time is the real-time clearing and settlement of payments transactions.

It's hard to convince most corporates that they need it.

That's, in part, because their ERP systems are batch. Having thousands of bank accounts with thousands of transactions authorize, clear and settle in real time requires much more than a new set of FI rails to power it — it requires big process and tech changes on the corporate side to support it.

It's also, in part, because it doesn't solve their real, real-time problem.

What corporates want more than real-time settlement is real-time access to data at their fingertips about the inflows and outflows of funds — and, in particular, the real-time authorization of good funds, along with the transparency associated with knowing when those funds will arrive.

When funds settle isn't much of a friction, since, with that information in hand, decisions about cash and working capital can be made. Neither are issues related to liquidity, which becomes a problem only when corporates are left guessing about whether what's on the way is good funds.

All of that makes real-time a real hard sell to corporates, and therefore a real hard sell to every single one of the FIs in the U.S. who today already have access to an ubiquitous faster payments scheme called same-day ACH.

Same-day ACH is being used by corporates and mostly as a utility when emergency payments must be made. Same-day ACH use cases haven't (yet) replaced volumes of paper check transactions but have replaced regular ACH — a nod to its value when a payment needs to be faster.

Same-day ACH also has a business model underneath it, which was critical to getting the scheme up and running and approved by every single bank in the U.S.

That makes any other faster/real-time payments scheme only as good as its ability to be ubiquitous across all the banks in the country too, along with a business model to support their investment.

That's why the Fed stepped in last week to request comments from across the payments ecosystem about their role in accelerating the development of real-time clearing and settlement rails — perhaps even laying the groundwork for regulation that must happen, just like it has happened everywhere else in the world where real-time payments have launched or are in motion.

Some inside the big banks that have already invested in the Faster Payments scheme promulgated by the Fed may think regulation is the only way real-time gets done in the U.S. — perhaps because they think it's one way to be sure their investments in that scheme can pay off.

But it's hard to fathom why it's better that regulators and not innovators call the shots, especially since it's hard for anyone to identify the game-changing payments innovations that have emerged as a result of regulated faster payments schemes.

Perhaps the greatest irony of the real time debate is that real time payments does nothing to accelerate the payments terms that ultimately determine when businesses get paid anyway, which is where corporates feel the pain. And the ability for buyers to pay suppliers sooner is independent of having new rails to do it.

Ironically, as I was writing this, I came across a news story about the Hyperloop — one that showed a picture of the new Hyperloop passenger car that is capable of traveling at a speed of 750 mph and making the trip between L.A. and San Francisco in 36 minutes.

It's pretty cool.

But these capsules carry only 30 to 40 passengers; it would require more than 100 of them to operate with enough

capacity to move a critical mass of people between those two endpoints leaving every 45 seconds. These capsules have to be built, and the tunnel itself has to be dug and tested. Stations have to be built for passengers to embark and depart.

Regulators have to be convinced that it's safe.

Passengers have to be comfortable with the idea that they are going to be smushed into a pneumatic tube that barrels its way inside of a tunnel under the earth for 36 minutes.

And be satisfied that it only goes from LA to San Francisco and paying whatever it costs to take that ride.

None of this diminishes the innovation and the creativity that is the Hyperloop. And one day, it may be the way that we all will get from point A to point B. But that day is a long way off, and a lot has to happen in order for the Hyperloop to scale and connect to all the many combinations of end points travelers find valuable.

In the meantime, people have places to go and viable options for how to get there.

It's a bit like the vision for modernizing the movement of money between businesses. We'd never build our payments and banking infrastructure today the way it was built decades ago. But lots and lots of internal FI and corporate systems are connected to it, so we need to make what we have today work as we design something that works better and transition to it.

Someone last week said that the reason that checks persist isn't because people necessarily like them, but because they're simple to use. Without knowing anything but a person's name and their mailing address, money can be transferred to them.

It's an insight that puts important perspective on the debate that rages over payment rails today.

Innovators are using software and technology to solve for the frictions that today get in the way of creating the funds certainty that corporates crave.

They are also developing solutions that simplify the management of payables and receivables that improve how they do business with their buyers and suppliers. Conversations about the plumbing that can settle funds in real time are just interesting conversations about a problem that corporates say over and over again they really don't have today.

Until the nirvana of B2B payments gets decided and built out, businesses have people to pay and places they need to pay them — and want solutions at scale, today, that they can use to do that.

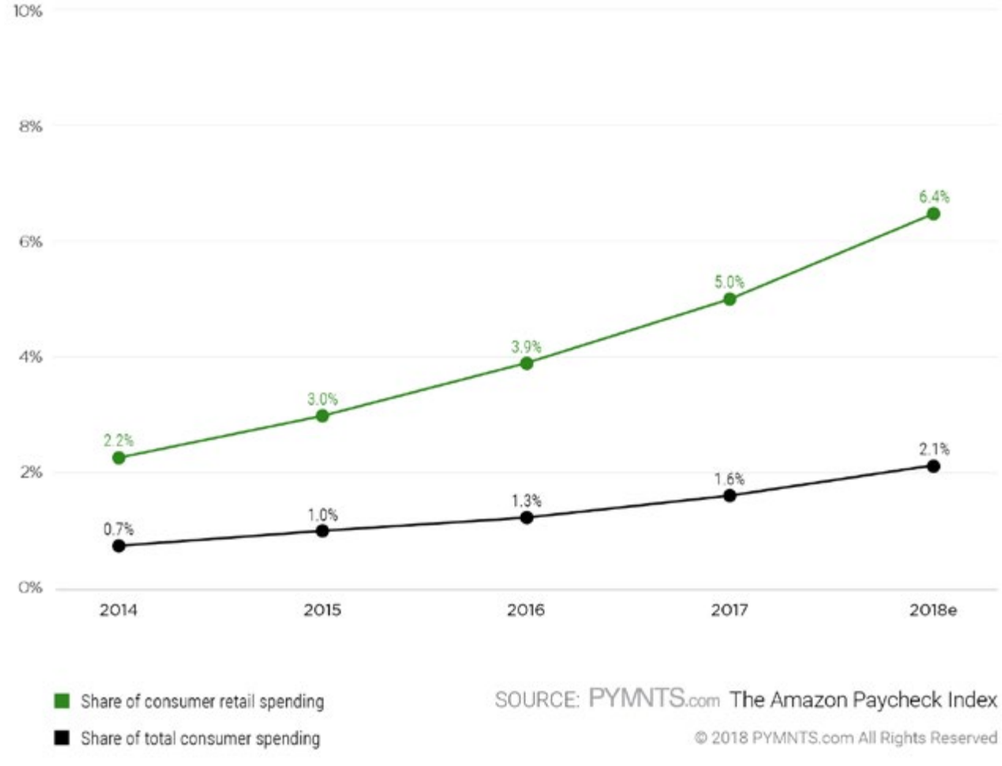
How Much Of **The Consumer's Paycheck** Goes To Amazon?

In 2009, consumers first coined the term "Whole Paycheck" as a tongue-in-cheek way to describe the sticker shock many felt when looking at their receipts after a shopping trip to Whole Foods. Whole Foods is, of course, the organic grocery chain that Amazon bought for $13.7 billion in June 2017

In 2018, the term can now be more legitimately used to define the portion of consumer spend and overall retail sales Amazon now captures given the expansion of its ecosystem.

The big difference, of course, is that Whole Foods got the moniker because

AMAZON SHARE OF TOTAL SPENDING



SOURCE: PYMNTS.com The Amazon Paycheck Index

of its high prices. Amazon is capturing more of a consumer's paycheck because of its good prices, fast delivery and great service.

In other words, consumers like doing business with the company.

Based on detailed analysis by the PYMNTS research group, we estimated that Amazon now accounts for 2.1 percent of all consumer spend — some $1,320 of the total paycheck for a household that earns roughly $63,000 a year ($62,941, to be precise). We estimated average annual consumer spending for 2018 based on U.S. Bureau of Labor Statistics data from 2014 to 2017.

What's driving that share of spend is the growing proportion Amazon has captured in the biggest chunk of it: retail. Retail spend captures about 31 percent of a household's paycheck for things like food, clothing, electronics, healthcare products and furniture.

We estimated Amazon has, today, captured 6.4 percent of the $19,556 a typical household spends on those things — or some $1,243 annually.

That share of overall retail spend has tripled over the last four years — growing from a 2.2 percent share in 2014 to the 6.4 percent we estimated today — a 30.7 percent CAGR over that four-year period.

Some of you reading this piece may say, "So what? Who cares? Big deal." Amazon's 2.1 percent of overall spend and 6.4 percent of retail spend is pretty puny.

The 2.1 percent is small as a percentage of overall spend, but the number has grown fast — remarkably fast over the last four years — accounting for an enormous chunk of eCommerce, which is humongous in certain categories as consumers shift their spend and as Amazon stays right there with them when they do.

That means Amazon has a lot of room to grow.

And lots more of the consumer's paycheck to capture.

THE SPENDING NITTY GRITTY

I've been curious about the "Amazon Effect" on more than its impact on traditional retailers for some time.

Most of the time when people talk about the "Amazon Effect," they talk in terms of the impact on traditional retail economics driven by the shift from offline to online sales and the impact of making free shipping table stakes.

However, the real Amazon Effect goes well beyond that.

I've always been fascinated with Jeff Bezos' approach to methodically building a marketplace — now ecosystem — that tapped not only into what consumers might buy online, but also why they were buying those things in the first place.

Amazon started with books because it was a product everyone bought. Music followed for that same reason. Over the years, its product mix expanded as data about consumer spending behaviors on and off Amazon was examined — and actioned by the Amazon team — leveraging the assets Amazon had built and the trust consumers placed in it as a trusted commerce go-to.

That trust kept the flywheel spinning as Amazon expanded its inventory of things to buy and chipped away at essential product categories, including many household staples like diapers and batteries with its private-label brands and handmade, artisanal goods with Amazon Handmade.

Amazon's expansion over the last four years has touched things bought or paid for online but consumed in the physical world — household and business services, food delivery with Amazon Restaurants, subscription fashion with Amazon Fashion, products for the home with Amazon Home and, more recently, even mattresses.

Given the shift that tracked with the types of things all consumers buy, I was curious to understand the "Amazon Effect" on how much of the consumer's paycheck is now being spent with the company.

That's what this analysis does.

The Amazon Paycheck Index is the result of many months of work by the PYMNTS research group using a variety of sources that track and report retail sales and consumer spending.

We used data from the U.S. Bureau of Labor Statistics for information on consumer household spending and Census data for information on sales across all categories of consumer spending, including retail sales. We used eMarketer data to estimate total retail sales by product category. We used Amazon's 10-K for specific information related to Amazon sales and growth by category, taking care to represent sales of items sold by third-party sellers as the commissions Amazon receives, instead of the GMV of those products sold.

We then built a data model and used statistical techniques to refine the model and project 2018 numbers using conservative assumptions. We've tested and refined the model and believe it presents a very solid picture of how much consumers are spending with Amazon — because they want to.

AMAZON'S WHOLE PAYCHECK

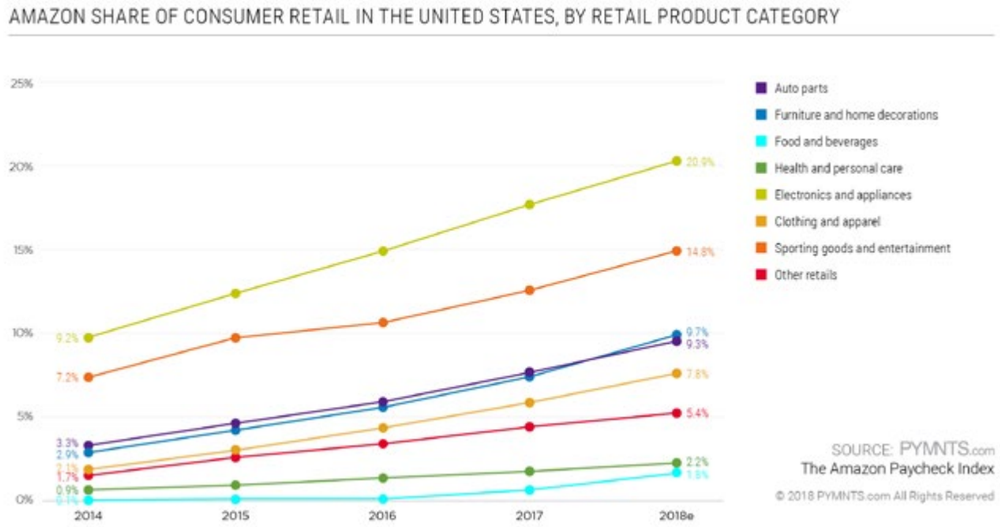
The 2.1 percent of all consumer spend that is now Amazon's shouldn't be all that hard to believe.

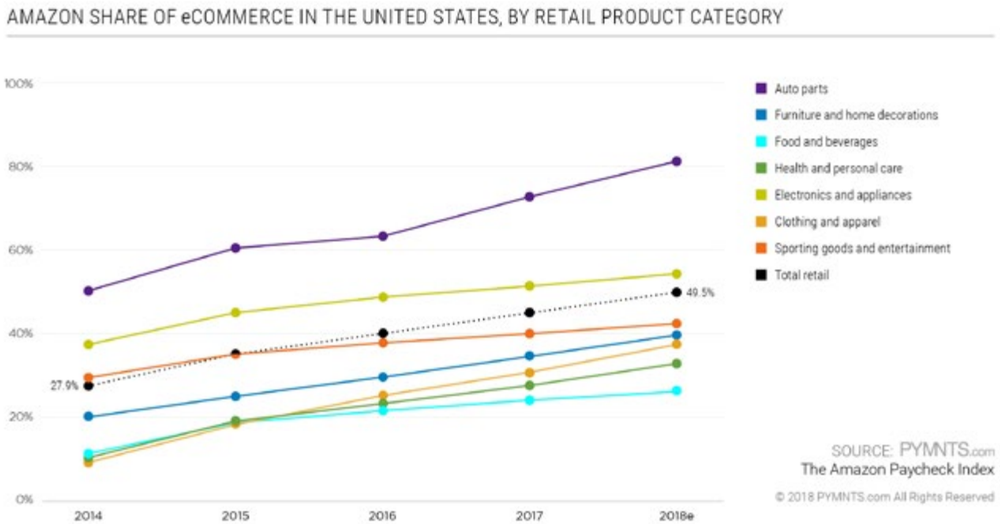
Over the last four years, retail sales have shifted to Amazon in key categories that were once the domain of the physical store.

Amazon now accounts for 20 percent of all electronics, 9.7 percent of home furnishings, 9.3 percent of auto parts, 7.8 percent of apparel and 5.4 percent of sporting goods (which includes books, music and hobbies) sales.

Looking at eCommerce share only, the picture is even more staggering, with Amazon taking a 54.2 percent share of electronics, 39.4 percent of home furnishings, 81 percent of auto parts and 38.1 percent of apparel accordingly, and 14.8 percent of sporting goods/books/music and hobbies sales.

By the end of 2018, Amazon, we estimated, will account for roughly 49.5 percent of all eCommerce sales.





AMAZON GROSS SALES IN THE UNITED STATES

	2014	2015	2016	2017	2018e	CAGR
Total Gross Sales (in millions dollars)						
Auto parts	2,499	3,552	4,606	5,996	7,747	32.7%
Furniture and home decorations	5,748	8,762	12,129	16,787	23,240	41.8%
Electronics and appliances	25,327	34,576	42,990	53,560	65,846	27.0%
Food and beverages	1,166	1,776	2,457	9,195	20,990	106.0%
Health and personal care	3,832	5,921	8,291	11,591	16,010	43.0%
Clothing and apparel	9,498	14,683	20,574	28,778	39,766	43.0%
Sporting goods and entertainment	18,828	25,577	31,628	39,171	48,029	26.4%
Other retails	16,412	23,564	30,707	40,570	52,935	34.0%
Total retail	83,311	118,411	153,381	205,648	274,562	34.7%
Subscriptions and others	2,902	4,782	7,072	10,919	16,866	55.3%
Total Amazon Sales	**86,213**	**123,193**	**160,453**	**216,567**	**291,428**	**35.6%**
Gross eCommerce Sales (in millions dollars)						
Auto parts	2,499	3,552	4,606	5,996	7,747	32.7%
Furniture and home decorations	5,748	8,762	12,129	16,787	23,240	41.8%
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Total retail	83,311	118,411	153,381	199,850	258,220	32.7%
Subscriptions and others	2,902	4,782	7,072	10,919	16,866	55.3%
Total Amazon Sales	**86,213**	**123,193**	**160,453**	**210,769**	**275,086**	**33.7%**

SOURCE: PYMNTS.com The Amazon Paycheck Index

AMAZON SHARE OF RETAIL SALES (PERCENT OF TOTAL SALES) BY RETAIL SEGMENT

Those numbers and that growth isn't because consumers don't have other places to shop or feel they're trapped somehow into shopping at or with Amazon.

Or because Amazon is necessarily the cheapest place for them to buy things.

It's because consumers say Amazon is the most convenient place for them to shop and buy things. Amazon has become the default for how consumers start their search for what to buy or where to buy the things they might see on the web.

CONVENIENCE THAT DRIVES SPEND AND AMAZON SHARE

When I looked at this analysis, what left my jaw dropping was the sheer growth in Amazon's sales across just about every retail category — and in just the last four years:

Clothing and apparel and health and personal care sales both grew at 43 percent annually, furniture and home furnishings sales at nearly 42 percent.

At a 32.7 annual growth rate over the last four years, Amazon is now the largest online seller of auto parts in the U.S.

Over the last four years, Amazon has expanded the inventory of products it carries via third-party sellers, added more perks for Prime Members and expanded the number of places off Amazon where consumers can use Amazon Pay to check out.

The Amazon Prime perk that started with free shipping has now expanded to include lots of other goodies that make being a Prime Member valuable and sticky: streaming services, discounts on other services and even a co-branded Chase/Visa card that gives consumers a 5 percent cash back incentive.

Clearly, what's driving that spend and growth in share is the convenience consumers find when buying from Amazon online.

But it's not just online anymore.

AMAZON SHARE OF CONSUMER SPENDING

	2014	2015	2016	2017	2018e
Share of Consumer Spending					
Auto parts	3.3%	4.6%	5.9%	7.5%	9.3%
Furniture and home decorations	2.9%	4.2%	5.6%	7.3%	9.7%
Food and beverages	0.1%	0.2%	0.2%	0.8%	1.8%
Health and personal care	0.6%	0.9%	1.3%	1.7%	2.2%
Electronics and appliances	9.2%	12.2%	14.8%	17.8%	20.9%
Clothing and apparel	2.1%	3.1%	4.3%	5.9%	7.8%
Sporting goods and entertainment	7.2%	9.2%	10.8%	12.6%	14.8%
Other retails	1.7%	2.6%	3.4%	4.3%	5.4%
Total retail	**2.2%**	**3.0%**	**3.9%**	**5.0%**	**6.4%**
Subscriptions and others	0.7%	1.0%	1.3%	1.6%	2.1%
Share of eCommerce					
Auto parts	51.1%	60.4%	63.7%	72.4%	81.0%
Furniture and home decorations	20.5%	25.1%	29.5%	34.2%	39.4%
Food and beverages	15.7%	20.3%	21.8%	24.6%	27.0%
Health and personal care	15.3%	20.4%	23.3%	27.9%	32.5%
Electronics and appliances	38.5%	46.2%	48.4%	51.6%	54.2%
Clothing and apparel	14.2%	19.5%	25.0%	31.2%	38.1%
Sporting goods and entertainment	29.2%	34.8%	37.8%	40.1%	42.6%
Total retail	**27.9%**	**34.8%**	**39.4%**	**44.4%**	**49.5%**

SOURCE: PYMNTS.com The Amazon Paycheck Index

Over the last four years, Amazon has seen its sales of food and beverage products grow 106 percent — with most of that growth happening in the aftermath of the Whole Foods acquisition in 2017. Spending on groceries is the largest single driver of consumer spend in the retail segment, and Amazon doubled its food and beverage sales from 2017 to 2018 after quadrupling them the year prior. Food is a category we believe has the potential to capture more of the consumer's spend over the next several years.

Amazon has opened Amazon Go stores in several cities to capture the food sales now going to convenience stores. Reports say that 3,000 more will open over the next several years.

Amazon also opened a store in SoHo that carries trending products sold online as well as those that receive the best ratings.

These physical storefronts offer special perks and goodies for consumers who are also Prime Members — and are used to acquiring and converting non-Prime consumers.

Over those four years, Amazon has also done something else: It has ignited voice commerce via Alexa. Alexa was first introduced via the Echo in November 2014. Since then, Alexa has made her way into a slew of voice-activated devices — both Amazon- and third-party-branded devices.

Alexa and her pervasiveness as a virtual assistant inside the consumer's home, inside the car and, increasingly, wherever the consumer wants to take her has contributed to that shift in share of spend and only underscored the importance of voice as an enabler for commerce.

And Amazon's importance as the consumer's go-to ecosystem for commerce.

And Amazon Pay's importance as the payment intermediary through which all these payments flow.

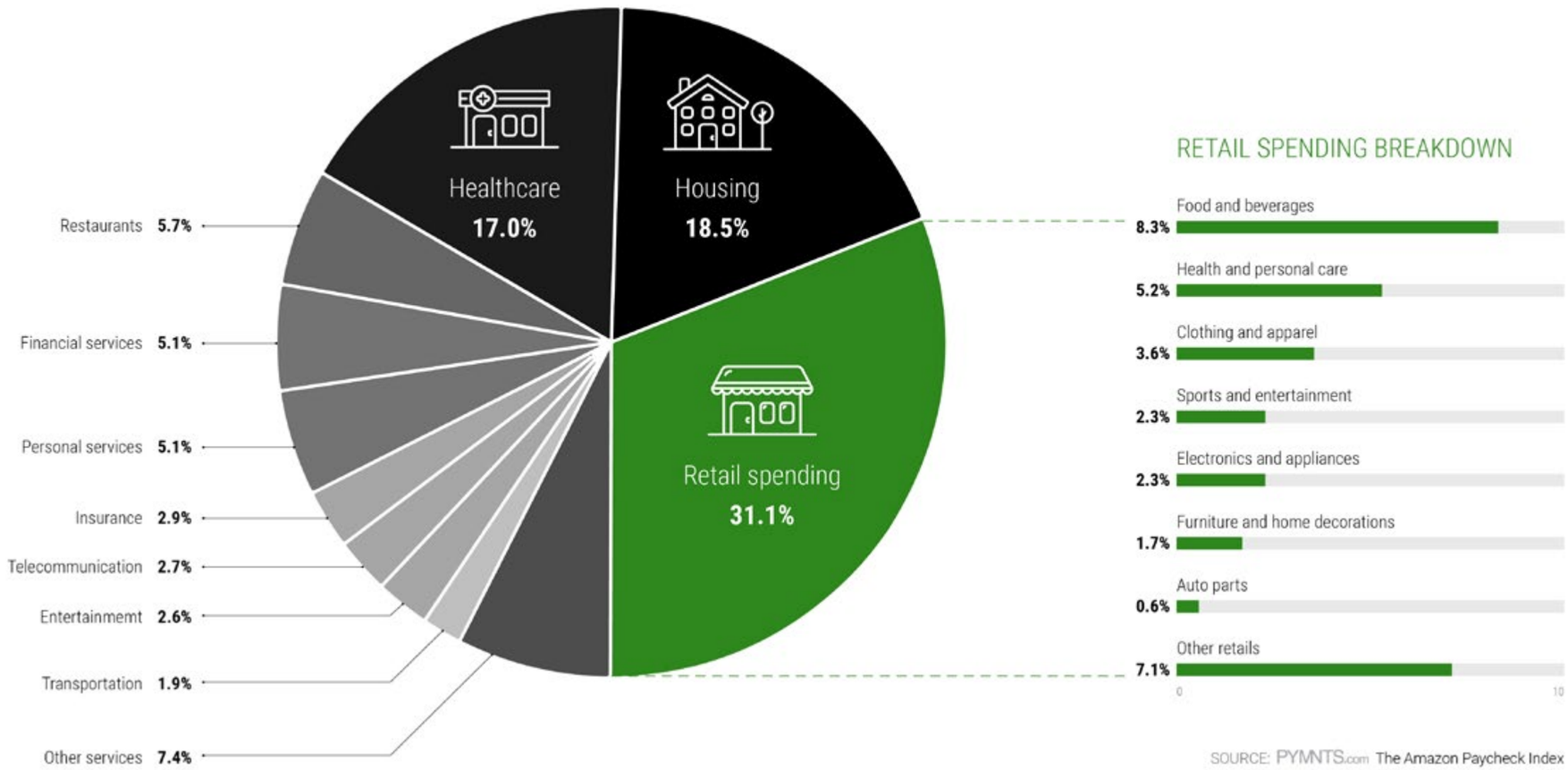
THE ROAD TO WHOLE PAYCHECK

The share of consumer spend that is now Amazon's is even more remarkable when one considers that roughly 45 percent of a household's paycheck today — some

$29,000 — goes toward things Amazon doesn't touch (yet).

Roughly 36 percent of a consumer's paycheck in the U.S. is spent on housing (18.5 percent) and healthcare (17.0), with another 12.6 percent on insurance (2.9 percent), financial services (5.1 percent), telecom (2.7 percent) and transportation (1.9 percent).

SHARE OF HOUSEHOLD SPENDING, BY SPENDING CATEGORY



SOURCE: PYMNTS.com The Amazon Paycheck Index

Yet, however, is the operative word. Amazon has made investments in or created partnerships with key players to expand the scope of its services — and in areas that consume big chunks of essential consumer spend: healthcare through a joint venture with JPMorgan Chase and Berkshire Hathaway; housing through an investment in a pre-fab home builder and insurance via opening a digital insurance storefront with Travelers Companies just last week.

The trust and convenience of buying from Amazon, coupled with giving consumers an easy and convenient way to pay, the perks of being part of the Amazon club and having access to a personal assistant that can now help sort out insurance coverage or (at some point) healthcare options or pay claims or book appointments could give Amazon a decided advantage in capturing more of what consumers spend on the things all consumers have to buy.

And in those segments where there are many options, and where consumers want a trusted intermediary to make it easy for them to decide and then buy: Amazon, Amazon Pay and Alexa.

TYPICAL U.S. HOUSEHOLD SPENDING

	TOTAL SPENDING		eCOMMERCE	
	Annual spending (in dollars)	Percentage	Annual spending (in dollars)	Percentage
Auto parts	378	0.6%	46	1.8%
Furniture and home decorations	1,084	1.7%	284	11.3%
Food and beverages	5,197	8.3%	83	3.3%
Health and personal care	3,265	5.2%	237	9.5%
Electronics and appliances	1,425	2.3%	585	23.3%
Clothing and apparel	2,297	3.6%	503	20.0%
Sporting goods and entertainment	1,472	2.3%	543	21.6%
Other retails	4,438	7.1%	230	9.2%
Total retail	19,556	31.1%	2,511	100.0%
Restaurants	3,558	5.7%		
Housing	11,646	18.5%		
Healthcare	10,731	17.0%		
Financial service	3,211	5.1%		
Personal service	3,216	5.1%		
Insurance	1,799	2.9%		
Telecommunication	1,687	2.7%		
Entertainment	1,652	2.6%		
Transportation	1,209	1.9%		
Other services	4,675	7.4%		
Total Consumer Spending	**62,941**	100.0%		

SOURCE: PYMNTS.com The Amazon Paycheck Index

That also might mean that we don't really need Amazon to tell us what it plans to do next.

Instead, all we might need to do is to follow the money — money in the form of how the consumer is spending her paycheck — to get a sense of where Amazon — and the consumer's paycheck — is headed next.

How **Connected Devices** Are Revolutionizing How And Who We Pay

Connected devices — smartphones, tablets, voice-activated speakers, smartwatches, in-car dashboard systems — are changing how consumers in the U.S. buy and pay.

Not just some consumers, but almost all of them.

We have brand-new data that reveals how much change is happening.

Using smartphones and apps to autopay at gas stations, or to find and pay for parking, or asking a voice-activated assistant on the other end of a speaker to order a pizza aren't just what early adopters of cool, connected tech are doing.

People of all stripes — from millennials to baby boomers, from Generation X to the Greatest Generation — are increasingly swapping the friction of shopping in a store for the convenience of using one of the many connected devices they now own to shop and buy from instead.

That includes many of the things that were once only possible — and therefore

largely purchased — in a physical store: things like groceries, prescriptions and clothes.

Saving time is what's driving this shift — a shift that is now certainly nearing its tipping point — as consumers are leaning into the buying and payments experiences that accommodate their busy lives. Omnichannel — the buzzword many use to describe the consumer's digital shopping journey and use to plan their product roadmaps around — is now

a woefully outdated concept to describe what's really going on.

The consumer's shopping journey isn't just moving from physical to digital. The consumer's journey is increasingly decided by the connected devices they own and where they are when they want or need to make a purchase.

For consumers, commerce is about convenience. Increasingly, that comes by way of a connected device and the payments experiences it powers. Voice is changing those options and that experience dramatically.

In collaboration with Visa, we studied 2,800 U.S. consumers who statistically represent the composition of the adult population in the country today. We asked those consumers a number of questions about the connected devices they own and how they use them to buy and pay for products and services. As part of that exercise, we also asked them to tell us what they bought over a seven-day period, where they were when they paid for those things and what devices they used to make those purchases.

We published our key findings today in the How We Will Pay 2018 Edition: A Week In The Life Of The Connected Consumer.

This is the second year of our work with Visa, so we were eager to see the change in consumer behavior from last year to 2018. And, boy, have things changed. I'll leave it to you to dig into the full report for those nitty-gritty details.

They give rise to five key eye-popping insights that will — or should — reveal the strategies of everyone in the connected payments ecosystem that powers a growing portion of consumer spend.

The connected consumer is just about every consumer.

George Bernard Shaw was quoted famously as saying that youth is wasted on the young. That may be, but the use of devices connected to the internet and the apps that enable payments surely isn't.

Not only is it the case that virtually no one from our study owns just a smartphone (3.1 percent), the vast majority of consumers (80 percent) own something other than a smartphone, laptop/computer or tablet. That's up from 75 percent last year.

Those who own six or more such devices — we call them the Super Connected — now total 36 percent of that group, up from 23 percent in 2017: a 53 percent increase. More than half of the Super Connected are women (57 percent). The average age of the Super Connected consumer is 42 — younger than the median adult population in the U.S., which is 47, yet nearly two decades older than the young millennials, who were once thought to have cornered the market on connected device ownership.

It was also interesting to see how many Gen X'ers and baby boomers also own six or more devices — 40 percent and 24 percent, respectively.

The ownership of these devices and their ease of use is driving connected payments use cases across all age groups and generations for things that might have once been considered a clunky digital experience.

Soon, that might be the other way around.

We observed in our study that more than half of consumers used them to make a purchase in seven of the 13 categories we queried: 28 percent said they bought clothing and accessories, and 20 percent said they bought groceries. That's up sharply from 2017.

And by "them," we mean any number of connected devices: smartphones, computers, tablets and voice-activated speakers. Connected payments experiences are no longer the domain of any single device. We observed the same consumers making purchases using many of them.

Connected devices are accelerating the shift away from physical stores.

We observed some interesting behaviors for the seven days we asked consumers to tell us what they bought and how they paid for those purchases.

With one exception (groceries), consumers were more likely to buy online than they were to buy from a physical store. Specifically, 63 percent of consumers visited a store to purchase food to eat at home, but for all other

types of purchases, fewer than 50 percent of the consumers we studied went to a physical store to make a purchase.

The Census data that reports that 90 percent of purchases still happen in the physical store misses the impact of connected payments experiences and why consumers use them to buy things.

The catalyst for the shift away from the physical store is to save time: the convenience of not having to visit a physical store to make a purchase or using a connected device to make the payments experience in the physical world better and faster. Seventy-eight (78) percent of the consumers we studied said saving time was the key reason why they used a connected device to buy something.

Using connected devices to "autopay" was most prevalent in the areas where checkout is friction-filled and time-consuming: paying for gas (49 percent), paying for clothing (41 percent), paying for parking (40 percent) and paying the check at a restaurant (39 percent).

One-third of the consumers we studied also expressed an interest in using these devices to pay bills; that's up from 10 percent last year.

Saving time and eliminating payments friction in-store is also driving consumer interest in using contactless cards. Twenty-six (26 percent) of consumers said they were "very" or "extremely" interested in using contactless cards to pay at checkout, with 84 percent of those consumers expressing interest in paying that way at grocery stores, 79 percent at quick-service restaurants (QSRs) and 72 percent with mass transit.

Voice is the payments gamechanger.

The ownership of and use of voice-activated devices is changing how consumers pay in ways that even a year ago seemed unimaginable. Voice-activated devices have been in the market for only four years, but the skills and the skills ecosystem that powers commerce via those devices is younger still.

Those who think that voice isn't catching on for commerce should probably think again.

The number of consumers in our study who reported owning a voice-activated device nearly doubled from last year to this year — with 27 percent owning one, which is almost double from 14 percent in 2017.

Perhaps even more striking is the number of consumers who said they used them to make a purchase: 29 percent of the 27 percent of voice-activated device owners reported using them to make a purchase.

To say that voice — the most intuitive and easy-to-use payments enabler there is — is a payments gamechanger is perhaps stating the obvious.

To say that it's a fast-moving train that will power payments should now be obvious too.

Consumers are using their voice-activated assistants to turn tedious, routine shopping experiences into connected payments timesavers. Twenty (20) percent of consumers who own voice-activated, connected devices use them to buy groceries, 22 percent to buy digital goods, 15 percent to order takeout and 28 percent to buy clothing and accessories.

Trust is the connected consumer's "North Star."

Making the leap to connected devices and connected payments experiences is something the consumers in our study certainly have made with both thumbs (plus the sound of their voice). All that said, the more abstract these connected payments experiences become, the greater the concern over the security and privacy of their data.

For the consumers we studied, data security and privacy are two sides of the same coin — a coin they say could tarnish, if their experience when using a connected device is compromised in some way.

This year, 79 percent of all consumers said concerns over data security and 78 percent said concerns over data privacy could inhibit their use of connected devices to make purchases. That's up 11 percent and 3 percent, respectively, from last year.

The operative word here is "could."

Today, consumers are still using the devices that power these payments experiences. And it can be argued that they will only use them more tomorrow. That paradox appears to influence who the consumers in our study say they trust to enable those experiences. Not surprisingly, it's the same list of providers consumers turn to and use today.

Nearly 60 percent (59.1 percent) say they trust their bank/card networks, with card networks (55.3 percent), Visa (41.9 percent), Amazon (37.1 percent) and PayPal (35.6 percent) rounding out the top four.

To track how we will pay, watch how Bridge Millennials pay today.

Bridge Millennials are the 20.7 million consumers that, as their name suggests, bridge the gap between the younger millennials and Generation X. We first discovered this group earlier in the year when examining the results from a consumer study about the purchase behaviors surrounding clothing and accessories.

Our hunch then was that there was a marked distinction between how a 25-year-old used connected devices to shop and to pay and how a 35-year-old might do the same.

What we discovered is that there is — and here's why.

Bridge Millennials are settled into a stable career, have made a dent in paying off their student loans and are settling down with a partner and perhaps even starting families. Their increased earnings power gives them spending power that younger millennials lack — a spending power nearly equal that of their Gen X elders.

But this is also the generation that came of age with connected devices in their hands, using them to do everything from checking social networks and sending money to their friends, to buying things using mobile devices. Using devices with apps that have payments features embedded in them is, therefore, second nature.

Half of all Bridge Millennials are Super Connected, and, in total, these Bridge Millennials account for 29 percent of the entire Super Connected group. They also own more voice-activated devices than any other group of consumers in our study. They use these devices more frequently to make purchases: Forty-two (42) percent of Bridge Millennials own voice-activated devices versus 27 percent of all consumers in our study. Thirty-two (32) percent of those who own those devices use them to make purchases, compared to 28 percent of all consumers in our study.

Bridge Millennials are also more comfortable using a connected payments experience to make purchases once largely done in the physical store, from groceries and personal care items to jewelry and automobile parts. In fact, 59 percent of Bridge Millennials use a variety of connected devices to make purchases, and 17 percent did so with voice-activated devices.

This compares to 53 percent and 11 percent of the consumers we studied.

That makes the Bridge Millennials the first generation of connected consumer with real spending power and the bellwether for the connected generations that follow.

How we will pay … will be more of how we pay today.

Payments innovators like to talk about innovations that help consumers bridge the physical and digital worlds.

That's not how consumers think about their shopping journeys, and neither should we.

Consumers don't think of themselves as moving between the physical and digital worlds as much as they now expect to use the connected devices they own as tools to make their buying and payments experiences more efficient.

That's particularly true for the things they buy today that require so much of their time: groceries, clothing, beauty products and prescriptions — even paying bills.

The devices that have become an indispensable part of the consumer's daily life are becoming an indispensable part of how they will pay.

Of all the potential use cases we studied, those that include “autopay” experiences were the most preferred by the U.S. representative sample of consumers. That is a sign of how comfortable consumers are with those payments experiences and the value they place on their time when they use them.

There’s no turning back.

How we will pay is via the devices consumers own and the connected payments experiences they will continue to power.

Who we pay will be determined by those best able to create and deliver those efficient and secure, connected payments experiences.

Seven Big Threats Facing Seven Big Tech And Payments Players This Halloween

Halloween, the annual celebration of the spooky and supernatural, is just a couple of days away.

For many in payments and the vast ecosystem that it powers, the scariest thing about Oct. 31 might not be the sight of a kid in a full-on Frankenstein costume at the door on Halloween night asking for candy.

The day after Halloween marks the 60-day sprint to the end of the year – a year in which the pace of innovation has accelerated materially. The shifts associated with that innovation are beginning to take root, and those impacts are beginning to be felt.

The 2019 planning sessions that will mark the next 60 days will no doubt include topics of conversation about the scariest things in payments that could knock key players off their game – or turn their plans upside down. Or turn into new opportunities as others take stock and adjust those plans.

Here are a few of those scary topics of conversation and the players they could haunt.

FACEBOOK … AND THE FACEBOOK COMMUNITY

The scariest thing for Facebook is the people who use it.

Unfortunately, Facebook has given hate speech a platform and hate speakers an audience, which will, over time, turn off its core users and advertisers.

Facebook leadership underestimated the role that platform governance plays in keeping platforms alive and thriving – and it may be too little, much too late to turn things around. Although the vilest voices on its platform are a small minority today, they may be loud and horrible enough to drive its future in a very different direction than it has long intended.

I've often written about this topic over the last several years, well before the 2016 election dominated the headlines about Facebook's future as a content platform. Before "fake news," there were the public beheadings, live shootings, live suicides and bullying – many of which were very viral.

All of those posts made it through Facebook's screens and filters, and

circulated on its platform for hours, even days, before being taken down. This happened despite sophisticated technology capabilities that successfully flagged many other types of inappropriate postings, like pornography, and kept them off the platform for years.

It took the public scandal of the 2016 election, the "fake news" that it propagated and the Cambridge Analytica debacle to force Facebook to face these issues publicly – and then they had no choice. Since then, Facebook has hired thousands to police the content posted on its platform, and to remove fake profiles and the posts that perpetuate it.

Facebook reported on their website that their teams have made progress: They removed 837 million pieces of spam in Q1 2018 before anyone reported it, disabled 583 million fake accounts "within minutes" of going online and removed 24 million inappropriate pictures related to violence and nudity.

But they also acknowledged that their technology "still doesn't work that well" when it comes to hate speech, requiring manual intervention to review and act upon. Only 38 percent of hate speech content was identified by their technology in Q1 2018, they reported, resulting in the removal of 2.5 million such pieces.

Some of you will scoff, as Facebook has a massive audience – currently 2.23 billion monthly active users – that keeps on growing. And some may rationalize that what has been identified and removed reflects a very small percentage of the offensive content across the platform.

But that would miss a few key points.

According to eMarketer, Facebook can count fewer than half of 12- to 17-year-olds as monthly users on any device, and predicts that it will lose two million users under the age of 24 in 2018 in the U.S.

That's small for now, but it's a bellwether of Facebook's future growth prospects and its ability to retain advertisers that want to reach that demographic.

Facebook's behavior as a platform has also eroded the trust that consumers have in it as an enabler of innovative payment experiences. In fact, according to our recent study, they come in dead last.

It's tough to trust a platform that has failed to be a responsible steward of consumers' personal data. That calls into question whatever potential Facebook might have had to drive commerce via payments on its platform.

And its future is very much in the hands of a community that thinks differently about Facebook today, with many now thinking twice about how and how often they use it.

GOOGLE … AND AD-SUPPORTED SEARCH

The category that Google innovated 20 years ago – ad-supported search – now appears to be one of its scariest things.

Alphabet reported earnings last week, showing – for perhaps the first time – the impact that consumers' changing product search behavior is having on its core business of ad-supported search.

Alphabet's stock took a drubbing, and remains down after they reported a decline in the prices it charged advertisers, coupled with the increase in the cost of paying partners to distribute its search engine – some $9 billion to Apple alone, it's been reported.

Bloomberg's examination of Google's ad business showed an increase of more than 60 percent in the number of clicks on Google's ads, but a 28 percent decline in prices charged advertisers – something that Bloomberg claims is the biggest drop in three years, and a slowdown that has analysts worried.

And as more inventory shifts to the mobile devices that don't drive the same conversion numbers for Google as desktop does, analysts worry that the slowdown – and the revenue losses that come with it – could continue.

This is happening at the same time that Amazon's earnings report showed triple-digit increases, quarter over quarter, in the category that includes its ad-supported revenue. It's been reported that advertisers are shifting more of their search budget to Amazon due to higher conversions, made easier by its one-click checkout experience. According to

eMarketer estimates, Amazon's share of digital ad revenue will grow from just over 2 percent today to 3.5 percent a little more than a year from now.

This also comes as vertical marketplaces and aggregators have become go-to destinations for consumers looking to make specific purchases. Consumers don't Google for takeout anymore – they go straight to Grubhub. They don't search on Google for where to buy a coffee table: They go first to Wayfair or Houzz if they want new, or Chairish if they something vintage. They don't Google when they want to buy a new flat-screen TV; they go first to Amazon, or maybe Best Buy.

Of course, Google knows this, and is working across a number of fronts to counter the threat to its core business.

For instance, it's turning tokenized browser-based credentials into a more streamlined way of transacting digitally when landing on a merchant site. There's a big available market with a lot of room to grow that pie – after all, Amazon "only" has about 50 percent of the online commerce market, and the U.S. Census Bureau still wants us to believe that 90 percent of retail sales still happen in the physical store.

But the wildcard for Google might be how voice commerce will change how consumers search for things they want to buy – whether those searches start in an ecosystem where consumers do buy products today, or whether they start in one that consumers use to search for where they could buy those things.

For Google, it's a scary distinction with an important difference – and a question that they are now asking Google Assistant to help them answer.

APPLE … AND THE IPHONE CUSTOMER

The consumers who have propelled Apple into becoming the first trillion-dollar company, and made the iPhone an icon of mobile innovation, aren't buying iPhones at the frequency they once did.

Upgrade cycles that were once every 21 months have now stretched to 31 months, adding nearly a year from purchase to purchase. Some analysts estimate that upgrade cycles will soon stretch to 33 months –just three months shy of three years.

Part of that expansion is because phones – iPhones, in particular – have become very expensive. The top-of-the-line iPhone X is a smidge shy of $1,500 when all is said and done, and the iPhone 8 is about $900.

But consumers are mostly hanging onto their iPhones because they look very much the same from model to model. Meanwhile, operating system upgrades give consumers the benefits of new features on older handsets – for free.

Not everyone feels compelled to buy a more expensive new iPhone just because the camera is better: For many, the differences in quality are not appreciable enough to justify the extra spend. Neither are the benefits of Face ID, since its widespread use as an authentication method isn't pervasive enough to drive an upgrade.

Apple is banking that the new iPhone XR will break that upgrade impasse. The XR incentivizes consumers by presenting them with an iPhone that looks different – something that is particularly important to Chinese consumers, whose phones have become as much of a status symbol as they are a digital essential – and is also cheaper to buy.

Analysts expect that the XR will a big seller, and Apple is investing heavily into advertising to boost demand, particularly around the all-important holiday gift-giving season. But those expectations are being dashed over concerns of lower-than-predicted unit sales, since many consumers may have just purchased a pricey iPhone 8 or iPhone X a year ago – and over lower sales volumes, given the lower price point.

According to last week's report in The Wall Street Journal, Verizon reported record-low iPhone upgrade rates and projected further declines in December.

Expanding upgrade cycles don't just affect Apple, of course – they are troubling to all smartphone OEMs. Overall shipments of smartphones are off slightly: 2 percent quarter over quarter.

But for Apple, the expanding upgrade cycle is causing its share in key markets

to slip: It has lost share in China, and has slipped to third place worldwide. Apple, for all of its attempts to diversify away from the iPhone, remains highly dependent on the revenue it generates.

That's why, for Apple, the scariest thing is also its great paradox: The consumers who love the iPhones they buy so much also want to hang onto them for as long as they can.

PAYPAL … AND ALEXA

Amazon has been purported by many to be the scariest thing to show up on their doorstep, at just about any time of the year. But for PayPal, Alexa is a particularly scary sight, all wrapped up in the Echo ecosystem, now 50,000 skills strong and embedded in thousands of devices – some that are Amazon-branded, but many that are not.

And it's now driving commerce.

Alexa, of course, is the very non-threatening, pleasant-sounding digital personal assistant connected to the Amazon ecosystem, who can play your favorite song, tell you corny jokes and now order and have delivered an expanded array of consumer products.

She's four years old, but her youth defies her place in the voice commerce ecosystem. A few years ago, I wrote a story about payments' new intermediary – one that would be game-changing, because consumers would put it there and use it. That intermediary was Alexa, and she has proven to become a strong and growing presence in the digital, commerce-enabled world.

The How We Will Pay study, just published in collaboration with Visa, shows that a staggering 27 percent of the U.S. population owns a voice-activated device, and 28 percent of those have used the devices to make a purchase during the seven days in which we asked them to tell us about their digital buying and payments experiences.

Alexa and Amazon have the majority share of that market and the wind at its back, as it strives to make Alexa that helpful, indispensable assistant across many financial, retail and payments experiences.

For PayPal – any digital wallet, really – that's scary. Alexa-enabled purchases are done via Amazon Pay with the credentials registered to that method of payment. That's not PayPal today. And although "never" is a strong word, it seems highly unlikely that Amazon would ever insert another intermediary into that payments flow.

Why should they? Consumers and merchants aren't asking.

That's also relevant given the competition today between Amazon Pay and PayPal for share of payments acceptance and volume as more transactions move online – and outside of Amazon.

Amazon today has about half of that volume – and a growing acceptance of payments acceptance off Amazon.

PayPal, of course, has had a 20-year head start, dominating in payments acceptance online with nearly 70 percent of the top 1,000 merchants. It is also relevant in enabling payments inside of contextual environments like ticketing.

What could potentially make Alexa less scary is the role that PayPal could play in making Google Assistant a strong competitor in the burgeoning voice commerce ecosystem – giving consumers a trusted way to pay with a new payments experience, and a payments option for a merchant ecosystem in search of a voice commerce counterweight to Amazon and Alexa.

EBAY … AND EBAY

"eBay has ruined eBay," wrote reallyhardtofind on June 6, 2018 – one in the string of 132 comments triggered by a post from a seller questioning why his sales are off a full 100 percent since April 1, 2018. This seller, who has been on the platform since the 1990s, is reporting zero sales.

And this seller is apparently not alone.

Long-time sellers in this six-page thread, one of several I came across, complained of volumes being appreciably down — many say down anywhere from 30 to 60 percent from what they once had.

The threads from sellers complaining about the lack of sales, and corresponding increase in fees, has led them to seek alternatives to eBay, with many citing Amazon as a viable digital port of call.

I've felt for a while that eBay has lost its way.

eBay used to be a reliable place to buy good-quality collectibles. It didn't sell new stuff – collectibles were its niche.

Today, checking out eBay's home page is just like looking at every other site that sells new products, along with the oddball mix of junky stuff that gets passed off as collectibles. As a buyer, it's hard to understand what eBay is and why they should start their product search there.

Sellers with good-quality collectibles have other online options that bring better traffic and higher conversions. If the forums are any indication, those sellers have left or plan to cut their losses by using other marketplaces as their primary storefronts.

The sellers who offer new stuff have other places to go, too, including Amazon – the company that eBay CEO Devin Wenig says he wants eBay to be nothing like, and which is suing Amazon for poaching its sellers.

This all comes, of course, as eBay has made the decision to mediate payments and made the move to Adyen as its sole payments processor. The motivation for that move was to create more of a direct relationship with the sellers in order to provide them with more services, including working capital and lower processing fees – fees, they say, that can be as much as 25 percent lower in some cases.

But lower fees are only relevant if sellers are selling things, which many say they aren't. And whether eBay can make a margin on payments is also irrelevant if sellers aren't selling.

Some seller complaints reflect concerns over additional fees charged for things that used to be free – so maybe making a margin on payments is harder than once anticipated.

Analysts have expressed concerns that PayPal's reported GMV on the eBay platform – half of what was estimated – signaled future softness in eBay's marketplace volume, and impacting its future as a viable place for buyers and sellers to transact.

The scariest thing for a marketplace like eBay is feeling the force of gravity that sends it spiraling down, forcing it to fight to climb up to its point of ignition.

FINTECHS … AND THE BANKS THEY WANTED TO DISRUPT

Instead of banks being afraid of the FinTech bogeyman, it's now more like the other way around.

Over the last many years, there's been a lot of words, and even some entire websites, dedicated to the threat to banks by the FinTechs that were out to "eat their lunch."

In most of those cases, the narrative was about the rise of the neo-bank targeted to millennials, whose distrust of traditional banks rivaled that of their parents' or grandparents' distrust of "The Establishment" in the 1960s.

It turned out to not be the case, for most of the adults living in the U.S.

People want to keep their money in a place that consumers trust. And that is a bank – one with FDIC insurance and safeguards that keep their money safe.

According to our latest Financial Invisibles Report, out of 10,000 adult consumers in the U.S., 93 percent had a bank account. That's where consumers want to park their money until they need to use it.

Not only do consumers want to keep their money in the bank, but they also want innovative mobile and digital banking solutions from them that make it easier to access and manage their money. Online and digital banking is an innovation enjoyed by many consumers, as is P2P payments. So, increasingly, is the promise of real-time disbursements via businesses that use bank and bankcard rails to quickly push those funds into bank accounts.

FinTechs are helping to enable many of those innovations for those banks.

Over the years, and in the last year in particular, FinTechs have understood that payments is a scale business, a risk business and a trust business. Their tech helps accelerate the delivery of innovation to FI customers who have the consumers' trust and are pretty good at managing risk. FIs are also getting better at partnering, acquiring or investing in FinTechs to up their own services and product game. APIs and other technologies make those integrations more manageable and those ecosystems more robust.

In developing countries outside the U.S., things are different – particularly in China, where closed ecosystems like Alipay/Ant Financial and Tencent/WeChat Pay are the trusted financial services ecosystems that dominate today's landscape. But even there, innovators are using their tech and platform as service offerings to give banks access to new products and services, since each one needs the other for different reasons.

AMAZON, THE REST OF THE FAANGS … AND THE ANTI-BIG TECH MOBS

Waylon Jennings once sang, "Mammas, don't let your babies grow up to be cowboys."

Today, big tech might want to tweak those lyrics just a bit: Founders, don't let your companies grow up to be big tech.

Amazon isn't the only big tech company that should find regulators terrifying.

There's a whole group of players in the same bucket.

They are even known by a scary acronym: FAANG.

Everyone better watch out: Those FAANG guys are mostly up to no good. Op-ed pages in major news dailies and tech columns also refer to them as the "Frightful Five," which includes Apple, Amazon, Facebook, Google and Microsoft.

But since FAANG is so much catchier than FAAMG, why not include Netflix and let Microsoft off the hook?

These companies are being demonized, mostly because they have created products or services that consumers like and use – things for which lots and lots of them are willing to pay. And they have gotten big as a result of innovating on top of the efficient platforms that they created and adding more value to consumers.

But they're mostly being demonized because they have disrupted the status quo. Take Netflix, which has helped to dislodge the high-priced/low-service cable companies.

A lot of the narrative for the FAANG pile-on has come out of the EU, where regulators have targeted (and continue to target) successful U.S.-based companies doing business in their markets. Google has been slammed – and fined billions – for making a better search product than Microsoft's Bing. Why? Because consumers don't want to use Bing. In fact, I suspect most regulators don't want to use it, and probably don't.

Meanwhile, Google has also been told to unbundle apps from their Android license agreement (which they provided for free in return for ad revenue) and now charges handset makers $40 for the bundle. Google is now being creamed in the media for doing that. The assumption, I suppose, was that Google should have just given handset makers their valuable apps for free.

After all, they are big and have piles of money, so why not?

But this sentiment has crossed the pond.

Voices — from politicians to op-ed writers — are calling for stricter enforcement of antitrust laws, and suggesting the breaking up of tech companies. The breakup of big tech has become the topic of TED Talks and book tours and talking heads who find no shortage of an audience to egg them on.

Perhaps Google can be divided into two companies, one of which gets keywords beginning with A-M, and the other with N-Z.

Or something.

Think about what this would mean for Amazon.

Perhaps these individuals would have Amazon broken up into different, separate businesses, ignoring that Amazon's integrated retail supply chain is no different conceptually than A&P's was when it was the biggest retailer in the world: Making products, distributing products and reselling others' products in storefronts was the business of retail then.

And it is the business of retail now. It's also the business of Walmart, too.

The ultimate victim of the "let's break up big tech" crowd, of course, is the consumer who benefits from the services of these companies.

So, maybe the scariest thing of all – for consumers, for Amazon, for FAANG, for whatever collection of companies and acronyms come next and for the thriving payments and commerce ecosystem that is using innovation to deliver more value to consumers and businesses – is the energized mob of academics, politicians and assorted gadflies who ignore all the benefits, innovations and competition these companies have brought us.

Unfortunately, it will take more than "boo" to scare them away.

The Apple iPhone Sales **Rope-A-Dope**

Apple's taken a beating since announcing its Q4 earnings last week.

The stock price is off nearly 7 percent, even though its trillion-dollar market cap remains intact.

Analysts and the media smelled blood in the water after CEO Tim Cook said Apple would stop reporting unit sales of its products, including its crown jewel, the iPhone, next quarter. This came on the heels of reported iPhone sales that didn't meet analyst expectations.

That means Apple won't tell the world how many — or how few — iPhones were sold over the all-important holiday season, and in the all-important months following the release of three brand-new iPhone models.

Or at any other time — unless it wants to.

The Wall Street Journal threw some serious shade on that move, citing Steve Jobs' reaction to Amazon's decision in 2009 to do the same for the Kindle — that it must not be selling many. Jobs' point then was that if a company is selling a lot of stuff, they want to tell people about it. If they aren't, then they don't.

Which, of course, is the iPhone story.

Last week, I talked about seven scary things for the platform giants. For Apple, it was consumers not buying iPhones at the frequency they once did.

In that piece, I explained the reasons why consumers now take longer to upgrade their iPhones. Instead of shelling out a thousand or fifteen hundred bucks for a new iPhone that looks just like the one in their hand today, the iPhone's 1.3 billion installed user base is increasingly just upgrading the iOS to get new features and functions. Proving that point, a month after iOS V.12 was released, Apple reported that 50 percent of all active iOS users had upgraded.

The combination of pricier phones and longer upgrade cycles, which experts say will stretch to just shy of three years in 2020, hits Apple particularly hard.

So, how's Apple going to make that up?

Well, they aren't being shy about the answer.

They say, quite loudly and clearly, that they plan to make it up from their Services businesses. And that largely means the app ecosystem.

So, all the apps in the App Store better buckle up, and be prepared to pay up, to remain a part of Apple's ecosystem.

After all, it costs money to support a trillion-dollar company.

THE SERVICES HANDWRITING ON THE WALL

Don't say I didn't warn you back in June of 2016.

Cook said last week that iPhone unit sales are no longer the right metric for measuring Apple's success. What he believes will replace that metric — because it has to — is what he's been talking up with analysts over the last two years, using a talk track that more recently has compared Apple's Services largesse as equivalent in size to a Fortune 100 company.

In June of 2016, Apple gave developers a bigger incentive to capture more revenue from their apps in the App Store — and for Apple to collect more of it too.

That was the year Apple gave developers a big pay raise on apps with a subscription business model. Instead of the 30 percent Apple used to collect in perpetuity for those in-app subscriptions, it reduced its cut to 15 percent for those that were downloaded and kept active for more than a single year.

It did so because apps like Netflix were avoiding signing up subscribers through the App Store to evade the Apple tax. Apple figured it was better to cut the ongoing tax to get subscription plays on board.

Subscription models, of course, are the "it" thing in payments, and Apple's revenue boost was to further incent developers to hop onto that recurring revenue bandwagon for the digital goods intended to be consumed on the Apple platform — books, news and media content, games, productivity tools used digitally, streaming music or video services. Apple provided a very thorough set of operating guidelines for how developers could do that, including some 200 permutations of subscription price points that were all inbounds.

Apple also provided very clear instructions for how those purchases must be made — which is via Apple's iTunes payments platform — 100 percent of the time.

Although developers can acquire customers off the App Store, register them off the App Store and enable their use on Apple's platform, trying to sidestep Apple by directing people off the app to register will get you kicked off the platform, probably forever.

That means it's totally within bounds for Amazon to acquire Kindle consumers on Amazon.com, and for Apple to allow those consumers to download the Kindle app and consume those Kindle purchases on Apple devices — which it does. In fact, the only way Kindle purchases can be consumed on Apple devices is if the consumer activates those purchases on Amazon.com — and that's how Amazon wants it.

That also means Netflix and Spotify can — and do — enroll and activate consumers off the App Store and give those consumers access to those services on Apple devices too. It's been reported that Netflix is doubling down on this front in 33 countries as part of a reactivation and new customer acquisition initiative. Netflix reports that roughly 35 percent of its customers come by way of App Store platforms — both Apple and Google Play combined.

But that also means Netflix and Spotify must pay their 15/30 percent cut to Apple if that consumer was acquired via the App Store, even if the consumer uses those services largely off the Apple platform — on Xboxes, PCs, TVs, smart speakers, in-dash applications, etc.

That still gives apps like Netflix and Spotify pause — and for legitimate reasons.

THE APP USAGE/SPEND MISMATCH

According to October 2018 App Annie data, although Netflix is the No. 1 app across all app stores as measured by

consumer spend, it's tenth when it comes to usage and downloads.

There, Facebook's properties — Messenger, Instagram, WhatsApp and Facebook — take four out of the top five spots.

Apple made $11 billion in 2017 from App Store revenues — collected from in-app purchases, paid apps and ad revenue from promoted apps in the App Store, and plenty more from its own subscription services, like Apple Music.

But there's only so much Apple can do to drive organic growth from its own subscriptions. And it will take time for Apple to buy and then assimilate any content platforms and the revenue generated along with them.

Until then, simply adding a toll collector for subscription apps for digital services isn't going to give Apple the Services revenue boost it needs to blunt the reality of diminishing iPhone revenue.

That's particularly true because the big players that drive lots of consumer spend today via the App Store have enough brand recognition and other, less costly, consumer acquisition channels available to acquire and activate customers.

And it's also because most developers haven't yet taken the digital subscription app bait — only 20 percent of them have opted into such a subscription model since the June 2016 announcement. Those who have taken the leap say they are seeing revenue increases, which means Apple is seeing that too. But the 80 percent still on the sidelines don't seem convinced that either their services are well-suited to such a model or that they want to adapt their solutions so that they are.

So, for Apple to move the Services revenue, it needs to do a lot more.

THE APPLE TAX MAN COMETH

Like, it needs to figure out a way to tax all of the other apps in the App Store.

For starters, it could extend the tax to free digital apps, particularly the ones that make their money off advertising.

Most would probably pay a fee to be available for download in the App Store and to be used on the iPhone. Google already pays Apple for a privileged position in the app ecosystem. Maybe Apple will decide that Facebook — which isn't exactly a pauper — should pay up too.

Then there are the subscriptions for products and services activated in the App Store for services consumed off the Apple platform — such as meal kits, box-of-the-month club offerings and delivery services — all of which are today excluded from the Apple revenue tax.

In fact, Apple's terms of service specifically say that payment for those in-app services must be done outside the app — via traditional credit card, mobile wallets or Apple Pay — because the iTunes payment system that collects the tax can't monitor or meter those transactions.

But maybe not for long.

There's nothing to prevent Apple from deciding that some portion of those subscription activations are paid to Apple — in much the same way as those services might expect to pay any other customer activation channel for finding and converting a qualified lead.

Maybe that's not 15 or 30 percent, since the price of those subscriptions is higher, but Apple could decide the activation of every new Blue Apron, Dollar Shave Club, BarkBox, Wag, Stitch Fix, Birchbox, Fabletics or any one of the growing number of automobile subscription services will come with a 2, 3 or 5 percent tax on that revenue stream for as long as that subscription is active.

Apple could also decide that any app that's well-suited to mobile platform usage — any kind of reservation, food delivery aggregator, quick-service restaurant app that enables mobile order-ahead or transportation services such as Uber and Lyft — should also pay a fee based on the usage of those apps on their platforms.

Maybe Apple does that by making those purchases flow through the iTunes platform or Apple Pay as the default payment button.

That certainly would be one way for Apple to juice Apple Pay usage.

At four years of age, Apple Pay is a star in a show without much of an audience, even though the number of people Apple reports with Apple Pay is increasing. That may have a lot to do with messaging people that upgrading their iOS is incomplete unless they install Apple Pay. It's quite possible that people counted as users are installing Apple Pay because they think they have to, not because they plan to use it.

Cook said last week that Apple Pay is the leading mobile contactless player, with transaction growth that has eclipsed that of PayPal at the mobile point of sale and a growing acceptance at most of the top retailers in the U.S.

That would be a great story if people were really using Apple Pay to buy things at those merchants. Upgrading a merchant terminal to enable contactless payments, by default, enables Apple Pay acceptance but is not a guarantee of consumers using Apple Pay at those merchants to buy things. It's not what we've seen over the last four years or, even more recently, in the results of the PYMNTS/Visa How We Will Pay study.

THE IPHONE ROPE-A-DOPE

The late, great Muhammad Ali beat George Foreman in the fight that will forever be known as the "Rumble in the Jungle" because he practiced being pummeled against ropes that would act as shock absorbers against Foreman's punches the day of the match.

It worked.

While everyone watching thought Ali, who went into the match as the underdog, was being creamed, he had a strategy.

He took his beating against the ropes, until he saw Foreman getting tired. He then came out swinging and won the match.

Such is the story with Apple and its slowing iPhone sales story.

Apple is taking its punches, with observers now starting to pile on, unsure of its ability to continue the winning streak the iPhone has given Apple for more than a decade.

Apple is deflecting those punches, first by making it harder to see how bad iPhone sales are, while at the same time shifting the narrative — and its strategy — to maximize Services revenue, well before the crowd thinks it's down for the count. Then, it will come out swinging with potentially the most potent punch it has: eventually taxing all of the apps in the Apple app ecosystem in some way.

Of course, the business merits of one or any of these ideas for gunning up Services revenue by taxing the apps ecosystem could likely have some disastrous downstream effects for Apple.

But none of them are implausible, or even that far-fetched.

Apple might think it's sitting in the catbird's seat with 1.3 billion iPhone users who are sticky to its platform and who use all the apps — and can easily charge for using its platform.

If apps want to be part of that ecosystem and available to those consumers, Apple might tell them: tough luck — pay up or go somewhere else.

It's risky.

Maybe apps will rebel.

But that's hard since iPhone users, while outnumbered by Android users, account for the majority of app usage for a lot of apps.

So, it just might work.

Unless voice-activated platforms like Alexa and Google Assistant ruin their plans.

The **Walmart/Amazon** Whole Paycheck Matchup

Walmart's Q3 earnings last week was a story of strong digital sales and 16 consecutive quarters of same-store sales growth. Consumers, executives said, continue to walk into Walmart stores and add more things to their shopping baskets.

That's a lot of feet – belonging to some 140 million consumers globally (100 million or so in the U.S.), who each week walk into one of those physical stores, in addition to the 100 million who are said to shop one of the retailer's online channels. Walmart's strong digital growth, at 43 percent last quarter, has now propelled has now propelled Walmart to within spitting distance of the No. 3 post position, displacing Apple, at roughly 4 percent of retail sales.

All of those things are precisely what Sam Walton staked the Walmart brand on 56 years ago when he opened the first store in Bentonville, Arkansas. The brand was built on keeping prices low, and stocking shelves with a variety of merchandise categories that would keep consumers coming back week after week. That combination, he believed, would capture a healthy share of the consumer's paycheck – and keep Walmart's bottom line healthy, too.

Yet, despite these strong Q3 results, investors weren't wowed: Walmart's stock dropped 2 percent on news of its earnings on Thursday, and another 2 percent on Friday.

Maybe that's because they are looking around the corner, beyond this most recent quarter, and are worried about what they see: that Walmart's healthy share of paycheck is being challenged by another retailer whose "customer as boss" mantra and commitment to low prices and stocked shelves is just as important as it was for Sam Walton 56 years ago.

That retailer is, of course, Amazon.

Today, based on brand-new PYMNTS proprietary analysis, Walmart accounts for roughly 8.9 percent of consumer retail spending in the U.S. and 2.8 percent of all consumer spending in the U.S.

That probably sounds pretty good.

Until you look at this chart.

At 6.4 percent and 2.1 percent, respectively, Amazon is nipping at the heels of Walmart's share of consumer spending. Perhaps more troubling for Walmart, however, is that Amazon's share of spend, overall and within retail, has grown rapidly over the last four years.

Walmart's has remained relatively flat.

Based on our analysis, that spending share gap will close even more rapidly, given Walmart's increasing loss of share to Amazon in many of the key categories that drive big chunks of consumer retail spending today.

And the investments that Amazon is making in other areas outside of retail account for large chunks of the consumer's paycheck overall, and will continue to do so in the years to come.

THE BATTLE FOR THE CONSUMER'S WHOLE PAYCHECK

PYMNTS first published the Amazon Whole Paycheck Index a month or so ago – driven, in part, by my curiosity over the degree to which consumer spend was being redirected toward Amazon and its growing consumer and retail footprint, and away from more traditional retail channels.

That curiosity was piqued by my walks to the office when I am in town (I live in Beacon Hill in Boston) and my mental counts of the number of Amazon boxes I see out on trash day. Last holiday season, by my own informal and non-statistically relevant methodology, I estimated that seven out of every 10 households on Beacon Hill shopped Amazon for the holidays.

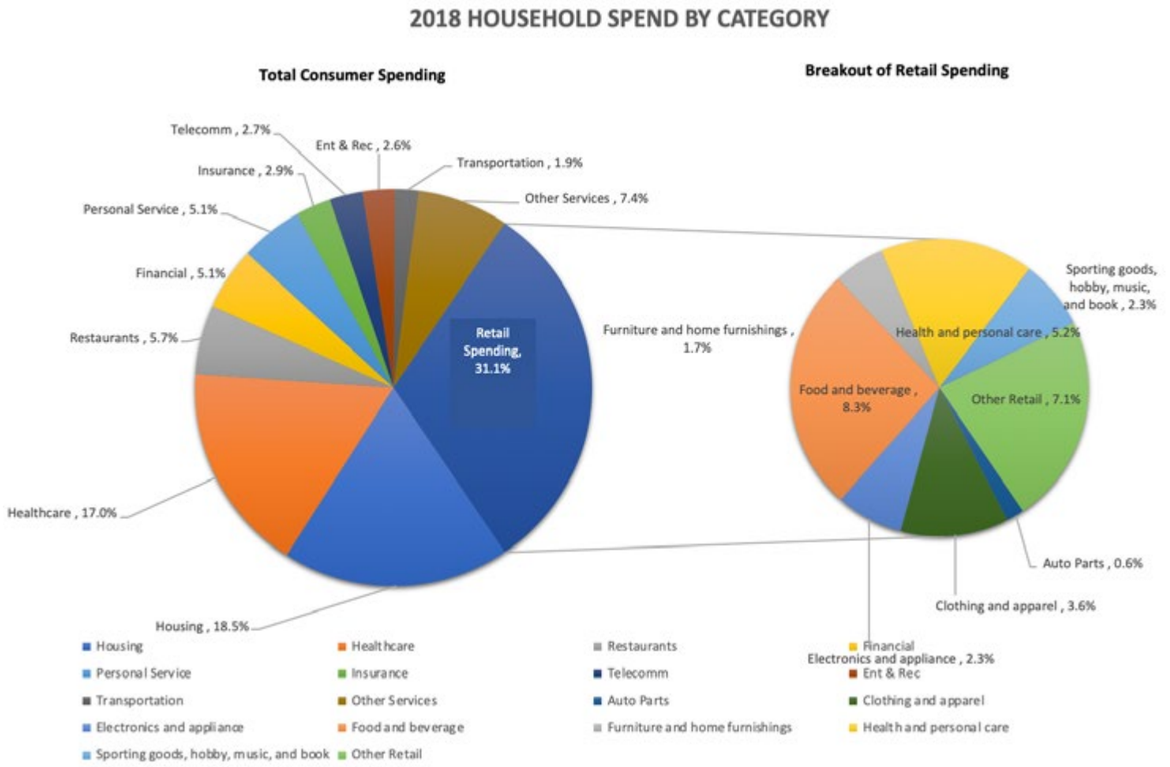
In an effort to be much more scientific and reliable, our data teams built a sophisticated statistical model to measure what we coined the Amazon Whole Paycheck phenomenon.

We started with census data to estimate how much households in the U.S. spent, overall, in 2018 across all spending categories.

That's $62,941.

We then drilled into how that spend is allocated across different spend categories. The lion's share of that $62,941 – 31 percent – is spent on retail purchases (food, electronics, clothing, etc.). Housing (18.5 percent) and healthcare (17.0 percent) round out the top three.

We then created a proprietary data model, using a variety of data sources and statistical techniques to calculate the



“paycheck index” for both Amazon and Walmart.

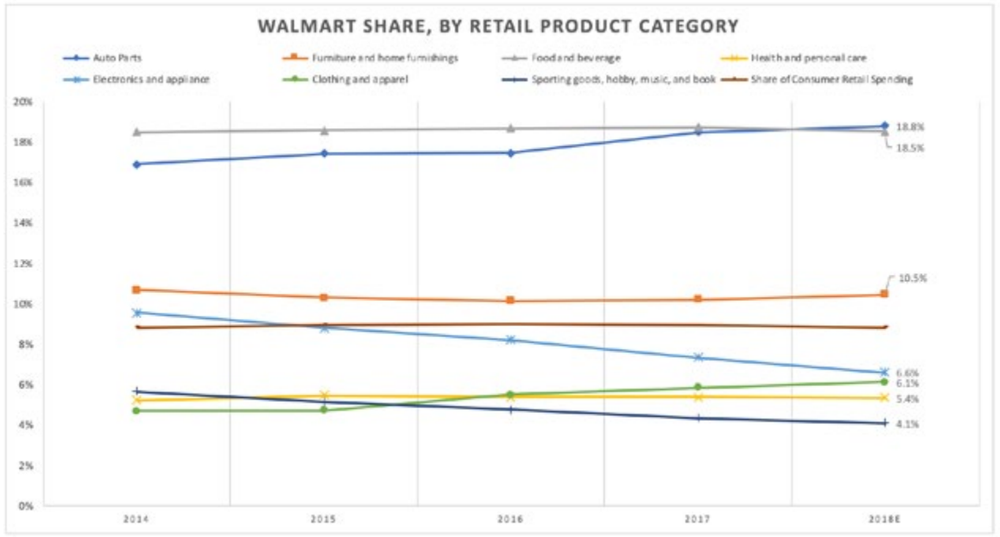
The story of the Amazon Whole Paycheck Index is here, which I’ll come back to in a minute, so let’s instead focus on Walmart Whole Paycheck numbers.

Here’s Walmart’s share of consumer spend by retail product category.

You might be thinking, hey, this looks pretty strong – incredibly strong, in fact – in the segments that drive a big chunk of consumer spend, like food, auto parts, furniture/home furnishings, clothing and even health/personal products.

You would be right.

Food and healthcare account for about 44 percent of all retail spend. And adding



electronics, auto parts, clothing and home furnishings into the mix, the percent of all retail spend attributed to those categories climbs to about two-thirds.

Walmart looks well-positioned in mostly all of them.

Until you look at this chart.

You don't have to be a math whiz kid to note that the slope of the lines on this chart and those on Walmart's look remarkably different.

Walmart's are largely flat, and Amazon's are rising – in every category.

For Amazon, the slope of those lines is moving up and to the right, rapidly, in the categories that are helping them close the total spending and total retail spending paycheck gap with Walmart.

That makes the story of the Amazon Whole Paycheck Index not so much about the percentage of spend – since one could argue whether 2.1 percent of total spend or 6.4 percent of all retail spend is too high or too low or maybe just about right.

But the remarkable annual growth rate (CAGR) that Amazon has achieved over the last four years has been in segments that represent the big chunks of that spend: grocery (at 106 percent), auto parts (at 32.7 percent), furniture/home furnishings (at 41.8 percent), clothing (at 43 percent), electronics (at 27 percent) and health and personal care (at 43.0 percent).

MINDING THE WHOLE PAYCHECK GAP

The consumer spending share gap between Walmart, the biggest retailer by market cap, and the world's largest digital retailer is being narrowed by three things.

First, the rapid growth in online sales, of which Amazon has a 50 percent share.

When it's easier to do so, consumers now buy things online – and with Amazon about half of the time. That's either by shopping on the Amazon marketplace, via one of the brands that it now owns – Zappos or Shopbop, for example – or via one of the 80 or so private-label brands that it now operates.

For Walmart, landing the spot of No. 3 largest etailer in the world sounds great, until you realize that the gap between it and the No. 1 player – Amazon – is bigger than the Grand Canyon today, despite Walmart's own impressive growth story of late.

It's a growth story, though, that's tempered by Amazon's acquisitions in segments that drive large chunks of consumer spend, and also drive feet into Walmart stores: grocery with Whole Foods, and healthcare/prescriptions with its $1 billion acquisition of PillPack in June of 2018.

Then there's the pervasiveness of Alexa and the consumer's growing adoption of voice as a commerce enabler. PYMNTS' latest How We Will Pay study, done in collaboration with Visa, highlights the universal appeal of voice – 28 percent of all consumers own a voice-activated device, and 27 percent of those use it to make purchases. That is a remarkable adoption curve in just four years, and a use case that will increasingly serve as a commerce tailwind for Amazon the more places that Alexa turns up. Walmart's voice story is entirely dependent on the adoption curve of Google and Google Assistant, and the ecosystem beyond Walmart that will give consumers a reason to opt into Google and not Alexa.

If you're Walmart, these charts – and those facts – are downright scary.

According to our analysis, Walmart has already ceded ground to Amazon in the clothing and electronics categories –

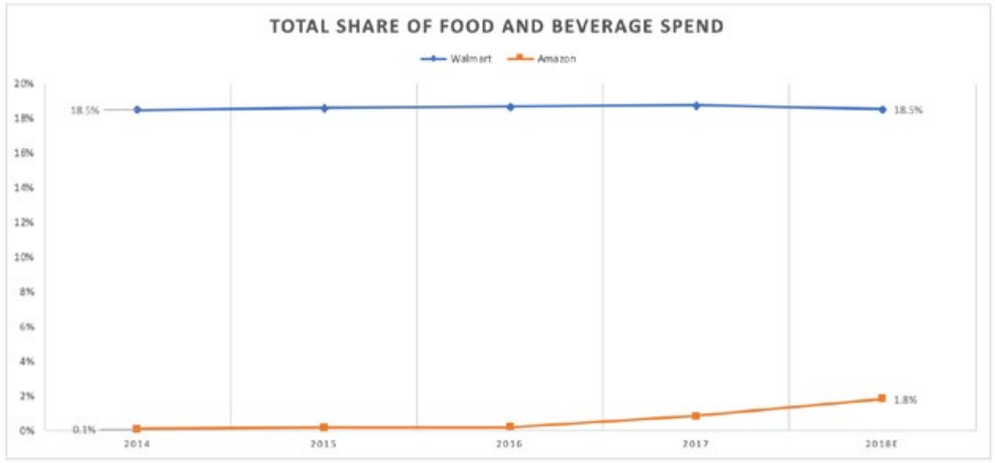
sporting, books and music, too. Home furnishings is literally neck and neck (Walmart at 10.5 percent and Amazon at 9.7 percent), given Amazon's rapid growth over the last four years, and the recent launch of its own private-label furniture line.

All of this makes the Walmart/Amazon rivalry over who will be the biggest, baddest retailer of them all about one and only one thing: who will be the biggest, baddest player in grocery and health-related services, where 44 percent of all retail spend in physical stores still holds sway – at least for now.

WHERE THE WHOLE PAYCHECK BATTLE WILL BE FOUGHT

Grocery has always been Walmart's bread and butter – pun intended. But over the last four years, its share of that consumer spend has remained largely flat at 18.5 percent.

But largely flat is all relative, since grocery represents more than half – 56 percent – of all Walmart's sales. That makes that 18.5 percent an enormous number. It's a number that also includes 18 percent of all SNAP food stamp redemptions, with Walmart reportedly as the largest individual recipient of that program.



Walmart is keenly aware that grocery and competitive grocery prices are what get consumers into the Walmart stores, and are driving sales and investments in innovations to keep consumers coming back.

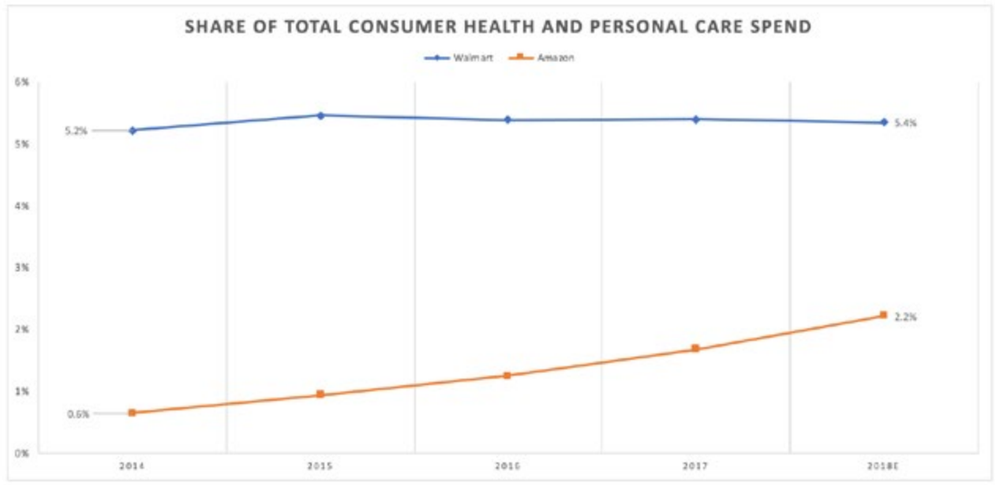
For instance, curbside pickup is now, or soon will be, available in 40 percent of all Walmart stores in the U.S., and the acquisition of Jet.com has helped Walmart bolster its online grocery sales. Plus, their investments in services and partnerships have helped to solve for last-mile delivery logistics.

It's no surprise, then, in looking at this chart, why Walmart has made grocery its focal point.

And why Amazon acquired Whole Foods.

For Amazon to make a dent in the roughly 8 percent of consumer spend that is food and beverage, the retailer needed a physical store footprint to meet the consumer where she buys groceries today – and where distribution centers for grocery delivery could be easily accessible.

The grocery gap between the two, for now, is enormous.



But all food dollars may not be created equally right now, and the share of consumers who are buying groceries online across all age groups in growing by double digits. And today, when consumers think about what to eat for dinner, they aren't always looking for what's in the fridge from the last grocery run to cook. Prepared foods, meal kits and delivery services are all now very much in the mix, requiring both Amazon and Walmart to adapt their offerings through their grocery store beachheads to accommodate those changing preferences.

Then there's spend on health and personal care, which today captures 5.2 percent of consumer spend, and growing. It's an area where Walmart leads Amazon in terms of share of consumer retail spend, but where the gap appears to be narrowing – and where Amazon is also growing quickly.

Today, Walmart is the fourth largest pharmacy operator in the U.S., driving more than $20 billion annually in pharmacy sales. Filling and refilling prescriptions is not only an important revenue driver, but also a big contributor to store foot traffic and those larger basket sizes.

Health and personal care is also where Walmart is making investments to remove friction and create stickier consumer relationships. The retailer has made the Walmart app more Rx friendly, and opened express lanes in stores to reduce the amount of time people spend waiting in lines for refills. Walmart now operates 19 clinics inside its stores to attend to routine, non-emergency health-related matters.

Over the years, Walmart has launched programs with incentives for consumers to eat healthier and visit the doctor, combining pharmacy refills and doctor's visits with a chance to drive more spend across all of Walmart. For example, women on Medicaid who maintain a regular schedule of prenatal doctor's visits get incentives to buy specific items at Walmart to keep themselves and their babies healthy. Others with chronic health conditions, such as diabetes or hypertension, are given similar incentives. And as the largest employer in the U.S., Walmart is working with insurance companies to reduce the cost of healthcare – and premium costs – for its 2.2 million employees by creating programs with similar incentives.

At about $100 million in annual revenue, Amazon's PillPack acquisition has a long road to hoe to best Walmart's hold on the share of the consumer's paycheck dedicated to prescription refills. But there's a reason that when the news was announced, the shares of major drug distributors took a market cap hit of $13 billion, just as the market cap of the major grocery chains took a $22 billion hit when Amazon announced it was buying Whole Foods in June of 2017.

Once the PillPack acquisition is cleared this year, Amazon will be set up to fill online prescriptions for consumers in 49 of the 50 states. That threatens existing distribution outlets like traditional drug stores – including Walmart, who was said to be a PillPack suitor but rebuffed.

The market's reaction to the PillPack news reflects its expectation for Amazon to become a force by making prescription refills as easy as shopping online, and to make next-day or same-day delivery a competitive advantage.

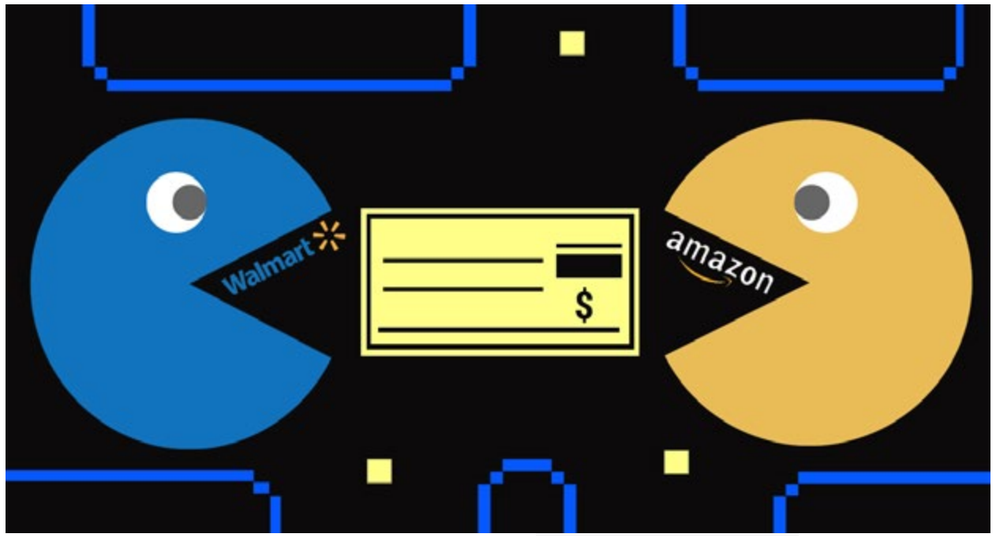
Of course, Amazon, too, is investing in other aspects of healthcare and health-related products, ranging from the online sales of medical equipment to a joint healthcare venture with JPMorgan Chase and Berkshire Hathaway that will reinvent healthcare delivery for first their collective workforces, and then for who knows who else once the model is in place.

TO THE CONSUMER GO THE SPENDING AND PAYCHECK SPOILS

Looking at the share of consumer spend overall, and by retail category, is a new and interesting way to see how Walmart and Amazon are each playing to their strengths and placing their bets on how to keep and grow that share.

What seems clear is that both Walmart and Amazon recognize that consumer choice will never just be about one channel versus the other, but about who can deliver what they want with the least amount of friction.

And that's increasingly in categories where inspecting things in the physical store no longer seems to be all that important. One needs only to look



at Amazon's share of clothing and accessories or home furnishings to see how real that consumer reality has become.

That's why we'll keep our eyes peeled on the two big sectors that will decide how this retail rivalry plays out – food/grocery and health/personal services – and how each will make investments to better their score, and the role that logistics will have in deciding how all of this ends up.

As both Sam Walton and Jeff Bezos know well, the consumer is the boss. And it's the consumer who will decide how it all shakes out.

What **Black Friday** Tells Us About The Future Of Retail

The verdict is in.

Black Friday was a boon for online retail.

Nostalgia still drove consumers to physical stores to snag and brag about great deals and to get into the holiday swing of things that only nicely decorated malls – complete with holiday music, Santa Claus and the looming reality of a Christmas deadline – can deliver.

But this year, millions more took not to their cars to trek to the malls for those deals, but to their couches instead. Adobe's analysis of 80 of the top 100 internet retailers found that consumers racked up two billion dollars in sales via their smartphones between Thanksgiving and the end of the day on Black Friday.

But in one way, Black Friday wasn't much different for consumers than any other shopping day.

Most of them were out looking for a good deal and a convenient shopping experience, and using their mobile phones to help them with both.

LETTING THEIR FINGERS DO THE SHOPPING

A study conducted in 2016 reported that consumers touch their phones 2,617 times a day – about once every 33 seconds.

At the time, that stat seemed amazing, even unbelievable.

It's actually neither – but rather, a testament to how important mobile devices are to consumers in navigating their day-to-day lives. And it shows much of a catalyst they've become in blurring the online and offline worlds for consumers and the people and businesses they touch – now every 33 seconds.

Nowhere have we seen these devices have more of an impact than in how consumers shop and how they do – and will – pay for their purchases.

Our second annual study, in collaboration with Visa, tells the story of how quickly – and enthusiastically – consumers embrace new connected devices and use cases to contextualize their shopping and buying experiences.

That increasingly includes voice-activated devices, the use of which to enable purchases has accelerated dramatically over the last 12 months. Now, 28 percent of all U.S. consumers report owning a voice-activated device, 27 percent of whom used it to make a purchase in the seven days we tracked their purchasing behavior. The proliferation of devices and apps that enable voice purchasing will only shift more commerce in that direction.

For merchants, this portfolio of connected devices represents an unprecedented opportunity to capture and convert consumers into customers wherever they are, and whenever they happen to be in the mood to make a purchase.

In fact, Adobe reported that 49 percent of online traffic on Black Friday was generated by smartphones, and the devices were used to turn 30 percent of all online purchases into sales.

They are also a real-time disruptor of how consumers now use the physical stores to shop.

Which is, they don't – at least not in the traditional sense of the word.

FIND BEFORE THEY BUY

In September of 2018, PYMNTS conducted a new study of 4,900 consumers to better understand their use of the mobile device in making purchases once completed exclusively in the physical store. We asked these consumers to describe the last purchase they made in a 24-hour period, staggering the study over a week-long period so we could capture responses across different days.

What we found is a reality that most retailers probably already know: Consumers making the decision to visit a store isn't about the surprise and delight of what they might find when they get there.

In fact, it's quite the opposite.

Today, visits to physical stores are about the consumers' certainty – even before she arrives – that what she wants to buy is in stock and available for her to

purchase and walk out holding in her hands.

THE PHYSICAL RETAIL DEATH SPIRAL, TAKE TWO

In 2014, I wrote a piece about the coming physical retail death spiral when reports about foot traffic at malls during the holiday season showed a marked downward trend. That reporting then wasn't just about an aberrant slip for that particular holiday season, but one that had, at that time, been nose-diving for the three years prior.

We didn't really need a team of data scientists poring over data to produce those results: All one had to do was visit the mall and observe how few people were shopping there.

At the time of that story, there were those who rationalized the decline in foot traffic as consumers being cautious about spending. Then only a few years out from under the financial crisis, consumers were using their phones and laptops more often to find good deals in an effort to watch their spending, they supposed.

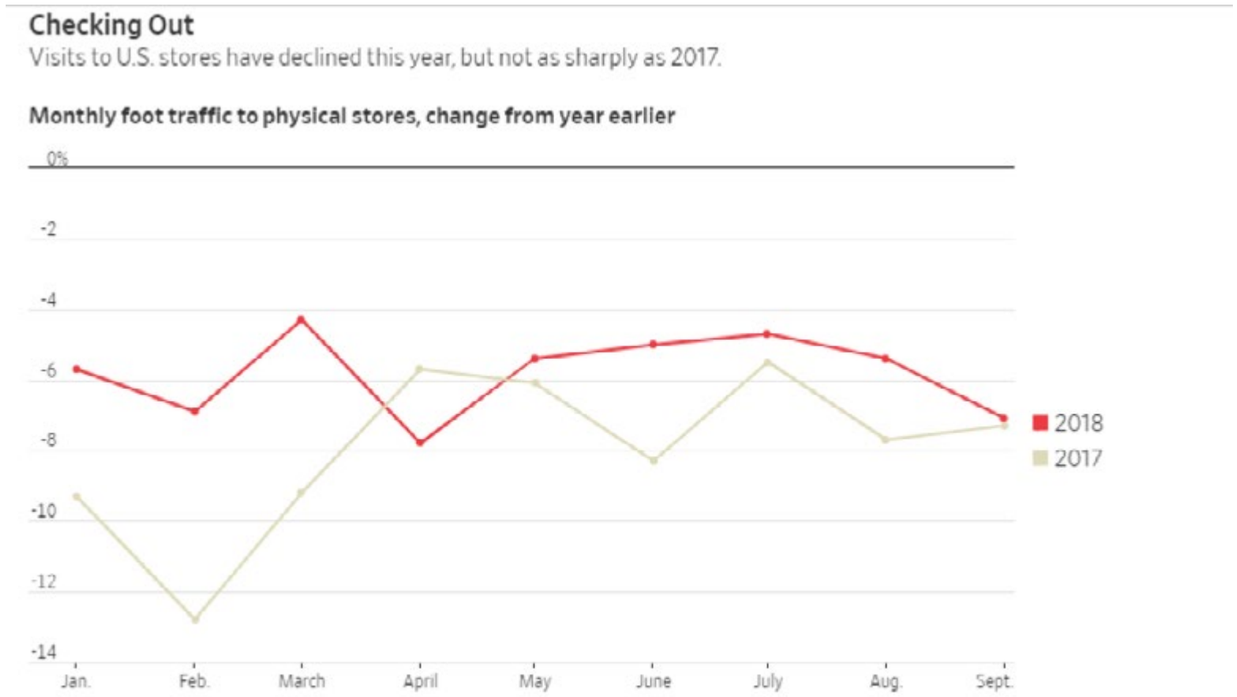
The conventional wisdom at the time was that physical retail would remain a relevant — and dominant — part of the retail shopping mix. After all, they said, more than 95 percent of all sales still happened in a physical store.

Fast-forward four years to a booming economy in which consumers are shopping until they are dropping, feeling ever more confident about their incomes and earning prospects and filling their shopping baskets higher than ever before.

The Wall Street Journal reported yesterday that foot traffic in physical stores is down for the fifth straight year, but not quite as sharply as in years past — not just during holiday times, but all the time.

Yet this decline comes as the economy is strong and consumers are buying more than they have in years – but just not at the physical store in the way they once did.

For more than 83 percent of the consumers we studied, stores are no longer places of discovery, but where they



go to fulfill the things they have used their smartphones to scout out first.

According to our study, only 16.5 percent of consumers in the U.S. now use the physical store exclusively to discover what they want to buy, a remarkable shift in the space of decade when that number was pretty darn close to 100 percent.

Stores have increasingly become places where consumers walk in knowing what they want to buy, and how much they will pay — or pick up what has already purchased and paid for online.

Only 79 percent of the weekday consumers we studied made a purchase in a physical store, including for food and groceries.

The physical retail ship is still sinking.

The 22 percent of consumers in our study who made a purchase online did so across a variety of retail segments, including clothing and accessories and, to a smaller extent, groceries and order-ahead at QSRs.

All of these results were for an otherwise run-of-the-mill week in the fall.

Nearly a quarter of online shoppers in our study made purchases in excess of $100. Nearly 59 percent of the consumers who are making purchases using smartphones are women. More than a third (36 percent) used debit cards to make those purchases, 28 percent used credit cards and 11 percent used PayPal.

Sixty-one percent of those consumers expressed their “extreme” satisfaction with purchases made that way.

The only channel to beat the mobile phone?

That would be the desktop computer, at 65 percent.

Shopping in the physical store ranked a distant third at 58 percent.

The physical retail ship is still sinking.

THE NEW RETAIL REALITY

Busy consumers now place a premium on the value of their time, and view mobile and other connected devices as efficient enablers of their purchases regardless of where they happen to be: at home, at the office, while commuting or even while out and socializing with friends.

Convenience is their calling card – and retail’s new reality.

That’s true for all types of purchases.

Sixty-one percent of consumers discovered the last item of clothing they purchased online. And 42 percent of those consumers ended up making that purchase online. Nearly fifty-two (51.5) percent discovered the last mass merchant product online, with 39 percent of those consumers making that purchase online. Those who fulfilled in the store did so after knowing what they

wanted and where they needed to get it at the best price.

In fact, reports suggest that traffic in the physical stores was strong in the mornings when door-buster type deals were promoted but otherwise light the remainder of the day.

Deals drove foot traffic, making the pitter patter of those little retail feet don't necessarily belong to profit-making customers, but rather those who want the certainty of a great deal and the product in their hands.

Smartphones have democratized access to perfect information about those deals and those sales, giving consumers their short list of stores where they can buy them at the best possible price.

That is, if getting that product immediately is an important priority.

Soon, logistics will democratize that, too, giving consumers the ability to take possession of those items the very same day, even further reducing their need to visit the physical store to get what they want to buy.

That's why Black Friday is little more than a souped-up version of how consumers shop and buy things today. Consumers no longer have to go to the store to find great deals on the things they want to buy. And on Black Friday or any other day, they don't have to get up early to snag a spot in line or fight for a parking spot at the mall to get those deals.

All they have to do is reach for their smartphones every 33 seconds to check for deal alerts and emails – and then click Buy.

Why Consumers Will Shrug Off **The Marriott Breach**

In 1954, mathematician L.J. Savage published research about how consumers process information when making decisions. Dubbed the sure-thing principle, Savage's work showed that consumers consider a variety of inputs when making decisions. They also mentally bucket – and then disregard – inputs that may be important, but not important enough to change their minds about something they really want to do.

To make his point, Savage used the example of someone contemplating the purchase of real estate. For that person, the outcome of an upcoming election was regarded as relevant. After weighing the pros and cons of each election outcome, that person decided to buy the property anyway. The election outcome, while ***a*** relevant input, was not ***the*** relevant decision driver for someone who had already decided they wanted to own that piece of property.

If the sure-thing principle can be believed, then last week's Marriott breach of 500 million customer records won't have much of an impact on the consumer's decision to book a hotel room at a Marriott property for their next trip.

WHAT'S REAL AND WHAT'S RELEVANT

Researchers say that consumers make 35,000 decisions a day. That's about 2,000 decisions every hour, or one every two seconds. Those decisions vary greatly in importance, significance and context. Many are rote, routine, low-risk and made based on past experience – whether it's cold enough outside to wear a hat or whether there's enough time to stop by Starbucks to pick up a coffee on the way to the office.

Others are made on the basis of the desired outcome, the odds of personal downside risk and the friction associated with an alternative course of action.

For example, the fact that 90 people die every day in the U.S. in an auto accident doesn't stop 138 million people from getting into their cars every day and driving to and from work. Driving is better than walking or, for many, even better than an alternative mode of transportation.

The same holds true each time a person steps on an airplane. Planes do crash, and when they do, it is horrific and many people usually die. But most people

who fly don't die in crashes, and more than 100,000 flights jam-packed with people take off and land safely every day, globally. In fact, researchers say that a person would have to fly once a day for 55,000 years before encountering a fatal act. Flying is safer than driving, or even probably walking, in Manhattan.

So, people continue to drive and step on an airplane since the odds of being personally impacted by an adverse event are quite slim. And the benefits of driving and flying far outweigh the alternatives.

People also keep shopping at merchants that were once hacked.

WHAT'S RELEVANT IN RETAIL

In December of 2013, Target was breached.

Hackers got off with some 41 million customer accounts, including payment card details. That breach cost then-CEO Gregg Steinhafel his job, and became the poster child for EMV and the need to lock down payment card security to protect against counterfeit fraud at the physical point of sale. Consumers were furious, and many vowed never to shop the store again, they said.

Until they did.

Foot traffic dropped in the months immediately following the breach, but analysts couldn't discern how much of that was related to post-holiday shopping fatigue and how much was the result of breach backlash. It was reported that some consumers whose cards were compromised said they stopped using them at Target – while still shopping there – and reverted to cash instead.

Until that friction got in the way of consumers doing what they really wanted to do: shop at Target and check out using their credit and debit cards.

Which is exactly what they did.

Consumers who liked shopping at Target and found the experience easy and convenient continued to shop there, just like always.

Just as millions of consumers have kept shopping the many more merchants that have been breached since.

Consumers, analysts say, are numb to the breach news, brushing it off as "yeah, whatever" and continuing on with their lives. So, despite the headlines, for most consumers, it's business as usual – no big deal and no big change.

That's because, although merchant breaches may make the news, the reality of those breaches doesn't touch the vast majority of consumers. There's no change in behavior is because most consumers haven't and won't be impacted – and when they are, they won't incur enough of a loss to force a change in their shopping behaviors.

For that, merchants can thank the banks and the payment networks.

Banks have invested billions in systems to detect and prevent fraud using stolen credentials, and to secure their networks from the hacks that could expose them. They continue to invest further in "true AI" tech and biometrics to further strengthen digital identity verification and authentication.

Consumers know that the banks have their backs, even in the face of breaches at the places where they routinely shop.

For proof, one need look no further than the Equifax hack, when the credentials of most every adult in the U.S. were laid bare and are now available for sale on the Dark Web.

On the one-year anniversary of that breach, it was reported that only 8 percent of consumers took Equifax up on their offer to freeze their credit reports. Fewer still cancelled their credit and debit cards.

Yet 90 percent of consumers have since taken proactive steps to monitor use of their payment credentials by either checking their accounts more regularly, setting up usage alerts or changing their PIN numbers in an abundance of precaution. More than half of consumers surveyed by Nerd Wallet believe that banks are doing enough to protect their information and keep it out of the reach of hackers.

It should then come as no surprise that it is the banks and the payments networks,

including PayPal, that consumers trust to deliver innovative – and secure – payments and commerce experiences, according to the latest How We Will Pay study done in collaboration with Visa. Merchants — with the exception of Amazon, whom they also trust — fall way down on that list.

Even more interesting is that in that same study, more than three quarters of consumers report that data security and privacy concerns could keep them from taking full advantage of the payments and commerce innovations made possible by the myriad of connected devices that now enable them.

Yet consumer adoption and use of those innovations continues to grow. Just like consumers would probably say they would be less likely to fly following a horrific plane crash — yet still do.

Consumers trust their decisions to use those devices to shop and pay at merchants, because banks, payment networks and payments services providers continue to invest in the integrity of the payments ecosystem, and often insure consumers against loss.

That keeps the consumer's confidence high in using payments products at the physical and now many virtual points of sale now available to them.

That's why the compromise of 500 million Marriott customer records, second only to the Yahoo breach in terms of size and scale, probably won't change the behavior of the vast majority of their customers – much as we all might want a just desserts for a system failure that is said to have continued for four years before it was detected.

It will be the banks' and the networks' investments and diligence that will keep maintain consumers' confidence in using their credentials to book rooms at Marriott properties and everywhere else they want to use them.

It's their sure thing.

And therein lies the dilemma facing the payments ecosystem today.

Absent the Target breach and the decision by payment networks to shift liability to merchants that didn't step up, it is unlikely that merchants would have proactively and aggressively made an investment in upgrading their point-of-sale systems to protect their customers from counterfeit card compromise. Yet they did, and fraud at the point of sale has dropped dramatically – some 75 percent over the course of the last three years.

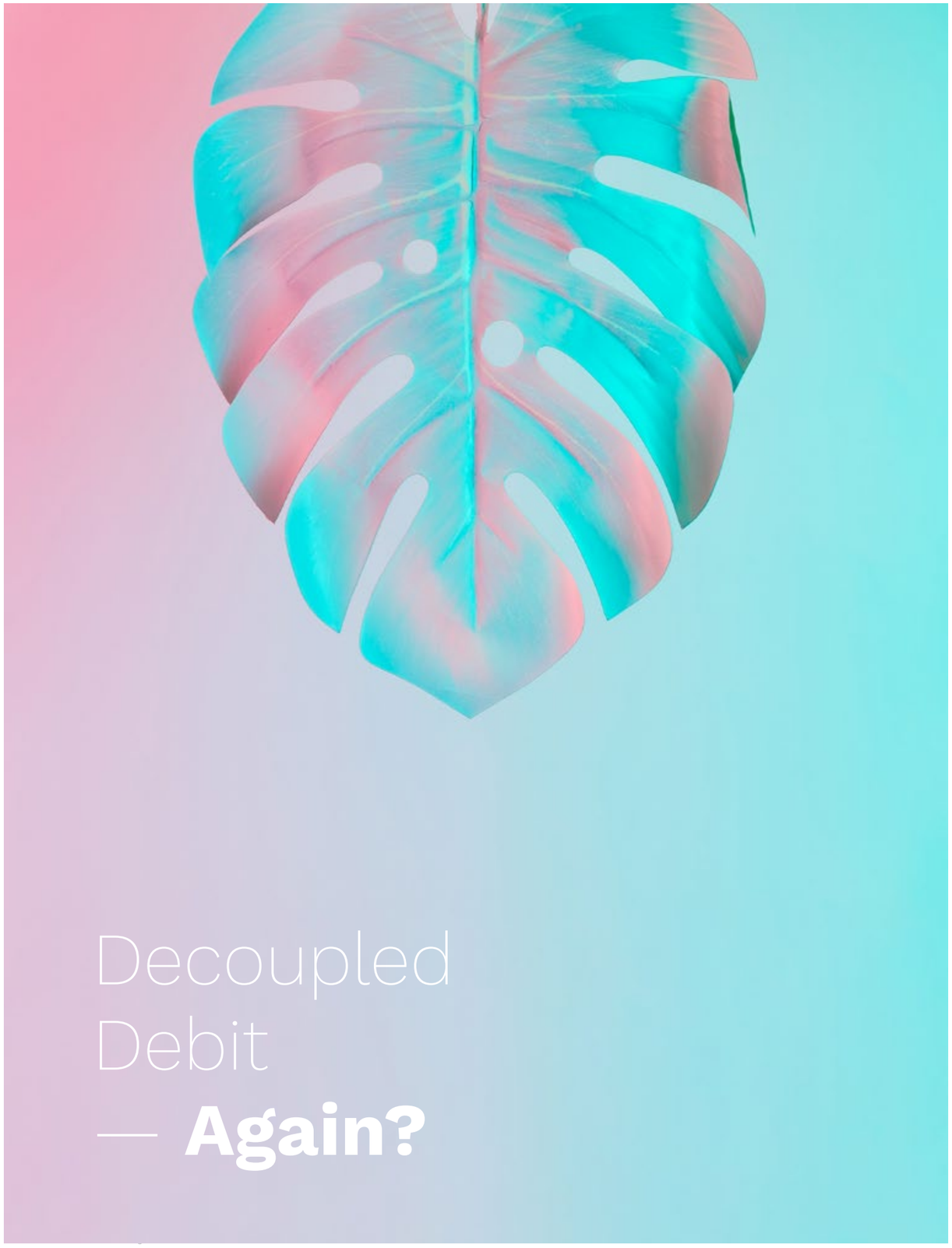
Now fraudsters, undaunted, have moved online, which is where payments volume is moving, too. The tactics these cybercrooks use to outsmart merchants and the consumers who shop them have become increasingly sophisticated.

And, unfortunately, as the ongoing string of breaches shows us, most recently the Marriott breach, merchant efforts to shut down fraud continue to lag behind the advances in technology capable of detecting and stopping it.

For consumers, when it comes to shopping and buying online, their sure thing is knowing that they're more than likely to escape harm, even if their credentials have been sold to the highest bidder on the Dark Web in an attempt to commit fraud at their expense.

For merchants, that's great news, since consumers keep spending even if merchant systems keep getting compromised.

If past is prologue, then, perhaps the only other sure thing is the need for the entire payments ecosystem – the payments networks, payments services providers and banks – to keep the pressure on merchants to increase the safeguards on their systems and keep consumer data out of the hands of the bad guys.



Decoupled Debit — **Again?**

The year is 2007.

Headlines are filled with news of a "revolutionary" product that will change the fortunes of merchants and unlock countless benefits for consumers when using it. Analysts at the time called this product "an historic opportunity" to bolster the merchant's "corroding bottom lines," and innovators rushed to build new applications to help them seize it.

And what was the product?

No, not the iPhone, but that would be a good guess.

It's the decoupled debit card.

Capital One made the headlines then — a genius move, many called it at that time, for an issuer that lacked demand in deposit accounts and had no other way to provide a debit-like offering that would make their brand sticky to consumers.

[Note to the payments history buffs out there: The real decoupled debit interchange pioneer was a company called Tempo, aka Debitman, established in 2000 and acquired by HSBC in 2006 after struggling for years to get acceptance at merchants.]

Creating a product that pulled funds from depository accounts at other issuers and was accepted at any Mastercard-accepting merchant gave Cap One something new to offer consumers — and a new business model around which to build rewards to get consumers on board.

The consumer value prop was the functionality of a debit-like product, since funds to pay merchants were pulled directly from their checking accounts, without the consumer having to switch their existing DDA account to a new bank to get the generous cash-back goodies. Merchants paid less when they accepted those cards.

Inspired, retailers set out to develop their own products with those same benefits: debit functionality, rich consumer rewards and a lower interchange fee burden when consumers used them to shop their stores.

This all went … basically, nowhere.

Aside from a handful of special use cases, there wasn't mass adoption of decoupled debit cards, and merchants didn't end up issuing many. Decoupled debit accounts for very little of ACH volume.

But today, more than a decade since those headlines and lackluster performance, decoupled debit is again in the news, touted (again) as the interchange fee elixir for merchants — made more powerful, they say, in the age of merchant-branded payments apps. Instead of calling it decoupled debit this time, though, it now has a new name — and in the EU, a new friend in the regulator who is breathing new life into it under the auspices of PSD2.

There's only one problem.

Consumers in the U.S., by and large, haven't taken the bait, and have even more reasons not to now.

2018: SAME SONG, DIFFERENT VERSE

I have to admit that after reading the Bloomberg story last week describing how retailers are revving up their efforts to use ACH-linked branded payments apps and methods to avoid paying interchange fees, I had to look twice at the dateline.

To me, it seemed like déjà vu all over again, as that famous American philosopher, Yogi Berra, put it.

Just like 2000, and then again in 2007 with the initial hype over decoupled debit.

Just like 2010, with the launch of ISIS, aka Softcard, and its merchant-friendly mobile payments scheme.

Just like 2012, with the launch of MCX and CurrentC merchant-branded, ACH-linked mobile payments products.

And each time, the headlines were all about how great these merchant-branded initiatives would be.

For the merchants.

Detailed financial models showed merchants the billions they would save using new schemes that sidestepped the card networks. Fancy PowerPoint decks detailed examples of those schemes and projected the savings and bottom line impact when implemented.

Yet all of them were devoid of the reality of how consumers want to pay merchants and the underlying benefit of using payment cards.

Many of those schemes have either fizzled and died, or are today found sputtering.

The only real success story, the Target REDCard, has plateaued.

When it was first introduced in 2007, the REDCard was cited as a merchant-branded ACH payments wunderkind, a pathbreaker for merchants that wanted to keep their best customers in the fold using their most economically advantageous payments product. REDCard holders linked that card to their checking account, and users were given 5 percent cash back on purchases made using it.

Today, Target says that REDCard transactions account for roughly 24 percent of sales, and that's nothing to sneeze at. A payment method that has managed to capture nearly a quarter of sales over a decade hasn't done badly.

But that may be as good as it gets.

The REDCard has seen its growth slow appreciably since 2013, the year of the infamous Target breach.

Between 2010 and 2013, it's been reported that the volume of sales on the REDCard grew from 6 percent to 19 percent – in other words, like gangbusters.

But between 2013 and 2015, it's been a different story.

Over those two years, REDCard sales grew more slowly: from 19 percent to 22 percent of all Target sales. And between 2015 and 2017, REDCard sales grew from 22 percent to 24 percent.

In May, Target introduced a new loyalty program that could be linked to any payment card a customer wants to use. The richer rewards still accrue to the REDCard holders whom, Target says, produce baskets that are as much as

50 percent higher than non-REDCard customers.

But Target execs concede that not all customers want to establish a new payment method in order to be considered — and treated as — a loyal Target customer.

Particularly, it seems, one whose loyalty is measured solely by their interest in linking their checking account to it.

So, what's different about the new talk of ACH-based cards?

Nothing, really.

Well, maybe there is one thing.

THE CONSUMER-MERCHANT INTERCHANGE BATTLEFIELD

The merchant's war on interchange fees (or just the merchant discount for three-party systems) is as constant as the sun rising every day in the east and setting every day in the west.

It's a battle that has raged for nearly all of the 60 years that general purpose payments cards have been in existence, despite the growth in retail spending they have ignited — and all of the benefits that have accrued to merchants when accepting them.

It's a battle that exists even though merchants dangle store-branded cards in front of consumers and few say yes.

And it's a battle that rages even though the notion of ACH-linked, merchant-branded payments schemes haven't exactly set the world on fire — despite the investments and valiant efforts made by merchants, merchant consortia and innovators to convince consumers to give them a try.

There's a simple reason for that resistance.

Consumers make their payments decisions based on what's best for them, not how much it costs a merchant to accept what they want to use.

And if we've taken one lesson from the mobile, contactless point of sale experiment, it's that it's not so easy to get consumers to change their preferences, once established. No matter how hard

the mobile pays shout, entreat and wish it to be so, consumers just haven't been all that interested.

It's also not clear what merchants are fighting for anymore when it comes to debit interchange. The Durbin amendment capped interchange at 24 cents, significantly reducing the difference between ACH and debit.

In fact, those economics – or perhaps the lack of them – helped to shutter most decoupled debit schemes operating at the time, since there just wasn't enough of an economic proposition to fund the kind of rich rewards that might get consumers to make the move – although frankly, there wasn't much evidence they would move anyway.

A move that now, in the face of the litany of merchant breaches, seems a big ask of consumers for whom the safety and security of their payments and bank account credentials is at all-time high.

Since 2005, sources claim there have been 4,500 data breaches, 3,455 of which have happened since 2013, the year of the Target breach.

Merchants have been the subject of many of those breaches, which resulted in compromised payments credentials. At least cards can be replaced easily and the consumer has some protection. With merchant-branded ACH-based products, not so much. Consumers will likely think twice about giving their bank credentials to hack-prone merchants.

Not surprisingly, perhaps, when we asked last summer who consumers trust to innovate their payments experiences, merchants (with one exception) don't rise to the top of the list – in fact, they sink way to the bottom.

Banks that issue network-branded cards, PayPal and Amazon round out the top five. Consumers, it seems, want a layer of protection – a trusted intermediary – standing between their payments credentials used at a merchant and the precious funds they have sitting in their bank accounts. Consumers use their debit cards, all right – just the ones issued by their banks.

That really shouldn't be bad news for merchants, particularly as technology and digital platforms open new channels

for consumers to find products and merchants from which they'd like to buy. Getting consumers comfortable with those new experiences can only happen if consumers are comfortable that they are protected when they plunk in their payments credentials and click (or say) "buy."

As for interchange, and the business model that underpins the payments system that operates globally today and powers trillions of dollars in sales, someone has to pay.

Consumers don't, so merchants must – and the biggest of those merchants pay very little, despite the protections consumers are afforded if things go amiss. For every story that talks about merchants touting merchant-branded schemes to reduce interchange, there are thousands that just want to get the sale before someone else does.

Perhaps even more ironic is that the justification for interchange fee reduction was once to give merchants more parity in the cost of accepting cash at the point of sale – a form of payment they once said was the cheapest way that a consumer could pay them.

But even that has changed.

Cashless is now becoming king in stores, as merchants push digital over paper (and coin) in the name of efficiency and a better user experience. Consumers are using less of it – and using it only introduces friction for cashiers who have to take it and make change, not to mention the consumer who is standing in line behind someone who pays that way.

In fact, the real irony may be that the merchants that once sought regulations to reduce card acceptance so they could do more with cash, may now be faced with regulation to make them take cash instead of cards.

At least, if New Jersey lawmakers have their say.

Oh, and if you want a real walk down memory lane, check out my MCX Fairy Tale, a piece that I wrote back in 2013 when talk of their replacing card networks was at a fever pitch.

Unlike most fairy tales, it does not come with a happy ending – as that piece then, or the reality of the scheme now, has proven.

Did Payments 2018 Predictions **Come True?**

In about two weeks, 2018 will be one for the history books. And from a payments and commerce perspective, it really has been one heck of a year.

Over the last 12 months, we've seen consumers acquire and use connected devices in new and different ways in the pursuit of commerce.

We've seen big moves from key players to consolidate the payments ecosystem, streamline payments friction and gain scale.

We've seen regulators both here and abroad usher in new rules for how payments and financial services are delivered, which threaten the structure and existence of Big Tech.

Despite headlines to the contrary, we've seen physical retail continue to be decimated as consumers shun stores for the convenience of online purchase and delivery.

We've seen crypto plummet – although at $3k+, it isn't clear whether the bubble has burst just yet.

And we've seen blockchain and blockchain tech keep the press release business thriving with a dearth of tangible results behind it.

Right around this time last year, I made several predictions about what the year in payments might look like in 2018. Rather than call winners and losers, I put forward a few broad themes that I thought would underpin the events of the year to come.

Now that we are nearly on the other side of that year, I thought it might be fun to look back to see how well my predictions held up.

At the start of 2018, I said it would be the year in which "power brokers would boost their power."

By that, I meant those with scale would expand their presence in the ecosystem and strengthen their relationships with consumers.

Why? Because payments and commerce require scale.

But unlike the power brokers of old who bullied their way into the consumers'

pocketbooks, it would be the consumers who invited those power brokers into their worlds.

And that they'd do that via the growing proliferation of connected devices that give them access to the internet anytime, anywhere, as well as a connection to any entity – a merchant, a business, a bank – where she wants to do business. These connected devices, I said last year, would shorten the distance between the consumer and a business – a store, a manufacturer, a bank – while also increasing the distance between the brands consumers were purchasing and the underlying payments they would use to make those purchases.

I suggested that those forces would, this year, drive an appreciable shift in the balance of payments power to those with the scale that can deliver that access. That, in turn, would make the power brokers of 2018 not only those that made connected devices, but also the software and payments platforms that enabled access across any platform. That means any operating system, and any device using whatever interface the consumer wants to use – type, click, text, voice, click or swipe.

And I added that consumers would decide who made that list – in 2018 and in the years to come.

For that, I think I did pretty well.

Look no further than Amazon's grip on the consumer and her purchase behaviors, PayPal's growing share of mobile wallet online, Walmart's moves to grow its base (online and off), the card network's embrace of Secure Remote Commerce (SRC) as a way to create a secure and interoperable standard for the 75 percent of online checkout that happens via guest checkout and the pervasiveness of voice-activated commerce – Alexa, in particular – as the trusted broker of commerce, in-store and digital.

Then I said to "think commerce first, not connected devices … and think power brokers like Amazon, not Apple."

2018 was the year we saw Apple, the company that hit a $1T market cap, lose ground in smartphone sales – so much so that it announced last quarter that it will no longer publish units sold going forward. And it quickly lost the $1T mantle and – who would have thunk it – hit a lower market cap than Microsoft.

2018 was the year in which we saw Apple Pay continue to languish as a mobile point-of-sale payments method, despite Apple's claims of its growing user base and its global expansion in countries where contactless POS is used by consumers carrying contactless cards.

It's a year that we've seen Apple continue to flounder with the execution of its voice-activated strategy, despite being the early leader with Siri, and shift its focus to services by doubling down on selling into its existing installed base services like healthcare.

Even Apple is thinking beyond the connected device.

It's a far cry from what was the conventional wisdom a few years past the launch of the iPhone and the birth of the App Store.

Then, the pundits told the world to make way for the new power broker in payments – Apple. It hasn't turned out that way. While their operating systems and devices have enabled consumers to shop anytime and anywhere using their smartphones, their respective attempts to control access to consumers via their "Pays" have failed to gain traction – either online or off.

Instead, think about what has developed even more momentum in 2018.

Alexa, the voice-activated assistant that is now in everything from glasses, thermostats and washers to lights, bathroom fixtures and cars – as well as in its own Echo devices and hundreds of others – can enable commerce anywhere the consumer wants to take her. Merchants from the smallest mop-and-pop to the biggest of the big, like Nike and the Gap, can be found on Amazon and accessed via any device the consumer wants to use.

One of the largest merchant apps in Apple's ecosystem, Amazon, has built a Prime customer base that it is now taking to any device, and a multitude of devices now have access to those consumers via Amazon's voice-activated assistant,

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Alexa. She and Amazon can direct any consumer purchase on and off Amazon, using Amazon Pay to complete payment – device-independent, but very much Amazon payments-dependent.

Device-centric players, like Apple, are now at risk – more so than ever – of losing ground, and control, over the customer, since there are now so many different ways that consumers, commerce and payments can be connected without it, including other smartphone brands. Commerce-centric players can make a thousand devices bloom – and can influence how and where consumers shop, buy and pay. Device-centric players with closed ecosystems remain at the mercy of producing the smash hits that enough consumers want to buy and use, and keep buying and using.

Connected devices enable commerce, but only if there is a commerce ecosystem for them to tap. In 2018, it became the domain of others, not Apple's.

In 2018, I said to "think intent, not content … and think Google, not Facebook."

Little did I know at the time – and boy, did I get lucky on this prediction. This year would become the one Facebook would like to soon forget.

Between fake news, Russian election meddling and data breaches, the world's largest social network has seen an erosion of trust and advertising dollars, as both eyeballs and advertisers have abandoned the site. The ambitions Facebook might have once had to establish itself as a commerce ecosystem seem like an uphill climb, absent two things: Consumers thinking about Facebook as a place to "go shopping" and the intervention of a trusted intermediary to give consumers confidence that buying on that platform is safe and secure.

For years, Facebook has been trying to parlay the massive amount of consumers' time spent inside its walled gardens into a big-time commerce play.

Despite more opportunities to shop via the News Feed and on Instagram, the launch of Marketplace as a challenger to Craigslist, and the ability for users to buy tickets to movies and concerts on Facebook, commerce inside their walled garden in 2018 seemed more like an asterisk to its main business – mobile advertising – than a serious entree into the world of payments and commerce. Even though Facebook, now more than ever, needs a foil to its mobile ad business.

But it's yet to be proven that consumers who are trolling through Facebook want to use that time or those platforms to shop.

In 2018, we observed the rise of contextual commerce opportunities as platforms integrated payments into their apps to turn product discovery into a sale on platforms where there is an intent to buy, which is not necessarily Facebook.

It was also the year that we saw Google, the search engine and consumer gateway to search, do more to close those intent-to-purchase loops, since product queries via search reflect a consumer's intent to buy.

We saw Google expand its line of branded hardware devices to turn "ask Google" into a sale via Google Assistant, in addition to opening its ecosystem to participating retailers that want in on the voice-activated shopping game.

In 2018, it was commerce players that had the most success in turning intent to buy into a purchase, not those that first had to convince consumers that their platform was capable of enabling a purchase.

At the start of 2018, I said to "think ubiquity, not niche … so think card networks, not niche alt pay plays."

What I said last year is that as the world of commerce moves ever more digital, so does the consumer's expectation to use the same method of payment everywhere she wants to shop, and with every device she uses to enable those purchases.

I said then that in the digital world, just like in the physical world, that's using network-branded card products that run across the ubiquitous global rails they operate – worldwide.

And the more that connected devices add more commerce waypoints on those consumers' digital shopping journeys, the more difficult it will become for any

alt payment brand to get enough scale to enable those buying preferences.

The reason?

Friction – and eliminating it. That means eliminating decisions, steps and obstacles on the way to a buy. And that means being ubiquitous.

That wouldn't be niche pays – and we haven't seen any of them launch or gain scale in 2018.

Venmo launched as a payment tender type in 2018, but one that is riding the PayPal acceptance mark in-app, and the Mastercard rails anywhere that Mastercard is accepted when consumers use the Venmo plastic card on or offline.

I said to think global power brokers, like Tencent and Alipay.

At the start of 2018, I said that ecosystems that control access to more than one billion users of its payments method are too big for anyone to ignore – as are their moves to create easier on-ramps to establish payments acceptance or build interoperable mobile-first payments networks across the globe.

2018 was a year that we saw Alipay expand acceptance in key markets to enable Chinese consumers to use their trusted payment method to buy outside of their home country. They did this by building on what Alipay had already done with First Data and Verifone, and by partnering with or investing in digital payments players like Paytm, GCash and Openpay in markets like the Philippines, India, Japan and Latin America. It was also a year that we saw Ant Financial license its tech platform to Chinese banks to help them establish more of a digital financial services footprint so that they, too, could expand their reach in and outside of China.

This was also the year that we saw WeChat Pay establish partnerships with key players to expand into Malaysia and Japan, and set the stage for expansion in the U.S. This move also built on a foundation that has seen Tencent invest more than $3 billion over the last seven years to take stakes in 40 U.S. companies, like Snap.

That said, 2018 wasn't a such great year to be a Chinese power broker in China (the government clamped down on Tencent's game platform) or outside of the country (as Alipay found when the U.S. government blocked its MoneyGram deal).

At the start of 2018, I also said that "remote payments would kill the physical POS … so think remote, not contactless."

I was pretty emphatic that 2018 would not be the year that NFC payments would ignite at the physical point of sale in the U.S.

And I was right in one way, maybe not in another.

The mobile wallet that was once regaled as the driver of contactless payments at the point of sale remains stagnant, now four years post-launch.

2018 was, though, the year that the nation's largest card issuer – Chase – made the decision to convert its portfolio of Visa cards to contactless for use at the point of sale starting in 2019.

It was a year that we heard consumers, when asked, tell us they'd appreciate the contactless experience given its speed of checkout, and we saw an innovator, Mobeewave, release an app that turned every chip-enabled phone into a contactless POS device that could further pave the way for a contactless card ignition in the U.S.

Those moves all acknowledge the failure of the mobile wallet to ignite contactless in the store, as well as the acceptance of the physical card form factor at the physical point of sale. Moving forward, with a contactless chip on those cards and a greater number of merchants that are NFC-enabled, there will be multiple ways to use those familiar form factors to check out in a store.

But, as I said at the start of 2018, that assumes checkout in the store continues to happen as it does today – card plus checkout counter. And that's not the physical POS checkout future.

So, while we may not have ignited contactless at the point of sale or killed POS checkout, my money remains on the latter via what I call the ultimate in

contactless: remote payments. When consumers use apps to order ahead, they pay online for products fulfilled in the store. And when they do, checkout becomes irrelevant, as do POS terminals, checkout lines and lanes. It's contactless in the truest sense of the word.

In 2018, we saw a groundswell of those use cases. Using a mobile device to pay for something – even while standing in the store – is being embraced by consumers, as retailers are using mobile devices to help consumers avoid lines and bringing the checkout to them. Retailers are encouraging consumers to stage those purchases – to order and pay online and pick up in store, since having feet in the store for any reason is better than having no feet and no sale.

Over time – but not over such a long time – I still believe that remote payments will marginalize POS checkouts in stores, as well as how consumers use remote payments to buy and pay. I said at the start of 2018 that stores would be used by consumers as showrooms and fulfillment centers – and our latest research on this topic makes that point loud and clear, particularly for the bridge millennials, who value convenience over price and even product selection.

2018 was the year that I said "innovation will happen at the edges … so think incremental, not big bang."

Last year, I said that if you believe payments is all about scale and that the big will only get bigger, there are only two possible paths for the smaller guys: Either they disappear or they leverage the assets made available to them by the power brokers to drive their own innovations.

The enormous opportunity, in 2018 and beyond, I said, was harnessing the creativity of innovators – not to rebuild the payments and commerce ecosystem from scratch, but to amplify their innovations by leveraging the assets those power brokers have built to help them scale and deliver more value to end users.

2018 was a year that we saw a lot of incremental improvements on the path toward eliminating friction in payments and commerce, and innovators using APIs and SDKs to accelerate their own innovations. It's also a year in which we saw crypto and the blockchain – the internet of money – crash and burn, despite the hype and the billions poured into those ventures.

It's one that also saw nearly 200 press releases on blockchain innovations, but fewer than 10 stories of how that change-the-world innovation was, in fact, changing the world beyond that initial press release.

In 2018, I said "faster payments get faster by using existing rails … so think smarter, not just faster."

Faster payments has been a recurring theme in payments ever since the Fed assembled its Faster Payments Task Force to study the issue back in May of 2015.

In 2018, we saw that task force get reconstituted and a new one launched – one that is now investigating the role of the Fed (hint: regulation) in making faster payments happen faster – and maybe even by regulatory fiat.

Meanwhile, payments are moving faster than ever.

Existing rails – ACH and network debit rails – are zipping payments back and forth between people and businesses like there's no tomorrow.

Same-day ACH is ubiquitous, and there are proposals to increase the number of settlement windows to include weekends and holidays. Faster payments using debit cards and technology platforms are depositing money into consumers' bank accounts in real time, while enabling new use cases like the deposit of loan proceeds, insurance claims, airline voucher payments, and instant payroll for gig and wage earners, as well as SMB merchants.

In 2018, we saw that instant money didn't require the Fed or a task force.

On the B2B side of the house, in 2018, we saw blockchain and crypto hit the skids, despite the press releases to the contrary, while at the same time, global, compliant network rails were facilitating the real-time movement and settlement of digitized assets, including data,

between banks and cross-border. We saw SWIFT leverage its connections to 11,000 banks to enable the real-time settlement of funds cross-border, as well.

Banks, which need to all be on board for any of this to work as advertised – see my earlier point about ubiquity – sort of like it this way, too, even though they are exploring faster payments alternatives. They have a business model for enabling these payments, and don't feel the need to invest billions into a network that will take years and years to become ubiquitous. Corporates want faster payments, they say, even though secure payments top their list. And certainty of payments trumps all.

As I said at the start of the year, in a perfect world, we'd all junk what we have and start from scratch using the tools that are available today. But the world isn't perfect, and payments – on a global scale – is a complicated beast. Today, as it's always been, banks and networks that want to enable instant payouts today to anyone can do that – all that's needed is a business model to support it.

No different at the end of 2018 than it was at the beginning.

In 2018, I said "skills take on apps … so think access, not apps."

Then, I said that if you believe that voice would be an underlying component of the future of commerce and payments, then it's skills, and not apps, that will drive developers' interest moving forward.

It makes sense. In 2018, consumers didn't all of a sudden become obsessed with apps (games excluded) and start downloading them like crazy. In fact, when it comes to those for shopping and commerce, they've really plateaued. And App Annie also reports that consumers spend a whole 50 minutes a month on shopping apps.

Consumers spend about five hours on their mobile phones every day, so that means they are spending an average of 1.7 minutes (50/30) on shopping apps. Most of that time is spent on a few key apps – with Amazon and Walmart.com in the number one and two spots, accordingly. That's because those apps give consumers access to millions of

SKUs in one single spot – and that's a whole lot easier than popping from app to app to find and buy what they want.

So, as I said in 2018, if consumers aren't going to the app stores and searching for what's new, and aren't downloading and using new apps, then developers aren't being asked to create them. And so they'd find other ecosystems to keep them busy (and paid).

That's voice.

Here at the end of 2018, Alexa counts some 50,000 skills as part of her ecosystem. In 2017, that number was 25,000. Developers are skating to where the puck is moving, not necessarily where the puck has always been played.

Voice commerce doesn't require the consumer to download anything at all – or even specify at which store she wants to shop.

Voice commerce and the ecosystem it is creating puts products or services before stores. Skills in a voice ecosystem build bridges from today's digital environments to the connected devices that consumers use to access that ecosystem and buy something. And they create on-ramps for brands that want a direct relationship with the consumer to cut out the app and retailer middleman and get that access.

Skills shift the power from app stores and retailers to the connected devices that allow consumers' devices to access new ecosystems, creating a new power center of commerce that consumers, using the power of their voices, will control.

It's a shift that accelerated in 2018 and will continue in the year to come.

What I did at the start of the year was share the framework for how I look at the dynamic world of payments and commerce – one that considers the complexity of the world of payments and the reality of how consumers and businesses engage with new ways to pay and new access points capable of making those purchases.

2018 was a fascinating year, one that I believe set the stage for the innovations that we will see emerge in the year to come – a year in which the developments

we have seen in 2018 will only strengthen and accelerate.

I'll have more to say on that the first Monday of 2019.

Until then, my very best to each of you for a wonderful holiday season and a healthy, happy and prosperous New Year.

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