

Amazonians are programmed to think in terms of Day 1 (startup mentality) from the first minute they start working at the company. "Day 2 is stasis, followed by irrelevance, followed by excruciating, painful decline, followed by death," said Jeff Bezos. Intensity and drive are expected and complacency is strictly taboo.

At heart Bezos fears most that Amazon will succumb to what is known as big-company disease, where employees focus on each other instead of on their customers, and where navigating a bureaucracy becomes more important than solving problems. The best way to make customers happy, in Bezos's playbook, is to make their lives cheaper and easier. He built a culture in which everything is questioned and nothing is taken for granted—not even the very existence of the company—and everyone must focus on the customer because all else flows from that.

"We are genuinely customer-centric, long-term oriented, and like to invent. Most companies focus on the competitor, rather than the customer and prefer to be close followers rather than inventors because it's safer. Everything starts with the customer." Amazon wants to be the smartest company the world has ever seen.

Increasingly, algorithms run the company and are *becoming* the company. The "flywheel" paradigm is deeply embedded in Amazon's culture. 3rd-party sellers account for more than half of all products sold on Amazon. Attracting more sellers increases revenues and creates more economies of scale that allow it to lower prices on its site and offer more benefits. That attracts more customers and brings more sellers, and the flywheel turns faster and faster.

Bezos is now accelerating his flywheel through shrewd use of AI, machine learning, and big data. From day one, Amazon has been a technology company that just happens to sell books. By 2019 Bezos was the world's richest man with a net worth of \$160b and controlled 40% of all online retailing in the US. Amazon Web Services (AWS) is the world's largest cloud computing company. Echo, a smart speaker with Alexa inside sold 50m units in its first few years of existence and grew 25% annually throughout the 2010s. Next Bezos set his sights on becoming a major player in brick-and-mortar retail, advertising, consumer finance, shipping, and health care—all driven by his AI flywheel. I call this new corporate model Bezonomics.

The business world is quickly dividing into those pursuing their own brand of Bezonomics by building up their AI technological skills. Alphabet, Alibaba, Apple, Facebook, JD.com, and Tencent fall into this camp. Amazon is a master of robotics. It's about to unleash a wave of automation that—when copied by others—will roil our labor markets to the point where governments will need to take seriously the idea of universal basic income.

In the US, **Amazon consistently ranks as the most trusted and beloved brand.** Globally, it ranks first in brand reputation. Small retailers have been crushed by Amazon and will continue to be. At the same time, it has been a spawning ground for start-ups. As of 2019, millions of independent businesses

sold 58% of all items on the company's Marketplace platform. The small businesses selling on its site have added 1.6m jobs.

Amazon employs hundreds of thousands in their vast global warehouse network and these jobs are hard, demeaning, and non-union. In 2017 and 2018 Amazon legally paid no US federal taxes while it posted \$10b in annual profits in 2018. One of the many reasons is that Amazon can deduct historical losses against today's profits. Bezonomics will keep engulfing a larger and larger share of the global economy.

Amazon is becoming an operating system for your life.

In an age where people are losing trust in our institutions, Amazon has earned deep respect. While 51% of American household attend church, 52% have Amazon Prime memberships. It is ranked as the world's most valuable brand, ahead of Apple and Google, accounting for 2.1% of all household spending. It saves shoppers the time, hassle, and expense of driving or taking public transport to purchase mundane items. It's the fast and accurate delivery of items to their doorsteps that keeps them coming back for more.

Amazon now operates 42 of its own physical retail stores including Amazon Go, Amazon 4-Star, and Amazon Books. Alexa was named for the ancient Egyptian library in Alexandria. Bezonomics is disrupting retail, cloud computing, media, and consumer electronics, and is moving into finance, health care and advertising. What the health-care industry needs is lower prices and better customer care—exactly what Amazon does best. Anyone competing with Amazon must learn to embrace the fundamentals of Bezonomics or find safe harbors where they can operate outside of its impact.

Bezos has created more than half a million new jobs, but his company also threatens the livelihood of millions. He runs Amazon as if every penny counts—even going so far as to use old doors as desktops. He requires his top executives to read *The Black Swan*, in which Taleb argues that humans are biologically wired to turn complex situations into oversimplified stories. Three characteristics separate him from other entrepreneurs. He believes that resourcefulness is the greatest virtue. He faces the truth no matter where it leads him. He is a visionary who thinks in terms of not years but decades and centuries.

Bezos has been in the right place at the right time, launching a book business just as the internet was taking off, surviving the dotcom meltdown, riding the wave of streaming media, and the massive shift in shopping from brick-and-mortar stores to online. His maternal grandfather, Lawrence Preston, "Pop Gise," "was super important for me." He spent every summer from the age of 4 to 16 at the Lazy G, his grandfather's ranch in south Texas. His grandfather was a well-respected and highly placed government official, whom Congress, in 1964, appointed to run the Atomic Energy Commission's Albuquerque operations office. He was in charge of 2,000 employees and oversaw some of the most sophisticated and secretive technology of his time. Gise was also a top manager at what became known as the Defense Advanced Research Projects Agency (DARPA). That technology helped lead to the formation of what we know today as the Internet. Gise had deep experience in the way government worked and was privy to some of the

most advanced and secretive technology of his day. That made a deep impression on the young Bezos. Today, among Silicon Valley titans, he is one of the most pro-government CEOs.

Amazon's Rekognition facial recognition software is one of the most sophisticated of its kind. "If big tech companies are going to turn their back on the US Department of Defense, this country is going to be in trouble." His grandfather's lessons about the importance of being resourceful made a huge impression on the young man.

After graduating from high school at the top of his class, Bezos headed for Princeton, where he wanted to be a quantum physicist. He then switched to electrical engineering and computer science where he felt more at home. He graduated with a rare 4.2 grade point average (4.3 is an A+) and headed for New York City, where he worked on Wall Street. His ideal woman, he said, would possess the ability to get him out of a 3rd-world prison. He found that woman in MacKenzie Tuttle, a fellow Princeton alum whom he met at work. During the early days of Amazon, MacKenzie displayed plenty of resourcefulness, acting as the start-up's accountant, helping with hiring, and even packing books, and driving to the UPS or the post office. Even the woman Bezos left MacKenzie for, Lauren Sanchez, was a former cohost of Fox's *Good Day LA* and of the dancing competition series *So You Think You Can Dance*, became a helicopter pilot and started her own aerial photography company.

Bezos eventually landed a job at the secretive hedge fund D.E. Shaw, which, among other things, engaged in high-speed arbitrage. One day Bezos figured out that the Internet was growing at 2300% per year. He decided that selling books would be a good place to start because they didn't spoil, came in relatively uniform sizes for easy packing and shipping, and shoppers knew pretty much what they were getting, thanks to reviews.

He realized, "Our biggest regrets are those of omission. It's the paths not taken that haunt us." He then knew that at 80 he'd never regret trying something big, even if he failed. He picked Seattle because of its reputation as a tech hub—Microsoft has headquartered there. More important, he selected it because of its small population. Under the laws back then, Amazon only had to collect tax on the books purchased on Washington State. Bezos started Amazon in the proverbial tech-startup garage with a \$100,000 stake provided by his parents. Bezos chose to sell books, but from the start had much larger ambitions.

He hired the most brilliant programmers he could, drove home his mantra of extreme customer service, and drove his employees to the limit in a culture that valued data, the truth, and high performance. He hired a talented team of editors who reviewed books and interviewed authors in an effort to make Amazon a destination for book lovers. His algorithms could help make reader recommendations based on what else was being read by other purchasers of the same book. He offered low prices, a broad selection, and fast delivery.

The company would go to any length to get its customers the best prices and fastest deliveries. No free lunchroom for employees. During a holiday season early in Amazon's history, Bezos ordered his executive team to work a series of night

shifts in its Seattle warehouse to help catch up on the swell of offers arriving. In its battle with the start-up Diapers.com, Bezos said that if it wouldn't agree to be taken over, Amazon would keep cutting the price on its diapers to zero if it had to until a deal could be made. Amazon swallowed the business.

One of Bezos's most striking personality traits is his ability to face the unvarnished truth no matter how inconvenient, to make decisions based on cold, hard facts. He deeply believes that facts should trump hierarchy every time. Every idea is managed with his famous 6-pager. The memos typically start by laying out the long-term impact of the new project and why it's meaningful to customers. Then a FAQ section helps determine the nuts and bolts of the proposed service or product, and how the development team should build it. The 6-page memo process works like an internally funded venture capital firm. They are willing to kill things fast and are good at limiting their downside.

Every big innovation at Amazon, such as Prime, the creation of Alexa, or Amazon's cloud service, has survived the crucible of the 6-page memo. Shorter memos are better for simpler solutions. Amazon's egalitarian atmosphere allowed underlings to challenge higher-ups with no negative repercussions. "It's a fucked-up place to work" said a former employee. Behind all that intensity was the relentless drive to do away with friction in the lives of Amazon's customers. The product had to work intuitively. Customers always came first and we'd work backwards from there. Employees are not customers. We were never going to get brunch or sushi, and no one had an assistant.

The 6-pager forces employees to think carefully about what they want to say, to craft a narrative about the project that clearly describes the potential of the product or service and includes only the most necessary and relevant details. It's a live document that tracks the project's life span, with the manager constantly refining and updating it until launch. The creation of Alexa shows the 6-pager at work. Bezos came up with a simple goal for Alexa: a device that would have no screen, with a person interacting with it entirely by voice. No keypads; no touch screens. "The amount Bezos thinks about the future is amazing. His ability to look ahead and connect unrelated pieces of information and patterns and find a thread that's of value between them is different than normal humans can do."

The 6-pager works on many different levels. First, it helps the company deal with complexity. After a 20-minute close reading of a memo at the beginning of a meeting, everyone at least gets the basics of the project. Bezos reads with a high level of concentration—at an Olympic level. He absorbs all the information in the memo, anticipating the bumps and icy patches he will hit once the meeting begins. He uses the 6-pager sessions to make sure his top lieutenants are aligned with the goals of any particular project. He has surrounded himself with a cadre of longtime loyal leaders he calls the S-team, his 18 top executives who know how he thinks, understand his values, and have a fierce desire to ferret out the truth. Many of his key S-team members were at one point in their career one of Bezos's technical advisors—more informally known as a "shadow." Shadows can follow him around for as long as 2 years in a full-time position.

Jell Wilke, who runs e-commerce globally for Amazon has his own shadow. This process makes sure Amazon has a strong roster of executives who could one day take Bezos's place as CEO. It also explains why Bezos has been able to manage a multi-industry business as large and complex as Amazon. One former S-member who left the company said that, "Jeff said he didn't believe in social cohesion because you can get to the wrong answer that way." If you hurt coworkers' feelings, maybe they don't have as much trust in the leadership or they won't speak up the next time or they'll be risk averse or leave the company. I personally love the Walmart culture of social cohesion where feelings matter.

As Bill Gates said, "Somebody who is smart, and rich, and ends up not acknowledging problems as quickly as they should will be attacked as arrogant. That comes with the territory." Amazon's public relations team has grown from a handful of spinmeisters to an army of 250. While most business leaders think in terms of the next quarter or perhaps the next 2-3 years, Bezos, thinks in terms of centuries.

In the early years, boosting cash flow and market share always trumped short-term profitability. Its soaring growth rate and the promise of future profits—even while the business kept piling up losses—granted him the ability to raise capital in the face of scathing criticism and skepticism from some on Wall Street. (It didn't hurt that Bezos controls 16% of Amazon's stock). He spends only 6 hours a year talking to investors and then only to the ones who are long-term holders of Amazon stock. Short term, ask someone to alleviate world hunger or solve peace in the Middle East, and most will throw up their arms in dismay. Ask them to solve those issues in 100 years, and suddenly the problem becomes more addressable.

AWS is Amazon's most profitable business line, serving customers including Netflix, Airbnb, and the CIA. In 2019 it was worth more than half of the Amazon itself. But bold, long-term bets don't always pay off. In 2019 it closed its Amazon Restaurants food delivery business and discontinued its Dash buttons, which allowed consumers to reorder laundry detergent and other everyday items with a push of a button. Other failures include the delivery service Kosmo.com and Pets.com. Also, the Amazon Fire Phone. But none were "bet the company" bets. If a company is constantly innovating, a few winning bets make up for the losses.

Bezos has libertarian leanings. When he acquired the struggling *Washington Post* in 2013 for \$250m, he did it because he thought it was a pillar of democracy worth saving. He started Blue Origin (a rocket launching company) because he's interested in space to make earth a residential and light industrial zone and move all the mining and heavy industry to space.

Amazon's Seattle headquarters is a sprawling campus with 47 buildings. One of its great strengths is that it's run like a federation of independent nations, each with its own leader and citizens. The heads of business units are spread throughout the city, running their own operations. This reflects Bezos's strong belief that too much communication and coordination between and within business units slows things down. That idea is antithetical to what professors teach at the Harvard Business School. Bezos concluded the opposite: that bringing everyone up-to-date on a project lengthens its gestation. Project teams

would include not more than 10 people, a group small enough that they could be fed by 2 pizzas.

The foundational principles of the Bezonomics philosophy are customer obsession, extreme innovation, and long-term management. His secret is what he calls his flywheel. At heart, the flywheel is a metaphor for a virtuous cycle. Rather than focusing on the competition, Amazonians spend their every working moment trying to make their customers' lives better. One way is to lower costs for its shoppers. That attracts more independent sellers, which leads to economies of scale. It is the concept of the flywheel that allows this giant corporation to operate as a federation of independent nations.

From 2000 to 2005, the stocks on the NASDAQ exchange lost \$5t in market value. Amazon went from \$107 to \$5.97 per share from December 1999 to September 2001, when the management book *Good to Great* was published by Jim Collins. Collins was invited to Amazon to coach their executive team and said, "You want to respond in times like this not by reacting to bad news but by building a flywheel." Collins believed that the Amazon CEO had always been an instinctive "flywheel-level thinker" but simply lacked the language for it. The flywheel for any great company is an underlying architecture of momentum that can be renewed and extended into multiple business and activities. The key is that there is no one big push that makes it go. A series of good decisions made with a coherent concept—in Amazon's case it was being genuinely "customer centric"—that over time accumulate and gives a company momentum.

Amazon is fiercely focused on driving down costs for its customers and improving service. This increases the number of customers, which leads to economies of scale. He gets his employees to focus on any of these components—traffic, sellers, selection, or customer experience—that distribute more energy to all of the spots on the flywheel and continually renews each element of the flywheel by innovating. Customers are always dissatisfied even if they don't know it, even when they think they're happy. Customer obsession is not just listening to customers, it's also inventing on their behalf.

In 2018, Amazon was spending \$29b a year on R&D, more than any other company in the world. Everyone is expected to innovate—not just a handful of scientists in white lab coats. Bezos was able to persuade Wall Street to keep supporting Amazon's stock as the company suffered losses or reported lackluster profits from 2001 to the mid-2010s, while it invested heavily in innovations that would please its customers. All of Amazon's major innovations—from the Kindle to AWS to the Echo—were many years in the making.

Bezos even applies flywheel thinking to his personal life. He prefers to think of it as "worklife harmony." What makes a difference is whether the work gives energy or saps it. Whatever energizes you—that makes you better at home. Some people come into a meeting and add energy. Others come in and the meeting deflates. You have to decide which kind of person you're going to be. It's a flywheel, a circle, not a balance.

Bezos is applying big data, artificial intelligence, and machine learning to the flywheel at an unprecedented rate, to make it spin even faster—on its own. Machine learning drives algorithms for demand forecasting, product search ranking,

deals recommendations, merchandising placements, fraud detection, translation, and much more.

Instead of hiring only traditional warehouse managers, Wilke hired operations researchers and data scientists to create a custom warehouse system. “We place buy orders for millions of items automatically with more consistent results. Everyone is using the same model to get the same insight. Amazon spent more than 2 decades accumulating data on its” customers and honing its AI programs to get to where **the software is the business model**. In comparison, only 25% of global corporations have an enterprise wide AI strategy. Bezos is applying this turbocharged flywheel not just to retailing but to a long list of industries on Amazon’s radar: media, health care, banking. Shipping.

The exact working details of big tech companies differ, but this is the business model of the future. Companies will guard their data zealously and battle over who controls what information and the winners will be those with the best data scientists. Computer science graduates can command an average starting salary of \$110,000 a year. All these companies have armies of world-class programmers and data scientists toiling around the world to monetize data. The dividing line between the digital and real economies will become increasingly blurred and eventually disappear. If the rest of the business community fails to master the AI flywheel, the world might very well end up with a handful of AI oligopolies controlling our purchases, entertainment, and even our health and finances.

Everything Amazon does is part of an effort to build a giant ecosystem that follows us everywhere. **The key organizing factor around this ecosystem is Amazon Prime**, the company’s membership program. It is the most powerful force driving Amazon’s AI flywheel. Prime members are gold to Amazon. They spend more than other shoppers, listen to more of its music, watch more of its videos, read more of its books, and give Amazon \$119 a year for the privileges that comes with being a member.

Bezos drew a moat around its best customers and changed the psychology of shoppers. He got them addicted to “free” shipping. Amazon deliberately keeps the press and Wall Street in the dark about how Prime actually works and the strategy behind it. At its heart, Prime is a way to change consumer shopping patterns, to turn the occasional online shopper into a person locked into the Amazon ecosystem who interacts with the company on a frequent basis. It is addictive and members stop checking whether they might find an item cheaper elsewhere. Amazon has locked an army of price-insensitive shoppers into their ecosystem.

Constantly improving the benefits of Prime isn’t easy, which is one reason working at Amazon is so highly demanding and at times stressful. Amazon’s customers are “divinely discontent.” Their expectations are never static—they go up. It’s human nature. Prime members spend \$1300 a year on Amazon, compared to \$700 for non-Prime members. We are becoming a nation of agrophobics, and the price we pay is a diminished sense of community.

AI winters, during the 1980s and 1990s, were periods when progress and funding would dry up. AI programs required tremendous amounts of rare and expensive computing power—

until the machines became skilled at identifying speech patterns and began *learning*. Amazon, a company full of *Star Trek* aficionados, began dreaming about replicating the talking computer aboard the starship *Enterprise*. In November 2014, it launched its smart speaker, Echo, with its AI voice assistant, Alexa. By 2019, more than 100m Alexa-enabled devices had been sold. Amazon now sells hundreds of products with Alexa built in, such as microwave ovens, security cameras, lightbulbs, thermostats, security and sound systems. Smart home devices like this will be as important as personal computers or even smartphones.

Voice commands, not keyboards or phone screens, **will become the most common way we interact with the Internet**. Amazon and the other tech giants are spending 10% of their annual research-and-development budgets on voice recognition—“simplifying by unifying.” Voice engine now responds with 95% accuracy—about the same as human listeners. The point where shoppers realize they can list their groceries and other items on Alexa and get them delivered on the same day, it will become frighteningly disruptive to the industry. By the time competitors figure out that Amazon owns the shopping list, it will be too late. People prefer talking and text with emojis and shorthand to formal writing. Voice expands the number of people who can enter Amazon’s world.

Compared to Amazon’s 850,000 workers, Google employs 98,000 and Facebook only 36,000. For the most part, Google, Facebook, Baidu, and other big tech firms hire the kind of workers whose jobs are not likely to be threatened by automation. By contrast, Amazon operates not only in cyberspace but in the tangible. It is a leader in the adoption of the “Internet of Things”—the digitization of much of what we do in the real world.

As these companies automate their warehouses, use drones and self-driving trucks for delivery, many solid blue-collar jobs will disappear. As global tech giants move into new industries, they’ll accelerate the digitization of health care, banking, and other sectors of the economy and have an even bigger impact on jobs. The tangible nature of Amazon’s retail business puts it at the center of a coming, massive disruption of the workplace. While the company has so far been creating hundreds of thousands of jobs, that trend will soon reverse itself as AI and robotics improve and more and more companies around the globe begin to adopt Bezonomics.

Laptop, smartphones, search engines, online shopping, and social media helped put out of business a host of newspaper publishers, booksellers, and retailers. As Bezonomics spreads, the global wealth gap will widen as the economy becomes ever more starkly winner-takes-all. The proliferation of robots with AI brains will dislocate hundreds of millions of workers around the globe, from warehouses stevedores, to taxi and truck drivers to checkout clerks. Automation will replace 800 million workers—30% of the global workforce by 2030. Technology will largely replace labor in manufacturing, trucking, logistics, retail, and administration. This “advanced capital” investment is designed to totally displace labor. Amazon’s warehouses that use robots contain on average 50% more inventory per square foot than those without and cut operating costs by 20%.

Amazon warehouse workers give their employer a rating of 3.6 stars out of 5—the same as Walmart. Workers at both places see them as an above-average place to work. A typical sentiment: I can't think of any time I joyfully came to work. It was just a job, not a place to stay long at all. It busts your spirit and wrecks your body. It is a workplace where "decency, respect and dignity were absent, one that resembles a low-security prison where workers don't have enough time for lunch, get penalized for taking sick days, and get punished for missing their productivity goals." What's inarguable is that warehouse jobs in general are intrinsically hard on the body and the soul. The idea is that these jobs, which pay a competitive wage plus benefits, should act as a stepping-stone for people while pursuing a new career.

"We're constantly increasing what we sell and how fast we need to get it to people." That means we'll see more and more automation. JD.com opened a warehouse in 2017 in China which ships 200,000 packages each day with only *four* employees. They maintain the robots. This warehouse works because it handles only standard-sized packages.

Bezos in 2018 opened the first Amazon Go store, where checkout isn't required. Once customers download the Amazon Go app, they need only take their phone and swipe at a turnstile to enter the store. After shoppers pick out what they want, and pop it in a bag, they simply walk out of the store and the amount will be charged to their Amazon account. It has opened these in Chicago, New York, and San Francisco. There are 3.6m cashiers in America. In 2019, Walmart opened a cashier-less Sam's Club in Texas.

Yes, there will be new jobs, but what is different this time is the scale and pace of the disruption. 3m industrial robots are now used in factories, more than double 7 years ago. In 2017, Tencent's Dreamwriter, a news-writing robot, generated 2000 finance or sports-related news articles each day. Insulated professions are high-touch or have an emotional component. Some dispossessed will find new jobs; others will survive on a universal basic income provided by their government, and others still will turn to the gig economy.

Amazon has the advantage that it owns all the product and pricing data flowing through its e-commerce platform. It offers Chinese factories an exclusive shipping service to bring their products to the US. As of 2018, a third of all sellers on Amazon were Chinese. The vast majority of complaints about sellers are about China. One of the most common of which is hijacking. Here a seller hacks a competitor's account and takes over its page on Amazon. The ultimate goal is to pirate the other seller's sales data, which is gold in the Amazon universe. To compete on Amazon, sellers need to have reviews and they're hard to come by—unless their bought. 30% of the reviews on Amazon are suspect.

America has too many stores—roughly 4X as much retail floor space per capita as other rich nations. Walmart is the king of the US grocery industry, accounting for 56% of all sales. Kroger comes in second with 17%. Amazon bought Whole Foods to get much-needed real estate in prime urban and suburban areas. It also got a high-end grocery whose customers fit nicely into the demographics of its prime members. Bezos plans to disrupt the grocery business by making ordering food as fast

and simple as saying, "Hey, Alexa, "I need milk and bananas," and then having the order arrive at a person's home within a few hours.

As Amazon builds out its retail business, it's essentially becoming a giant shipping company. It's amassing its own fleet of container ships, jumbo cargo jets, and tractor-trailer trucks. The last mile is where costs pile up. It can account for more than half of the total cost of shipping a package.

Autonomous deliveries will allow retailers to slash shipping costs by more than 40%. 46 companies around the world are working on self-driving vehicle technology. When autonomous vehicles first appear in significant numbers, they'll be delivery vans, which have predictable routes and therefore can more easily learn the ins and outs of complex cityscapes.

Marc Lore started working for Walmart in 2016 when it acquired Jet.com. He saw in Walmart the scale and capital he needed to go after Amazon. By January 2019, 11% of Walmart's shoppers used its curbside pickup program. He used to work at Diapers.com and then Amazon, after they bought it. Walmart put Lore in charge of their e-commerce and gave him free rein to build an entrepreneurial, fast-growing online business that could match Amazon's logistics.

Just as Amazon is racing to build a brick-and-mortar empire, Walmart is striving to meld an attractive online shopping experience with its already formidable brick-and-mortar presence. It's the only company in America that has the expertise and deep pockets to take on Amazon head-on. Walmart, nearly twice the size of Amazon, is the largest business in the world, but its stock market value is only half of Amazon's. Amazon has more coasts and urban, while Walmart has more heartland. Walmart generally has better prices than Amazon and its stores and warehouses are nearer to customers than Amazon's. But Walmart has no stores in New York City.

You can imagine a scenario where a handful of retail giants act like colonial powers splitting up the globe into spheres of influence. Alibaba and JD.com would be prevalent platforms in China. Amazon would prevail in Europe along with perhaps Tesco in Britain, Carrefour in France, and the Schwarz Group or Aldi in Germany. Amazon plus Alibaba plus Walmart would battle it out over India, with its 1.3b consumers.

Because Walmart's Super Stores are profitable, when someone orders groceries online, the overhead is covered. The combination of in-store foot traffic and home delivery is the magic. But Walmart that was late to e-commerce doesn't have nearly the depth of data. It uses Google Assistant for voice shopping, making it harder to collect valuable purchasing data. Lore believes that direct deliveries to the refrigerator will save costs. Walmart's new system will allow it to deliver when people *aren't* home.

Retailers of the future will focus on 4 areas: in-store experience that digitally merges with an amazing online one; exclusive products; mastering social media; and social mission. Anyone who wants to keep up in an Amazonian world must eventually master at least 2 of these. Nike and Sephora have integrated the online and in-store experience. Williams-Sonoma carry high-end cookware and kitchen equipment. Fashion retailers such as Stitch Fix, ASOS, and Lulus have harnessed technology to make their customers feel special in a way that Ama-

zon can't. Warby Parker gives away a pair of eyeglasses, in a highly visible way, to someone in the developing world for every pair it sells. With the exception of Walmart or Alibaba, most businesses will have a hard time besting Amazon on both price and speed. But Amazon isn't good at building a strong brand identity for its *products*.

Most consumers will eventually get over the privacy issues raised by facial recognition. Businesses and governments already know pretty much everything about everyone, and a business downloading one's shopping history is a lot less sinister than an insurance company or an employer knowing someone's intimate medical history. Owners of iPhone Xs have warmed quickly to the device's face recognition password system. Williams-Sonoma controls its own inventory, ensuring that much of it is exclusive to its own channel and brand, with one of the most robust Internet operations in retail. It calls its brick-and-mortar stores "billboards for our brands." Best Buy competes by selling products that need a lot of hand-holding, including complicated home theater hookups and home Wi-Fi and security systems. Best Buy's Geek Squad travels to homes and offices to help with such complex installations. Google, Microsoft, Samsung, and other makers of consumer electronics have opened boutiques within Best Buy stores.

When Bezos talks about customer obsession it's very narrow. It's about being the best utility, not about being good at fashion or hands-on service. Amazon's business model is driven by algorithms rather than people. It's not known for its social conscience. Industries such as health care, banking, and advertising are vulnerable. An entire industry of consultants is emerging to advise businesses on how to compete with Amazon. It organically builds businesses in new sectors, sometimes making a relatively small (under \$1b each) strategic acquisition to acquire the talent of technology it needs to get its invasion armies rolling. It then has the patience and capital to make new businesses work no matter how long it takes. It's willing to lose money for years on a new business, and it has been given permission by Wall Street to do so.

Amazon has unparalleled technological firepower, which it can apply to any sector it invades. Once Amazon targets a sector of the economy, it applies its AI flywheel—driven by massive amounts of customer data—and starts pushing. It launched the Kindle in 2007 and, after years of losses and some false starts, grabbed 80% of the e-reader market, in the process becoming a consumer electronics company. Now it's expanding in the smart home industry, making its own Wi-Fi-linked microwaves, clocks, security cameras, etc. In 2018 it invested in a small pre-fab housing manufacture. It has a deal with Lennar, the nation's largest homebuilder, to preinstall Alex in all the company's new homes. It has a software program to screen for new targets. Bezos once said, "Your margin is my opportunity." Amazon screens for businesses where costly human labor (and thinking) can be replaced by smart machines. These include advertising, health care, banking, and insurance. It has gained the most traction so far in advertising, which is a potential 3rd pillar at the company, along with e-commerce and cloud computing.

Imagine what it's going to be like when Bezos rolls out Prime Health. Trust is a crucial element in health care and Am-

azon is the most trusted brand in America. It likes to move fast and operate on the cheap, but the pharmacy business is the exact opposite. It's burdened by regulation, the need for state licenses, and other hurdles. Some patient data is inaccurate and most is siloed—doctors, hospitals, and the patients themselves don't have easy access to all the information in one place. Combined, Amazon, Berkshire, and Chase have 1.2m employees and the mandate of Haven is to make health care for them better, easier to navigate, and more affordable.

The 1-Click button dramatically increased the likelihood that its consumers would complete their purchases. More than 20,000 small businesses that sell on its Marketplace have borrowed money from Amazon, so it is growing its role in banking. When a company spends more than any other company in the world on R&D, it gets to do a lot of experimentation.

In September 2018, Amazon announced it would build one of its 2nd headquarters in New York City. But, "We pulled out because it wasn't worth the grief." Spending months and even years trying to appease hostile politicians takes time and resources away from Amazon's focus on its customers. Dealing for decades with local politicians who'd be only criticizing its every move isn't how the company likes to roll. The number of antitrust experts who want to dismantle the company is small but growing.

To split up Amazon on the premise that it hurts the consumer is ludicrous. Amazon's private label products are less than 1% of total sales—far less than other big retailers, many of whom have private label products that represent 25% or more of their sales. 3rd-party sellers now account for 58% of all items sold on Amazon.com—up from 30% a decade earlier. More than 2m merchants who operate in the US, Europe, China, Japan, and South America are expanding not dying, and that can't be used as an argument for breaking up Amazon. While Amazon controls 40% of all online retail in the US, 9 of every 10 shopping dollars still go to brick-and-mortar stores—it controls only 4% of US retail.

Roosevelt said that the trusts run by Rockefeller, Morgan, Mellon, and others had become so powerful they were threatening the very sovereignty of the federal government.

[Amazon consistently ranks as the most trusted and beloved brand. It is becoming an operating system for your life. The foundational principles of the Bezonomics philosophy are customer obsession, extreme innovation, and long-term management. His secret is what he calls his flywheel. The software is the business model. Voice commands will become the most common way we interact with the Internet.]