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Peter Thiel's CS183: Startup - Class 4 Notes Essay

32-41 minutes

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Here is an essay version of my class notes from Class 4 of CS183: Startup. Errors and omissions are my own. Credit for good stuff is Peter's entirely.

CS183: Startup—Notes Essay—April 11—The Last Mover Advantage

I. Escaping Competition

The usual narrative is that capitalism and perfect competition are synonyms. No one is a monopoly. Firms compete and profits are competed away. But that's a curious narrative. A better one frames capitalism and perfect competition as opposites; capitalism is about the accumulation of capital, whereas the world of perfect competition is one in which you can't make any money. Why people tend to view capitalism and perfect competition as interchangeable is thus an interesting question that's worth exploring from several different angles.

The first thing to recognize is that our bias favoring competition is deep-rooted. Competition is seen as almost quintessentially American. It builds character. We learn a lot from it. We see the competitive ideology at work in education. There is a sense in which extreme forms of competition are seen as setting one up for future, non-competitive success. Getting into medical school, for example, is extremely competitive. But then you get to be a well-paid doctor.

There are, of course, cases where perfect competition is just fine. Not all businesses are created to make money; some people might be just fine with not turning a profit, or making just enough to keep the lights on. But to the extent one wants to make money, he should probably be quite skeptical about perfect competition. Some fields, like sports and politics, are incredibly and perhaps inherently competitive. It's easier to build a good business than it is to become the fastest person alive or to get elected President.

It may upset people to hear that competition may not be unqualifiedly good. We should be clear what we mean here. Some sense of competition seems appropriate. Competition can make for better learning and education. Sometimes credentials do reflect significant degrees of accomplishment. But the worry is that people make a habit of chasing them. Too often, we seem to forget that it's genuine accomplishment we're after, and we just train people to compete forever. But that does everyone a great disservice if what's theoretically optimal is to manage to *stop* competing, i.e. to become a monopoly and enjoy success.

A law school anecdote will help illustrate the point. By graduation, students at Stanford Law and other elite law schools have been racking up credentials and awards for well over a dozen years. The pinnacle of post law school credentialism is landing a Supreme Court clerkship. After graduating from SLS in '92 and clerking for a year on the 11th Circuit, Peter Thiel was one of the small handful of clerks who made it to the interview stage with two of the Justices. That capstone credential was within reach. Peter was so close to winning that last competition. There was a sense that, if only he'd get the nod, he'd be set for life. But he didn't.

Years later, after Peter built and sold PayPal, he reconnected with an old friend from SLS. The first thing the friend said was, "So, aren't you glad you didn't get that Supreme Court clerkship?" It was a funny question. At the time, it seemed much better to be chosen than not chosen. But there are many reasons to doubt whether winning that last competition would have been so good after all. Probably it would have meant a future of more insane competition. And no PayPal. The pithy, wry version of this is the line about Rhodes Scholars: they all had a great future in their past.

This is not to say that clerkships, scholarships, and awards don't often reflect incredible accomplishment. Where that's the case, we shouldn't diminish it. But too often in the race to compete, we learn to confuse what is hard with what is valuable. Intense competition makes things hard because

you just beat heads with other people. The intensity of competition becomes a proxy for value. But value is a different question entirely. And to the extent it's not there, you're competing just for the sake of competition. Henry Kissinger's anti-academic line aptly describes the conflation of difficulty and value: in academia at least, the battles are so fierce because the stakes are so small.

That seems true, but it also seems odd. If the stakes are so small, why don't people stop fighting so hard and do something else instead? We can only speculate. Maybe those people just don't know how to tell what's valuable. Maybe all they can understand is the difficulty proxy. Maybe they've bought into the romanticization of competition. But it's important to ask at what point it makes sense to get away from competition and shift your life trajectory towards monopoly.

Just look at high school, which, for Stanford students and the like, was not a model of perfect competition. It probably looked more like extreme asymmetric warfare; it was machine guns versus bows and arrows. No doubt that's fun for the top students. But then you get to college and the competition amps up. Even more so during grad school. Things in the professional world are often worst of all; at every level, people are just competing with each other to get ahead. This is tricky to talk about. We have a pervasive ideology that intense, perfect competition makes the best world. But in many ways that's deeply problematic.

One problem with fierce competition is that it's demoralizing. Top high school students who arrive at elite universities quickly find out that the competitive bar has been raised. But instead of questioning the existence of the bar, they tend to try to compete their way higher. That is costly. Universities deal with this problem in different ways. Princeton deals with it through enormous amounts of alcohol, which presumably helps blunt the edges a bit. Yale blunts the pain through eccentricity by encouraging people to pursue extremely esoteric humanities studies. Harvard—most bizarrely of all—sends its students into the eye of the hurricane. Everyone just tries to compete even more. The rationalization is that it's actually inspiring to be repeatedly beaten by all these high-caliber people. We should question whether that's right.

Of all the top universities, Stanford is the farthest from perfect competition. Maybe that's by chance or maybe it's by design. The geography probably helps, since the east coast doesn't have to pay much attention to us, and vice versa. But there's a sense of structured heterogeneity too; there's a strong engineering piece, the strong humanities piece, and even the best athletics piece in the country. To the extent there's competition, it's often a joke. Consider the Stanford-Berkeley rivalry. That's pretty asymmetric too. In football, Stanford usually wins. But take something that really matters, like starting tech companies. If you ask the question, "Graduates from which of the two universities started the most valuable company?" for each of the last 40 years, Stanford probably wins by something like 40 to zero. It's monopoly capitalism, far away from a world of perfect competition.

The perfect illustration of competition writ large is war. Everyone just kills everyone. There are always rationalizations for war. Often it's been romanticized, though perhaps not so much anymore. But it makes sense: if life really is war, you should spend all your time either getting ready for it or doing it. That's the Harvard mindset.

But what if life isn't just war? Perhaps there's more to it than that. Maybe you should sometimes run away. Maybe you should sheath the sword and figure out something else to do. Maybe "life is war" is just a strange lie we're told, and competition isn't actually as good as we assume it is.

II. Lies People Tell

The pushback to all this is that, generally speaking, life really is war. Determining how much of life is actually perfect competition versus how much is monopoly isn't easy. We should start by evaluating the various versions of the claim that life is war. To do that, we have to be on guard against falsehood and distortion. Let's consider the reasons why people might bend the truth about monopoly versus competition in the world of technology.

A. Avoid the DOJ

One problem is that if you have a monopoly, you probably don't want to talk about it. Antitrust and other laws on this can be nuanced and confusing. But generally speaking, a CEO bragging about the great monopoly he's running is an invitation to be audited, scrutinized, and criticized. There's just no reason to do it. And if the politics problem is quite severe, there is actually strong positive incentive to distort the truth. You don't just not say that you are a monopoly; you shout from the rooftops that you're not, even if you are.

The world of perfect competition is no freer from perverse incentives to lie. One truth about that world is that, as always, companies want investors. But another truth about the world of perfect competition is that investors should not invest in any companies, because no company can or will make a profit. When two truths so clash, the incentive is to distort one of them.

So monopolies pretend they're not monopolies while non-monopolies pretend they are. On the scale of perfect competition to monopoly, the range of where most companies fall is shrunk by their rhetoric. We perceive that there are only small differences between them. Since people have extreme pressure to lie towards convergence, the reality is probably more binary—monopoly or competitive commodity business—than we think.

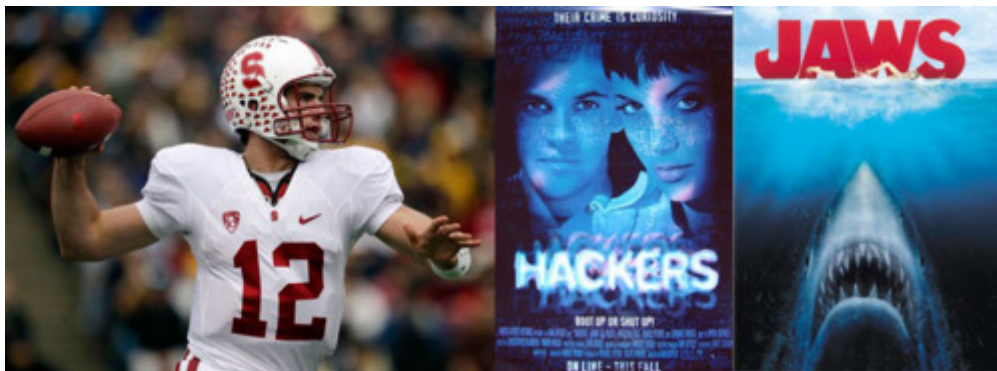
B. Market Lies

People also tell lies about markets. Really big markets tend to be very competitive. You don't want to be a minnow in a giant pool. You want to be best in your class. So if you're in a business that finds itself in a competitive situation, you may well fool yourself into thinking that your relevant market is much smaller than it actually is.

Suppose you want to start a restaurant in Palo Alto that will serve only British food. It will be the only such restaurant in Palo Alto. "No one else is doing it," you might say. "We're in a class of our own." But is that true? What is the relevant market? Is it the market for British food? Or the restaurant market in general? Should you consider only the Palo Alto market? Or do people sometimes travel to or from Menlo Park or Mountain View to eat? These questions are hard, but the bigger problem is that your incentive is not to ask them at all. Rather, your incentive is to rhetorically shrink the market. If a bearish investor reminds you that 90% of restaurants fail within 2 years, you'll come up with a story about how you're different. You'll spend time trying to convince people you're the only game in town instead of seriously considering whether that's true. You should wonder whether there are people who eat only British food in Palo Alto. In this example, those are the only people you have pricing power over. And it's very possible that those people don't exist.

In 2001, some PayPal people used to go eat on Castro Street in Mountain View. Then, like now, there were all sorts of different lunch places. Whether you wanted Indian, Thai, Vietnamese, American, or something else, you had several restaurants to choose from. And there were more choices once you picked a type. Indian restaurants, for instance, divided into South Indian vs. not, cheaper vs. fancier. Castro Street was pretty competitive. PayPal, by contrast, was at that time the only e-mail based payments company in world. It employed fewer people than the Mountain View restaurants did. Yet from a capital formation perspective, PayPal was much more valuable than all the equity of all those restaurants combined. Starting a new South Indian food restaurant on Castro Street was, and is, a hard way to make money. It's a big, competitive market. But when you focus on your one or two differentiating factors, it's easy to convince yourself that it's not.

Movie pitches unfold in much the same way. Most of them are the same in that they all claim that *this* movie will be truly unique. This new film, investors are told, will combine various elements in entirely new ways. And that may even be true. Suppose we want to have Andrew Luck star in a cross between "Hackers" and "Jaws." The plot summary is: college football star joins elite group of hackers to catch the shark that killed his friend. That's definitely never been done before. We've had sports stars and "Hackers" and "Jaws," but never anything at the intersection of that Venn diagram. But query whether that intersection would be any good or not.



The takeaway is that it's important to identify how these rhetorical narratives work. Non-monopolies always narrow their market. Monopolies insist they're in a huge market. In logical operator terms, non-monopolies tell intersection stories: British food \cap restaurant \cap Palo Alto. Hometown hero \cap hackers \cap

sharks. Monopolies, by contrast, tell union stories about tiny fishes in big markets. Any narrative that carries the subtext of “we’re not the monopoly the government is looking for” will do.

C. Market Share Lies

There are all kinds of ways to frame markets differently. Some ways are much better than others. Asking what is the truth about a given market—and reaching as close to an objective answer as possible—is crucially important. If you’re making a mobile app, you need to determine whether your market is apps on the iPhone, of which there are several hundred thousand, or whether there’s a good way to define or create a very different, smaller market. But one must stay on guard against the sources of bias in this process.

Let’s drill down on search engine market share. The big question of whether Google is a monopoly or not depends on what market it’s in. If you say that Google is a search engine, you would conclude that it has 66.4% of the search market. Microsoft and Yahoo have 15.3% and 13.8%, respectively. Using the Herfindahl-Hirschman index, you would conclude that Google is a monopoly since 66% squared is well over 0.25.

But suppose you say that Google is an advertising company, not a search company. That changes things. U.S. search advertising is a \$16b market. U.S. online advertising is a \$31b market. U.S. advertising generally is a \$144b market. And global advertising is a \$412b market. So you would conclude that, even if Google dominated the \$16b U.S. search advertising market, it would have less than 4% of the global advertising market. Now, Google looks less like a monopoly and more like a small player in a very competitive world.

Or you could say that Google is tech company. Yes, Google does search and advertising. But they also do robotic cars. They’re doing TV. Google Plus is trying to compete with Facebook. And Google is trying to take on the entire phone industry with its Android phone. Consumer tech is a \$964b market. So if we decide that Google as a tech company, we must view it in a different context entirely.

It’s not surprising that this is Google’s narrative. Monopolies and companies worried about being perceived as such tell a union story. Defining their market as a union of a whole bunch of markets makes them a rhetorical small fish in a big pond. In practice, the narrative sounds like this quotation from Eric Schmidt:

“The Internet is incredibly competitive, and new forms of accessing information are being utilized every day.”

The subtext is: we have to run hard to stay in the same place. We aren’t that big. We may get defeated or destroyed at any time. In this sense we’re no different than the pizzeria in downtown Palo Alto.

D. Cash and Competition

One important data point is how much cash a company has on its balance sheets. Apple has about \$98b (and is growing by about \$30b each year). Microsoft has \$52b. Google has \$45b. Amazon has \$10b. In a perfectly competitive world, you would have to take all that cash and reinvest it in order to stay where you are. If you’re able to grow at \$30b/year, you have to question whether things are really that competitive. Consider gross margins for a moment. Gross margins are the amount of profit you get for every incremental unit in marginal revenues. Apple’s gross margins are around 40%. Google’s are about 65%. Microsoft’s are around 75%. Amazon’s are 14%. But even \$0.14 profit on a marginal dollar of revenue is huge, particularly for a retailer; grocery stores are probably at something like 2% gross margins.

But in perfect competition, marginal revenues equal marginal costs. So high margins for big companies suggest that two or more businesses might be combined: a core monopoly business (search, for Google), and then a bunch of other various efforts (robotic cars, TV, etc.). Cash builds up because it turns out that it doesn’t cost all that much to run the monopoly piece, and it doesn’t make sense to pump it into all the side projects. In a competitive world, you would have to be funding a lot more side projects to stay even. In a monopoly world, you should pour less into side projects, unless politics demand that the cash be spread around. Amazon currently needs to reinvest just 3% of its profits. It has to keep running to stay ahead, but it’s more easy jog than intense sprint.

III. How To Own a Market

For a company to own its market, it must have some combination of brand, scale cost advantages, network effects, or proprietary technology. Of these elements, brand is probably the hardest to pin down. One way to think about brand is as a classic code word for monopoly. But getting more specific than that

is hard. Whatever a brand is, it means that people do not see products as interchangeable and are thus willing to pay more. Take Pepsi and Coke, for example. Most people have a fairly strong preference for one or the other. Both companies generate huge cash flows because consumers, it turns out, aren't very indifferent at all. They buy into one of the two brands. Brand is a tricky concept for investors to understand and identify in advance. But what's understood is that if you manage to build a brand, you build a monopoly.

Scale cost advantages, network effects, and proprietary technology are more easily understood. Scale advantages come into play where there are high fixed costs and low marginal costs. Amazon has serious scale advantages in the online world. Wal-Mart enjoys them in the retail world. They get more efficient as they get bigger. There are all kinds of different network effects, but the gist of them is that the nature of a product locks people into a particular business. Similarly, there are many different versions of proprietary technology, but the key theme is that it exists where, for some reason or other, no one else can use the technology you develop.

Apple—probably the greatest tech monopoly today—has all these things. It has complex combination of proprietary technology. By building both the hardware and the software, it basically owns the entire value chain. With legions of people working at Foxconn, it has serious scale cost advantages. Countless developers building on Apple platform and millions of repeat customers interacting with the Apple ecosystem provide the network effects that lock people in. And Apple's brand is not only some combination of all of these, but also something extra that's hard to define. If another company made an otherwise identical product, it would have to be priced less than the Apple version. Even beyond Apple's other advantages, the brand allows for greater monetization.

IV. Creating Your Market

There are three steps to creating a truly valuable tech company. First, you want to find, create, or discover a new market. Second, you monopolize that market. Then you figure out how to expand that monopoly over time.

A. Choosing the Right Market

The Goldilocks principle is key in choosing the initial market; that market should not be too small or too large. It should be just right. Too small a market means no customers, which is a problem. This was the problem with PayPal's original idea of beaming money on palm pilots. No one else was doing it, which was good. But no one really needed it done, which was bad.

Markets that are too big are bad for all the reasons discussed above; it's hard to get a handle on them and they are usually too competitive to make money.

Finding the right market is not a rhetorical exercise. We are no longer talking about tweaking words to trick ourselves or persuade investors. Creating your market has nothing to do with framing stories about intersections or unions. What is essential is to figure out the *objective truth* of the market.

B. Monopoly and Scaling

If there is no compelling narrative of what the market is and how it can scale, you haven't yet found or created the right market. A plan to scale is crucial. A classic example is the Edison Gower-Bell Telephone Company. Alexander Graham Bell developed the telephone, and with it, a new market. Initially, that market was very small; only a few people were involved in it. It was very easy to be the only one doing things in such a small, early market. They expanded. They kept expanding. The market became durable. Network effects began to operate. It quickly became very hard for others to break in.

The best kind of business is thus one where you can tell a compelling story about the future. The stories will all be different, but they take the same form: find a small target market, become the best in the world at serving it, take over immediately adjacent markets, widen the aperture of what you're doing, and capture more and more. Once the operation is quite large, some combination of network effects, technology, scale advantages, or even brand should make it very hard for others to follow. That is the recipe for building valuable businesses.

Probably every single tech company ever has fit some version of this pattern. Of course, putting together a completely accurate narrative of your company's future requires nothing less than figuring out the entire future of the world, which isn't likely to happen. But not being able to get the future exactly right doesn't mean you don't have to think about it. And the more you think about it, the better your narrative and better your chances of building a valuable company.

C. Some Examples

Amazon started very small. Initially, it was just going to be an online bookstore. Granted, becoming the best bookstore in the world, i.e. having all books in catalogue, is not a trivial thing to do. But the scale was very manageable. What is amazing about Amazon was that and how they were able to gradually scale from bookstore to the world's general store. This was part of the founding vision from the outset. The Amazon name was brilliant; the incredible diversity of life in the Amazon reflected the initial goal of cataloging every book in the world. But the elasticity in the name let it scale seamlessly. At a different scale, the Amazon's diversity also stood for every *thing* in the world.

eBay also started small. The idea was to build a platform and prepare for the unexpected. The first unexpected thing was the popularity of Pez dispensers. eBay became the single place where people who were into collecting all the various kinds of Pez dispensers could get them. Then came beanie babies. eBay soon became the only place in world where you could quickly get any particular beanie baby you wanted. Creating a marketplace for auctions lent itself to natural monopoly. Marketplaces are full of buyers and sellers. If you're buying, you go where the most sellers are. And if you're selling, you go to where the buyers are. This is why most companies list on just one stock exchange; to create liquidity, all buyers and sellers should be concentrated in the same place. And eBay was able to expand its marketplace to cover a surprisingly large number of verticals.

But eBay ran into problems in 2004, when it became apparent that that auction model didn't extend well to everything. That core monopoly business turned out to be an auction marketplace for somewhat unique products, like coins and stamps, for which there was intense demand but limited supply. The auction model was much less successful for commodity-like products, which companies like Amazon, Overstock, and Buy.com dealt in. eBay still turned out to be a great monopoly business. It's just a smaller one than people thought it would be in 2004.

LinkedIn has 61 million users in the U.S. and 150 million worldwide. The idea was that it would be a network for everyone. The reality is that it's largely just used for headhunting. Some have proposed a unique long/short strategy utilizing that insight: short the companies where lots of people are joining LinkedIn to post résumés and look for jobs, and go long the companies who are suspiciously quiet on LinkedIn. The big question about LinkedIn is whether the business network is the same as the social network. LinkedIn's narrative is that the business network is fundamentally discrete. If that's true, it will probably own that market for a long time.

Twitter is a classic example of starting with a small, niche product. The idea was simply that anyone can become a microbroadcaster. It works even if you just do it with a small number of people. But as it scales you basically build a new media distribution center. The big question about Twitter is whether it will ever make any money. That's not an easy question to answer. But if you ask the future tech questions—Do you have a technological advantage? Do you have a moat? Can people replicate this?—Twitter seems safe. If Twitter's market is the market for sending messages of 140 characters or less, it would be incredibly hard to replicate it. Sure, you can copy it. But you can't *replicate* it. Indeed, it's almost impossible to imagine a technological future where you can compete with Twitter. Move to 141 characters and you break SMS compatibility. Go down to 139 and you're just missing a character. So while monetization is an open question, Twitter's robustness and durability are hard to beat.

Zynga is another interesting case. Mark Pincus has wisely said that, "Not having clear goal at outset leads to death by a thousand compromises." Zynga executed very well from the beginning. They started doing social games like Farmville. They aggressively copied what worked, scaled, figured out how to monetize these games—how to get enough users to pay for in-game perks—better than anyone else did. Their success with monetization drove the viral loop and allowed them to get more customers quickly.

The question about Zynga is how durable it is. Is it a creative or non-creative business? Zynga wants the narrative to be that it's *not* a creative or a design company. If it is, the problem is that coming up with new great games is hard. Zynga would basically just be game version of a Hollywood studio whose fortunes can rise or fall with the seasons. Instead, Zynga wants the narrative to be about hardcore psychometric sauce. It's a better company if it's figured out how psychological and mathematical laws give it permanent monopoly advantages. Zynga wants, perhaps *needs*, to be able to truthfully say, "we know how to make people buy more sheep, and therefore we are a permanent monopoly."

Groupon also started small and scaled up aggressively. The questions for Groupon is what is the relevant market and how can they own it. Groupon insists it's a brand; it's penetrated to all these cities, and people look to it, not others, for deals. The anti-Groupon angle is that it has no proprietary technology and no network effects. If the branding isn't as strong as Groupon says it is, it will face lots of challenges in the long term.

All these companies are different, but the pattern is the same: start with a small, specific market, scale up, and always have an account of how robust you are going forward. The best way to fail is to invert this recipe by starting big and shrinking. Pets.com, Webvan, and Kozmo.com made this mistake. There are many modes of failure. But not being honest about objective market conditions is a sort of failure paradigm. You can't succeed by believing your own rhetoric over reality except by luck.

V. Tech Frontiers

There is always some room to operate in existing markets. Instead of creating a new market, you could "disrupt" existing industries. But the disruptive tech story is possibly overdone. Disruptive companies tend not to succeed. Disruptive kids get sent to principal's office. Look at Napster. Napster was certainly disruptive...probably *too* disruptive. It broke too many rules and people weren't ready for it. Take the name itself: *Napster*. It *sounds* disruptive. But what kinds of things can one "nap"? Music and kids. Yikes. Much better than to disrupt is to find a frontier and go for it.

But where is the frontier in technology? How should we begin to think about it? Here is one possible framework. Picture the world as being covered by ponds, lakes, and oceans. You're in a boat, in a body of water. But it's extremely foggy, so you don't know how far it is to the other side. You don't know whether you're in a pond, a lake, or an ocean.

If you're in a pond, you might expect the crossing to take about an hour. So if you've been out a whole day, you're either in a lake or an ocean. If you've been out for a year, you're crossing an ocean. The longer journey, the longer your expected remaining journey. It's true that you're getting closer to reaching the other side as time goes on. But here, time passing is also indicative that you still have quite a ways to go.

So where are the places where technology is happening? Where is there room for the journey to continue? The frontier is a promising place, but also a very uncertain one. You can imagine a tech market where nothing is happening for a long time, things suddenly start to happen, and then it all stops. The tech frontier is temporal, not geographical. It's *when* things are happening.

Consider the automotive industry. Trying to build a car company in the 19th century was a bad idea. It was too early. But it's far too late to build a traditional car company today. Car companies—some 300 of them, a few of which are still around—were built in 20th century. The time to build a car company was the time when car technology was being created—not before, and not after.

We should ask ourselves whether the right time to enter a tech industry is early on, as conventional wisdom suggests. The best time to enter may be much later than that. It can't be too late, since you still need room to do something. But you want to enter the field when you can make the last great development, after which the drawbridge goes up and you have permanent capture. You want to pick the right time, go long on tech, succeed, and then short tech.

Microsoft is probably the last operating system company. It was also an early one, but there's a sense in which it will be the last as well. Google, the narrative goes, is the last search engine company; it wrought a quantum improvement in search with its shift to an algorithmic approach, and that can't be much improved on. What about bioinformatics? A lot seems to be happening there. But whether it's too early to jump in is hard to know. The field seems very promising. But it's difficult to get a sense of where it will likely be in 15 or 20 years. Since the goal is to build companies that will still be around in 2020, you want to avoid a field where things are moving too quickly. You want to avoid being an innovative but non-profitable disk drive company from the '80s.

Some markets are like the automotive market. Should you start a new lithium battery company? Probably not. The time for that may have passed. Innovation may be too slow. The technology may be too set by now.

But sometimes seemingly terminal markets aren't. Look at aerospace. SpaceX thinks it can cut space launch costs by 70-90%. That would be incredibly valuable. If nothing has happened in an industry for a long time, and you come along and dramatically improve something important, chances are that no one else will come and do that again, *to you*.

Artificial Intelligence is probably an underrated field. People are burned out on it, largely because it has been overrated and overstated for many decades. Few people think AI is or will soon be real at this point. But progress is increasingly relentless. AI performance in chess is increasing. Computers will probably beat humans in Go in 4 or 5 years. AI is probably a good place to look on the tech frontier. The challenge is that no one knows how far it will go.

Mobile Internet deserves some mention. The question is whether there's a gold rush in mobile. An important subquestion is whether, given a gold rush, you'd rather be a gold digger or the guy selling shovels to gold diggers. But Google and Apple are selling the shovels. And there may not be that much gold left to find. The worry is that the market is just too big. Too many companies are competing. As discussed above, there are various rhetorical tricks one can use to whittle down the market size and make any given company seem way more unique. Maybe you can create a mobile company that owns a valuable niche. Maybe you can find some gold. But that's worth being skeptical about.

VI. Frontiers and People

One way to tell whether you've found a good frontier is to answer the question "Why should the 20th employee join your company?" If you have a great answer, you're on the right track. If not, you're not. The problem is the question is deceptively easy sounding.

So what makes for a good answer? First, let's put the question in context. You must recognize that your indirect competition for good employees is companies like Google. So the more pointed version of the question is: "Why would the 20th engineer join your company when they could go to Google instead and get more money and prestige?"

The right answer has to be that you're creating some sort of monopoly business. Early businesses are driven by the quality of the people involved with them. To attract the best people, you need a compelling monopoly story. To the extent you're competing with Google for talent, you must understand that Google is a great monopoly business. You probably should not compete with them at their core monopoly business of search. But in terms of hiring, you simply can't compete with a great monopoly business unless you have a powerful narrative that has you becoming a great monopoly business too.

This raises the question that we'll discuss next week: kinds of people do you want to take with you as you head off into the frontier?

