Lecture 5: Business Strategy and Monopoly Theory

Peter Thiel

Sam: Alright, good afternoon, today’s speaker is Peter Thiel, Peter was the founder of PayPal, Palantir, and Founders Fund and has invested in most of the tech companies in Silicon Valley. He's going to talk about strategy and competition. Thank you for coming, Peter.

Peter: Awesome, thanks Sam for inviting me, thanks for having me.

I sort of have a single idée fixe that I'm completely obsessed with on the business side which is that if you're starting a company, if you’re the founder, entrepreneur, starting a company you always want to aim for monopoly and you want to always avoid competition. And so hence competition is for losers, something we’ll be talking about today.

I'd like to start by saying something about the basic idea of when you start one of these companies, how do you go about creating value? What makes a business valuable? And I want to suggest there's basically a very simple formula, that if you have a valuable company two things are true. Number one, that it creates "X" dollars of value for the world. Number two, that you capture "Y" percent of "X.” And the critical thing that I think people always miss in this sort of analysis is that "X" and "Y" are completely independent variables, and so "X" can be very big and "Y" can be very small. "X" can be an intermediate size and if "Y” is reasonably big, you can still have a very big business.

So to create a valuable company you have to basically both create something of value and capture some fraction of the value of what you've created. And sort of just to illustrate this as a contrast, if you compare the US airline industry with a company like Google on search, if you measure by the size of these industries you could say that airlines are still more important than search, just measured by revenue. [For airline carriers] there’s $195 billion in domestic revenues in 2012; Google had just north of $50 billion. And certainly on some intuitive level if you were given a choice and said, well would you want to get rid of all air travel, or do you want to give up search engines, the intuition would be that air travel is something that's more important than search. And this is of course just the domestic numbers.

If you'd look at this globally, airlines are much much bigger than search, than Google is, but the profit margins are quite a bit less. They were marginally profitable in 2012, I think in the entire hundred year history of the airline industry, the cumulative profits in the US have been approximately zero. The companies make money, they episodically go bankrupt, they get recapitalized, and you sort of cycle and repeat. And this is reflected in the combined market capitalization of the airline industry, which may be something like a quarter of Google's. So you have search much smaller than air travel but much more valuable. I think this reflects these very different valuations on "X" and "Y."

If we look at perfect competition, there's some pros and cons to the world of perfect competition. On a high level, this is something you always study in Econ I, it's always easy to model, which is why I think econ professors like talking about perfect competition. It somehow is efficient, especially in a world where things are static, because you have all the consumer surplus that’s captured by everybody, and politically it’s what we’re told is good in our society: you want to have competition and it’s somehow a good thing. Of course there are a lot of negatives, it's generally not that good if you're involved in anything that’s hyper competitive, because you often don't make money. I’ll come back to this a little bit later. So I think on one end of the spectrum you have industries that are perfectly competitive and at the other end of the spectrum you have things that I would say are monopolies, and they’re much more stable longer term businesses, you have more capital, and if you get a creative monopoly for inventing something new, I think it's symptomatic of having created something really valuable.

I do think the extreme binary view of the world I always articulate is that there are exactly two kinds of businesses in this world, there are businesses that are perfectly competitive and there are businesses that are monopolies. There is shockingly little that is in between. And this dichotomy is not understood very well because people are constantly lying about the nature of the businesses they are in. And in my mind this is not necessarily the most important thing in business, but I think it's the most important business idea that people don't understand, that there are just these two kinds of businesses.

So let me tell you a little bit about the lies people tell. If you imagine that there was a spectrum of companies from perfect competition to monopoly, the apparent differences are quite small because the people who have monopolies pretend not to. They will basically say, and it’s because you don’t want to get regulated by the government, you don’t want the government to come after you, so you will never say that you have a monopoly. So anyone who has a monopoly will pretend that they are in incredible competition; and on the other end of the spectrum if you are incredibly competitive, and if you’re in some sort of business where you will never make any money, you'll be tempted to tell a lie that goes in the other direction, where you will say that you're doing something unique that is somehow less competitive than it looks because you'll want to differentiate, you will want to try and attract capital, or something like that. So if the monopolists pretend not to have monopolies, the non-monopolies pretend to have monopolies, the apparent difference is very small whereas the real difference I would submit is actually quite big. So there’s this business distortion that happens because of the lies people tell about their businesses and the lies are sort of in these opposite directions.

Let me drill a little bit down further on the way these lies work. And so the basic lie you tell as a non-monopoly is that we're in a very small market. The basic lie you tell as a monopoly is the market you’re in is much bigger than it looks. So typically if you want to think of this in set theoretic terms, you could say that a monopoly tells a lie where you describe your business as the union of these vastly different markets and the non-monopolist describes it as the intersection. So in effect, if you're a non-monopolist you will rhetorically describe your market as super small, you're the only person in that market. If you have a monopoly you'll describe it as super big and there's lots of competition in it.

Some examples of how this works in practice. I always use restaurants as the example of a terrible business, this is always sort of the idea that capital [accumulation] and competition are antonyms. If someone accumulates capital, a world of perfect competition is a world where all the capital gets competed away. So you're opening a restaurant business, no one wants to invest because you just lose money, so you have to tell some idiosyncratic narrative and you'll say something like. "Well we're the only British food restaurant in Palo Alto.” So its British, Palo Alto and of course that's too small a market because people may be able to drive all the way to Mountain View or even Menlo Park and there probably are no people who eat nothing but British food, at least no people who are still alive.

So that's sort of a fictitiously narrow market. There is sort of a Hollywood version of all of this, the way movies always get pitched, where it’s like a college football star, you know, joins an elite group of hackers to catch the shark that killed his friend. Now that's a movie that has not yet been made, but the question is, "Is that the right category or is the correct category, it's just another movie?" In which case there are lots of those, it’s super competitive, it’s incredibly hard to make money, no one ever makes money in Hollywood making movies, it’s really really hard.

So you always have this question about is the intersection real? Does it make sense? Does it have value? And of course there are startup versions of this, and in the really bad versions you just take a whole series of the buzzwords: sharing, mobile, social apps, you combine them and give some kind of narrative and whether or not that's a real business or not, it is generally a bad sign. It's almost this pattern recognition when you have this rhetoric of these sort of intersections, it generally does not work. The something of somewhere is really mostly just the nothing of nowhere, it's like the Stanford of North Dakota, one of a kind, but it's not Stanford.

Let's look at the opposite, the opposite lie, is if you are let's say the search company that’s down the street from here and has about a happy sixty-six percent market share and is completely dominant in the search market. Google almost never describes itself as a search engine these days and instead it describes itself in all these different ways. So it sometimes says it’s an advertising company. So if it was search you would say, well it's like it has this huge market share that's really crazy, so it's like an incredible monopoly, it's a much bigger and much more robust monopoly than Microsoft ever had in the nineties, maybe that's why it’s making so much money. But if you say it's an advertising market, you could say well, search advertising is seventeen billion and that's part of online advertising, which is much bigger and then, you know, all US advertising is bigger, and then by the time you get to global advertising, that's close to five hundred billion and so you're talking about three and a half percent, so a tiny part of this much larger market.

Or if you don't want to be an advertising company, you could always say you’re a technology company. The technology market is something like a one trillion dollar market and the narrative that you tell about Google and the technology market is, well we're competing with all the car companies with our self-driving cars, we’re competing with Apple on TVs and iPhones, we’re competing with Facebook, we’re competing with Microsoft on office products, we’re competing with Amazon on cloud services and so we're in this giant technology market, where there's competition in every direction you look and no we’re not the monopoly the government's looking for and we should not get regulated in any way whatsoever. So I think one has to always be super aware that there are these very powerful incentives to distort the nature of these markets, one way or the other.

The evidence of narrow markets in the tech industry is if you basically just, if you look at sort of the big tech companies, Apple, Google, Microsoft, Amazon, they have just been building up cash for year after year and you have these incredibly high profit margins, and I would say that the that one of the reasons the tech industry in the US has been so successful financially is because it's prone to creating all these monopoly-like businesses and it's reflected by the fact that these companies just accumulate so much cash they don't even know what to do with it beyond a certain point.

Let me say a few things about how to build a monopoly, and I think one of the sort of very counterintuitive ideas that comes out of this monopoly thread is that you want to go after small markets. If you’re a startup, you want to get to monopoly. You’re starting a new company, you want to get to monopoly. Monopolies have a large share of the market, how do you get to a large share of the market? You start with a really small market and you take over the whole market and then over time you find ways to expand that market in concentric circles.

The thing that's always a big mistake is going after a giant market on day one because that's typically evidence that you somehow haven't defined categories correctly, that normally means there is going to be too much competition in one way or another, so I think almost all the successful companies in Silicon Valley had some model of starting with small markets and expanding. If you take Amazon, you start with just a bookstore, we have all the books in the world, it's a better bookstore than anybody else has in the world when it starts in the 1990s. It's online, there's things you can do that you could not do before, and then you gradually expand into all sorts of different forms of e-commerce and other things beyond that.

eBay, you start with Pez dispensers, you move on to Beanie Babies, and eventually it’s all these different online auctions for all these sorts of different goods. What’s very counterintuitive about many of these companies is they often start with markets that are so small, that people don't think they are valuable at all when you get started. The PayPal version of this was we started with power sellers on Ebay, which was about twenty thousand people. When we first saw this happening in December of 1999, January 2000 right after we launched, there was a sense that these were all, it was such a small market, it was terrible, we thought these were terrible customers to have, it's just people selling junk on the internet, why in the world we want to be going after this market?

But there was a way to get a product that was much better for everybody in that market, and we got to something like twenty five, thirty percent market penetration in two or three months, and you've got some walk in to brand recognition, and are able to build the business from there. So I always think these very small markets are quite underrated. The Facebook version of this I always give is that if the initial market at Facebook was ten thousand people at Harvard, it went from zero to sixty percent market share in ten days, that was a very auspicious start. The way this gets analyzed in business schools is always, that's so ridiculous, it's such a small market, it can't have any value at all. So I think the business school analysis of Facebook early on, or of Paypal early on, or of Ebay early on, is that the markets were perhaps so small as to have almost no value and that they would've had little value had they they stayed small, but it turned out there were ways to grow them concentrically and that's what made them so valuable.

Now I think the opposite version of this is always where you have super big markets and there is so many different things that went wrong with all the clean tech companies in the last decade. But the one theme than ran through almost all of them is that they all started with massive markets. Every clean tech powerpoint presentation that one saw in the years 2005 to 2008, which is the clean tech bubble in Silicon Valley, started with where the energy market, where the market was measured in hundreds and billions of trillions of dollars. And then once you're sort of like a minnow in a vast ocean, that is not a good place to be. That means you have tons of competitors and you don’t even know who all the competitors are.

You want to be a one of a kind company. You want to be the only player in a small ecosystem. You don’t want to be the fourth online pet food company. You don’t want to be the tenth solar panel company. You don’t want to be the hundredth restaurant in Palo Alto. Your restaurant industry is a trillion dollar industry. So if you do a market size analysis, you conclude restaurants are fantastic business to go into. And often large existing markets typically means that you have tons of competitions so it's very very hard to differentiate. The first very counterintuitive idea is to go after small markets, markets that are so small people often don't even think that they make sense. That's where you get a foothold and then if those markets are able expand, you can scale into a big monopoly business.

There are several different characteristics of these monopoly businesses that I'd like to focus on. There is no single formula. In technology there is always a sense that in the history of technology, every moment happens only once. The next Mark Zuckerberg won’t build a social network and the next Larry Page won’t be building a search engine, and the next Bill Gates won’t be building an operating system. If you are copying these people, you are not learning from them.

There are always very unique businesses that are doing something that has not been done before and end up having the potential to be a monopoly. The opening line in Anna Karenina, that all happy families are alike and all unhappy families are unhappy in their own special way, is not true in business, where I think all happy companies are different because they're doing something very unique. All unhappy companies are alike because they failed to escape the essential sameness in competition.

One characteristic of a monopoly technology company is some sort of proprietary technology. My sort of crazy, somewhat arbitrary rule of thumb is you want to have a technology that's an order of magnitude better than the next best thing. So Amazon had over ten times as many books, it may not have been that high tech, but you figure oh well it can sell ten times as many books and be more efficient along the way. In the case of PayPal, Bill Turner was using checks to send money on Ebay, it took seven to ten days to clear, and PayPal could do it more than ten times as fast. You want to have some sort of very powerful improvement, some order of magnitude improvement, on some key dimension. Of course, if you just come with something totally new, it's just like an infinite improvement. I would say the iPhone was the first smart phone that worked, it may not be in fact, but it's so definitely an order of magnitude of an improvement. So I think the technology needs to be designed to give you a massive delta over the next the next best thing.

I think there often are network effects that can kick in and that really help the thing and these are linked to monopolies over time, the thing that is very tricky about network effects is they're often very hard to get started and so you know everyone understands how valuable they are. There's always this incredibly tricky question: why is it valuable to the first person who's doing something. Economies of scale, if you have something with very high fixed costs and very low marginal costs, that's typically a monopoly-like business.

And then there is this thing of branding which is sort of this idea that gets lodged into people's brains. I never quite understand how branding works, so I never invest in companies where it’s just about branding but it is, I think, a real phenomenon that creates real value. I think one of the things, I'm going to come back to this in a little bit, towards the end, but one of the things that’s very striking is that software businesses are often, are for some reason, very good at some of these things. They are especially good at the economies of scale part because the marginal cost of software is zero. So if you get something that works in software it's often significantly better than the existing solution and then you have these tremendous economies of scale and you can scale fairly quickly.

So even if the market starts small, you can grow your business quickly enough to stay at the same size as the growing market and maintain the monopoly of power. Now the critical thing about these monopolies is it's not enough to have a monopoly for just a moment. The critical thing is have one that lasts over time and so in Silicon Valley there is always this sort of idea that you want to be the first mover and I always think in some ways the better framing is you want to be the last mover. You want to be one of the last companies in that category, those are the ones that are really valid. Microsoft was the last operating system, at least for many decades. Google was the last search engine. Facebook will be valuable if it turns out to be the last of social networking site.

And one way to think of this last mover value is this idea that most of the value in these companies exists far in the future. If you do a discounted cash flow analysis of the business, you'll look at all these profit streams, you have a growth rate, the growth rate’s much higher that the discount rate and so most of the value exists far in the future. I did this exercise at Pay Pal in March of 2001 we'd been in business for about twenty seven months and the growth rate was a hundred percent a year, we were discounting future cash flows by thirty percent, and it turned out that about three quarters of the value of the business as of 2001 came from cash flows in years 2011 and beyond.

And whenever you do the math on any of these tech companies, you get to an answer that is something like that. So if you are trying to analyze any of the tech companies in Silicon Valley, AirBnB, Twitter, Facebook, any emerging Internet companies, all the ones in Y Combinator, the math tells you that three quarters, eighty-five percent of the value is coming from cash flows in years 2024 and beyond. It's very far in the future and so one of the things that we always over value in Silicon Valley is growth rates and we undervalue durability.

Growth is something you can measure in the here and now, you can always track that very precisely. The question of whether a company will be around a decade from now, that’s actually what dominates the value equation and that’s a much more qualitative sort of a thing. And so if we went back to this idea of these characteristics of monopoly, the proprietary technology, network effects, economies of scale, you can think of these characteristics as ones that exist at a moment in time where you capture a market and take it over but you also want to think about, are these things going to last over time. So there’s a time dimension to all these characteristics. So networks in fact often have a great time element where as the network scales, network effects actually get more robust, and so if you have a network business it's often one that can become a bigger and stronger monopoly over time.

Proprietary technology is always a little bit of a tricky one, so you want something that is an order of magnitude better than the state of the art in the world today. That's how you get people's attention, that's how you initially break through. But then you don't want to be superseded by somebody else. So there are all these areas of innovation where there was tremendous innovation, but no one made any money. So disk drive manufacturing in the 1980's, you could build a better disk drive than anybody else, you could take over the whole world and two years later someone else would come along and replace yours. In the course of fifteen years, you got vastly improved disk drives, so had a great benefit to consumers, but it didn't actually help the people who started these companies.

There's always this question about having a huge breakthrough in technology, but then also being able to explain why yours will be the last breakthrough or at least the last breakthrough for a long time or if you make a breakthrough, then you can keep improving on it at quick enough pace that no one can ever catch up. So if you have a structure of the future where there's a lot of innovation and other people will come up with new things and the thing you're working on, that's great for society. It's actually not that good for your business typically. And then economies of scale we’ve already about. I think this last mover thing is very critical. I’m always tempted, I don't want to overdo chess analogies, but the first mover in chess is someone who plays white, white is about a one-third of a pawn advantage, so there is a small advantage to going first. You want to be the last mover who wins the game, so there’s always world chess champion Capablanca line, “You must begin by studying the end game.” I wouldn't say that’s the only thing you should study, I think perspective of asking these questions, why will this still be the leading company in ten, fifteen, twenty years from now, is a really critical one to try to think through.

I want to go in two slightly other directions with this the monopoly versus competition idea. I think this is the central idea on my mind for business, for starting a business, for thinking about them. There are some very interesting perspectives, I think it gives, on the whole history of innovation in technology and science. We've lived through 300 years of incredible technological progress in many many different domains. Steam engines to railways, the telephone, refrigeration, household appliances, the computer revolution, aviation, all different areas of technological innovation. Then there's sort of an analogous thing to say about science where we've lived through centuries of enormous amounts of innovation in science as well.

The thing that I think people always miss when they think about these things, is that because "X" and "Y" are independent variables, some of these things can be extremely valuable innovations, but the people who invent them, who come up with them, do not get rewarded for this. Certainly if you go back to you need to create X dollars in value and you capture Y percent of X, I would suggest that the history of science has generally been one where Y is zero percent across the board, the scientists never make any money. They’re always deluded into thinking that they live in a just universe that will reward them for their work and for their inventions. This is probably the fundamental delusion that scientists tend to suffer from in our society. Even in technology there are sort of many different areas of technology where there were great innovations that created tremendous value for society, but people did not actually capture much of the value. So I think there is a whole history of science and technology that can be told from the perspective of how much value was actually captured. Certainly there are entire sectors where people didn't capture anything.

You're the smartest physicist of the twentieth century, you come up with special relativity, you come up with general relativity, you don't get to be a billionaire, you don't even get to be a millionaire. It just somehow doesn't work that way. The railroads were incredibly valuable, they mostly just went bankrupt because there was too much competition. Wright brothers, you fly the first plane, you don't make any money. So I think there is a structure to these industries that’s very important.

I think the thing that's actually rare are the success cases. So if you really think about the history in this and this two hundred fifty years sweep, why is almost always zero percent, it's always zero in science, it's almost always in technology. It's very rare where people made money. You know in the late eighteenth, early nineteenth century, the first industrial revolution was the textile mills, you got the steam engine, you sort of automated things. You had these relentless improvements that people improved efficiency of textile factories, of manufacturing generally, at a clip of five to seven percent every year, year after year, decade after decade. You had sixty, seventy years of tremendous improvement from 1780 to 1850. Even in 1850, most of the wealth in Britain was still held by the landed aristocracy and the workers didn't make that much. The capitalists didn't make that much either, it was all competed away. There were hundreds of people running textile factories, it was an industry where the structure of the competition prevented people from making any money.

There are, in my mind, probably only two broad categories in the entire history of the last two hundred and fifty years where people actually came up with new things and made money doing so. One is these sort of vertically integrated complex monopolies which people did build in the second industrial revolution at the end of the nineteenth and start of the twentieth century. This is like Ford, it was the vertically integrated oil companies like Standard Oil, and what these vertically integrated monopolies typically required was a very complex coordination, you've got a lot of pieces to fit together in just the right way, and when you assemble that you had a tremendous advantage. This is actually done surprisingly little today and so I think this is sort of a business form that when people can pull it off, is very valuable.

It's typically fairly capital intensive, we live in a culture where it's very hard to get people to buy into anything that's super complicated and takes very long to build. When I think of my colleague and friend Elon from PayPal success with Tesla and SpaceX, I think the key to these companies was the complex vertically integrated monopoly structure they had. If you look at Tesla or SpaceX and you ask, was there sort of a single breakthrough, I mean they certainly innovated on a law of dimensions, but I don't think there was a single 10X breakthrough on battery storage, they may be working on some things in rocketry, but there was no sort of single massive breakthrough. But what was really impressive was integrating all these pieces together and doing it in a way that was more vertically integrated than most other competitors.

So Tesla also integrated the car distributors so they wouldn't steal all the money as has happened with the rest of the car industry in the US. Or SpaceX, basically, you pulled in all subcontractors where most of the large aerospace companies have single sourced subcontractors that are able to charge monopoly profits and make it very hard for the integrated aerospace companies to make money. And so vertical integration I think is sort of a very under explored modality of technological progress that people would do well to look at more.

And then I think there is something about software itself that's very powerful. Software has these incredible economies of scale, these low marginal costs, and there is something about the world of bits, as opposed to the world of atoms, where you can often get very fast adoption and fast adoption is critical to capturing and taking over markets because even if you have a small market, if adoption rate is too slow, there will be enough time for other people to enter that market and compete with you. Whereas if you have a small to midsize market, have the fast adoption rate, you can now take over this market. So I think this is one of the reasons Silicon Valley has done so well and why software has been this phenomenal industry.

What I would suggest that we will leave you with is there are these different rationalizations people give for why certain things work and why certain things don't work, and I think these rationalizations always obscure this question on creating "X" dollars in value and capturing "Y" percent of "X." So, the science rationalization we’re always told is that the scientists aren’t interested in making money. They’re doing it for charitable reasons and that you're not a good scientist if you’re motivated by money. I'm not even saying people should always be motivated by money or something like this, but I think we should wish to be a little bit more critical of this as a rationalization. We should ask is this a rationalization to obscure the fact that "Y" equals zero percent and the scientists are operating in this sort of world where all the innovation is effectively competed away and they can’t capture any of it directly.

The software distortion that often happens is because people are making such vast fortunes in software, we infer that this is the most valuable thing in the world being done full stop. And so people at Twitter make billions of dollars, it must be that Twitter is worth far more than anything Einstein did. What that realization tends to obscure, is again that "X" and "Y" are independent variables and that there are these businesses where you capture a lot of X and others where you don't. So I do think the history of innovation has been this history where the microeconomics, the structure of these industries has mattered a tremendous amount and there is sort of this story where some people made vast fortunes because they worked in industries with the right structure and other people made nothing at all because they were in these very competitive things.

We shouldn't just rationalize that way. I think it's worth understanding this better. Then finally, let me come back to this sort of overarching theme for this talk, this competition is for losers idea, which is always a provocative way to title things because we always think of the losers as the people who are not good at competing. We think of losers as the people who are slow on the track team in high school or do a little less well on standardized tests, and don't get into the right schools. So we always think of losers as people who can't compete and I want us to really rethink and re-value this and consider whether it's possible the competition itself is off.

It's not just the case we don't understand this monopoly-competition dichotomy intellectually. So we’ve been talking about why you wouldn’t understand it intellectually, because people lie about it, it’s distorted, the history of innovation rationalizes it in all these very strange ways. I think it's more than just an intellectual blind spot, but also a psychological blind spot, where we find ourselves very attracted to competition and in one form or another we find it reassuring if other people do things. The word ape, already in the time of Shakespeare, meant both primate and imitate and that is something about human nature, it's deeply imitative, ape like, sheep like and this is very problematic thing that we need to always think through and try to overcome.

There is always this question about competition as a form of validation, where we go for things that lots of other people are going for. It's not that there is wisdom of crowds, it's not that lots of people trying to do something is the best proof of that being valuable. I think it's when lots of people are trying to do something, that is often proof of insanity. There are twenty thousand people a year who move to Los Angeles to become movie stars, about twenty of them make it. I think the Olympics are a little bit better because you have, you can sort of figure out pretty quickly whether you’re good or not, so there's little less of a deadweight loss to society. You know the sort of educational experience that at a place, the pre-Stanford educational experience, there is always sort of a non-competitive characterization. I think most of the people in this room had machine guns and they were competing with people with bows and arrows, so it wasn’t exactly a parallel competition when you were in junior high school, in high school. There is always the question: does the tournament make sense as you keep going?

There is always this question if people going on to grad school or post doctoral educations, does the intensity of the competition really make sense. There is the classic Henry Kissinger line describing his fellow faculty at Harvard, “The battles were so ferocious because the stakes were so small,” describing academia and you sort of think on one level this is a description of insanity. Why would people fight like crazy when the stakes are so small, but it's also, I think, simply a function of the logic of a situation. When it's been really hard to differentiate yourself from other people, when the differences are, when the objectives differences really are small, you have to compete ferociously to maintain a difference of one sort or another. That's often more imaginary than real. There is always sort of a personal version of this I tell, where I was sort of hypertracked. In my eighth grade junior high school yearbook one my friends wrote, I know you’re going to get into Stanford. Four years later, I went to Stanford Law School, ended up at a big law firm in New York where from the outside everybody wanted to get in and on the inside everybody wanted to leave and it was this very strange dynamic where I realized, this was maybe not the best idea, and I left after seven months and three days.

Other people down the hall told me, it's really reassuring to see you leave, Peter, I had no idea that it was possible to escape from Alcatraz, which of course all you had do was go out the front door and not come back. But so much of people's identities got wrapped up in winning these competitions that they somehow lost sight of what was important, what was valuable. Competition does make you better at whatever it is that you're competing at because when you're competing you're comparing yourself with the people around you. I’m figuring out how to beat the people next to me, how do I do somewhat better than whatever it is they're doing and you will get better at that. I'm not questioning that, I'm not denying that, but there often comes this tremendous price that you stop asking some bigger questions about what's truly important and truly valuable. Don't always go through the tiny little door that everyone's trying to rush through, maybe go around the corner and go through the vast gate that nobody is taking.

Q: Do you have any ways to determine the difference [between a monopoly and a non monopoly] when looking at an idea or thinking about your own idea?

A: I would say the question I always focus on is what is the actual market? So not what's the narrative of the market, because you can always tell a fictional story about a market: it's much bigger much or smaller, but what is the real objective market. So you always try to figure it out, and you realize people have incentives to powerfully distort these things.

Q: So which of the aspects, of all these you mentioned, you would you say is applicable to Google?

A: Well, they have they have network effects with the ad network, they had proprietary technology that gave them the initial lead because they had the page rank algorithm, which was an order of magnitude better than any other search engine. They had economies of scale up because of the need to store all these different sites, and at this point you have brand, so Google has all four. Maybe the proprietary technology is somewhat weaker at this point but definitely it had all four, and maybe three and a half out of four now.

Q: How does this apply to Palantir and Square?

A: That's sort of a set of companies that are doing different copycat payment systems, on mobile phones, there's Square, there's PayPal, they have different shapes that's how they differentiate themselves, one is a triangle, one is a square. Maybe at one point the apes run out of shapes or something like that, but at Palantir we started with a focus on the intelligence community, which is a small submarket. We had a proprietary technology that used a very different approach where it was focused on the human computer synthesis, rather than the substitution, which I think is the dominant paradigm. So, there is a whole set of things, I would say, on the market approach and on the proprietary technology.

Q: What do you think about lean startups?

A: So the question is what do I think about lean startups and iterative thinking where you get feedback from people versus complexity that may not work.

I'm personally quite skeptical of all the lean startup methodology. I think the really great companies did something that was somewhat more of a quantum improvement that really differentiated them from everybody else. They typically did not do massive customer surveys, the people who ran these companies sometimes, not always, suffered from mild forms of Aspergers, so they were not actually that influenced, not that easily deterred, by what other people told them to do. I do think we're way too focused on iteration as a modality and not enough on trying to have a virtual ESP link with the public and figuring it out ourselves.

I would say the risk question is always a very tricky one, because it's often the case that you don't have enough time to really mitigate risk. If you're going to take enough time to figure out what people want, you often will have missed the boat by then. And then of course there is always the risk of doing something that's not that significant or meaningful. You could say that a track in law school is a low risk track from one perspective, but it may still be a very high risk track in the sense that maybe you have a high risk of not doing something meaningful with your life. We have to think about risk in these very complicated ways. I think risk is this complicated concept.

Q: Doesn't the last mover advantage already imply that there's competition to begin with?

A: Yes, there's always a terminology thing. I would say that there are categories in which people sort of are bundled together. The monopoly business, I think they really were a big first mover. In some sense you can say Google was not the first search engine, there were search engines before. But on one dimension they were dramatically better than everybody else. They were the first one with page rank, with an automated approach. Facebook was not the first of social networking site. My friend, Reid Hoffman, started one in 1997, they called it Social Net, so they already had the name social networking in the name of their company seven years before Facebook. Their idea was that it going to be this virtual cyberspace were I'd be a dog and you'd be a cat and we'd have all these different rules about how we interact with each other in this virtual alternate reality. Facebook was the first one to get real identity, so I hope Facebook will be the last social networking site. It was the first one in a very important dimension, people often would not think of it as the first because they sort of lump all these things together.

Q: If someone worked at Goldman Sachs out of college and left after six months and is now studying CS at Stanford, how would you recommend rethinking their competitive advantage?

A: I am not great at the psychotherapy stuff, so I don't quite know how to solve this. There are these very odd studies they have done on people who go to business school, this one was done at the Harvard Business School where it's sort of the anti-Asbergers personality, where people are super extroverted, generally have low convictions, few ideas and you have sort of a hothouse environment you put all these people and for two years and at the end of it, they systematically end up, the largest cohort systematically ends up doing the wrong thing, they try to catch the last wave. in 1999 everyone tried to work with Mike Milken, this was a few years before he went to jail for all the junk bond stuff.

They were never interested in Silicon Valley or tech except for 1999, 2000 when they timed the dotcom bubble peaking perfectly. 2005 to 2007 was housing, private equity, stuff like this. This tendency for us to see competition as validation is very deep, I don't think there's some easy psychological formula to avoid this. I don't quite know how what sort of therapy to recommend.

My first starting point, which is only going to be maybe ten percent of the way, is to never underestimate how big a problem it is. We always think that this is something that afflicts other people. We always point to people in business school, people at Harvard or people on Wall Street, but it actually does afflict all of us to a very profound degree. We always think of advertising as this thing that works on other people, for all the stupid people who follow ads on TV, but they obviously work to some extent and they work to the disturbing extent on all of us and it's something we must work to overcome.

Thank you very much.