

## David and Goliath

Reading Schedule: 9/10/16 - 9/30/16

### Introduction: Goliath

- The Philistines and the Israelites were at war. Laying between them was a ridge of Elah, a death zone. They decided to settle the difference through a one-on-one match to avoid casualties. The Philistines sent a 6'9 giant wearing heavy armor and carrying many weapons. No one in the Israelites' camp but a little shepherd boy volunteered to go head to head with the giant. So began one of history's most famous battles. The giant was Goliath and the little boy was David
- This book explores 2 central ideas:
  - Much of what we consider valuable in our world arises out of the lopsided conflicts, because facing and overcoming odds produces greatness and beauty
  - We consistently misread and misinterpret these lopsided conflicts. Giants are not who we think they are. The same seemingly advantageous qualities are often the sources of weakness. And being an underdog opens doors and creates opportunities
- Back to the story: Goliath was basically armed from head to toe. He expected to have a one-on-one combat with a seasoned warrior. David was everything he did not expect. So the story went, David picked up 5 smooth stones from the ground, put one into his sling shot and fired. Goliath's forehead was hit and he was knocked out. The story passed on from generation to generation, hence the phrase "David and Goliath" - a metaphor for improbable victory. The only problem with this phrase was that almost everything about it was wrong
- In ancient time, there were 3 types of troops: infantry, cavaliers, and projectile (slingers). They each canceled each other out like rock, paper, and scissors: infantry can beat cavaliers, cavaliers are too fast for projectiles, and projectiles have an upper hand over infantry. If we analyzed the physics of David's slingshot that delivered a stone to Goliath's only vulnerable spot: his forehead, we could come up with a few analogies:
  - Facing David's slingshot is like standing still and waiting for an MLB player to pitch at you, except his baseball wasn't made of cork board and leather but solid rock
  - David's slingshot could deliver a projectile up to 34 m/s - a speed comparable to a .45 automatic. That could easily penetrate through the skull
- David was the projectile troop while Goliath was the infantry type. He couldn't move freely while David had all the maneuverability and distance
- King Saul and the Israelites didn't really understand the fundamentals of battles. They and Goliath all operated under the assumptions that the battle would be fair and square. David broke the traditional duel rules; he didn't fight face to face. He substituted speed and the element of surprise for strength. Everyone thought the victory was improbable because Goliath was big and David was small and hence the element of surprise
- But there was another issue here. Note that Goliath had to be preceded by a servant who carried his shields into the valley. Goliath yelled "Come to me...". Why didn't Goliath come to David instead of the other way around? When he spotted David's shepherd staff, he yelled "Am I a dog that you should come to me with sticks?". Note that that was plural sticks! David was only holding one stick. Many medical experts now believe that Goliath was suffering from what is called acromegaly - a disease caused by a benign tumor of the pituitary gland. The tumor causes an overproduction of growth hormone, which could explain Goliath's size. Common side effects included vision problems. Goliath could not see clearly and by the time he realized that David had changed the rule, it was too late
- From up above, the Israelites saw an intimidating giant. But his size was also the source of his weakness. The powerful and the strong are not always what they seem. All these years you have told the tale of David and Goliath wrong. This book will fix that

## Part One: The Advantages of Disadvantages (and the Disadvantages of Advantages)

### Chapter 1: Vivek Ranadivé

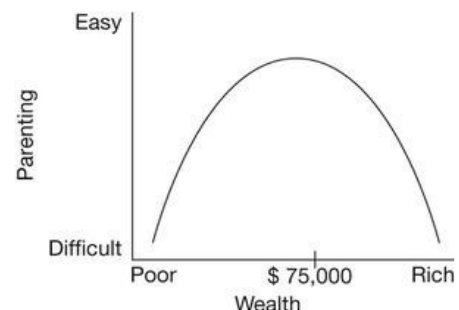
- Vivek decided to coach his daughter's basketball team. He had never played the game before. Vivek was a Software Engineer who lived in Menlo Park. The girls on his daughter's team were of nerds and programmers. He decided to use 2 principles to coach:
  - He would always speak calmly and with wisdom just like he would at his software firm
  - The strategy would be pushing for full-court press against the opponent instead of defending only about 24ft of the 94ft-court
- If you were to total all the wars fought within the last 200 years where one country is 10x more powerful than the other, the more powerful countries only won 71.5% of the time. The underdogs won almost a third of a time. For example, Lawrence of Arabia was a leader of a few hundred nomads revolting against the Turks at the end of WWI. Their task was to destroy the Turkish railroads. The Turks had modern weapons and abundant resources, while Lawrence's nomads never fired a rifle before. However, Lawrence's nomads were skilled in finding water

across the deserts. They packed very light so they could travel up to 110 miles per day, allowing them to strike many surprise attacks that the Turks could never see coming

- For some reasons, we have a problem thinking about what an advantage is. We rigidly think things as helpful but actually aren't. And we ignore things that actually make us smarter and more formidable. Lawrence's nomads had the mobility and endurance, while the Turks were forced to be immobilized. When we see giants, why do we automatically assume that they will win? What does it take to be David, Lawrence of Arabia, or Vivek Ranadivé?
- Vivek's basketball team was consisted of not-so-tall girls who couldn't shoot very well. They exploited the 2 deadlines in basketball to their advantage:
  - In basketball, when a team scores, a player of the other team has take the ball out-bound and pass it to her teammates in-bound within 5 seconds, otherwise the ball goes to the opponent. Usually this isn't an issue because once a team scores, they would rush back to their end of the court to defend. Vivek's girls did the opposite: they wouldn't rush back to defend their net. Instead, they would guard their counterpart to minimize the chance of their opponent meeting the 5 second deadline. Vivek's girls wouldn't even bother guarding the passer. Why bother? His girls were shorter anyway. Instead, the 5th girl would be used a floater to double team on the opponent's best player
  - The second deadline is when after the first deadline is met, the team with the ball has to advance it mid court to the opponent's end within 10 seconds. If the opponent successfully got the inbound pass in, Vivek's girls would descend on the player with the ball and trap her. Focusing on these 2 deadlines allowed Vivek's team to steal the ball often and deliver easy layups. This allowed them to hide their weakness in shooting
- Lawrence attacked the Turks where they were the weakest: along the furthest, most deserted outpost. Vivek's girls attacked the inbound pass, when it was most vulnerable to any team, good or mediocre. Note that these were very tiring approaches. Vivek couldn't teach his girls shooting skills in the short amount of time, so he at least could teach them about attitude and enhancing endurance. The whole winning philosophy was based on the willingness to try harder than everyone else
- So if the 94-ft press strategy is so effective, why don't all the underdog teams use it? Why don't the Goliath teams learn to replicate it? If marching 600 miles around, through a snake-infested desert on a back of a camel is so effective, why doesn't every army do it? It's because the underdogs' approach is very, very tough. In the Fordham vs. UMass basketball teams example, the underdogs at Fordham spent 2 hours practicing every day. They spent 98% of the time moving and only stopped for several 7-second instructional breaks so that their heart beats wouldn't rest. If you're an underdog and go toe-to-toe with a Goliath, chances are high that you will be defeated. But if you are desperate, like very, very desperate, your weakness becomes a great advantage. You have more will power to do the underdog way. But again, not every underdog has a mind to to work that hard
- An ideal basketball player would be consisted of fine skills and well-calibrated execution. When basketball became a game of effort vs. ability, the game became unrecognizable. The other coaches who actually played basketball were very pissed off at Ranadivé, who hadn't even played the game before. He didn't gave 2 fucks about the world of basketball. Lawrence of Arabia was an archeologist by trade. He didn't graduate with top honors from a British military academy. He didn't give a flying fuck about military establishment. And then there was little David, a shepherd who understood nothing about a formal duel rituals. He was pretty much at the lowest level of all professions. We spend a lot of time thinking about ways prestige and resources and belonging to elite institutions make us better off. We don't spend enough time thinking about how those limit out options. Ranadivé, Lawrence, and David were underdogs and misfits, and that give them the freedom to cry things no one else ever dreamt of

## Chapter 2: Teresa DeBrito

- Studies have shown that there is no statistical difference in students' performance between big- and small-size classes. Greece and Ireland are the only 2 countries that show some nontrivial difference, despite the fact that the U.S have been pouring billions into hiring teachers. The per-pupil spending in the U.S has risen 21% for the past decade
- When your parents are poor, chances are you may have to taste all the bitterness before the sweetness, if it comes at all. You understand the value of money more and are more driven. You're most likely driven and desperate to get to a better state. When you make it, how are you going to transfer that drive to your children? Being poor makes parenting very hard, but so does being rich. Is there a sweet spot? Economists say 75k/year is. Any more than that and diminishing marginal returns kick in
- "He who doesn't have it, does it, and he who has it, misuses it". At a certain point (the vertex of this up-side-down parabola), having



too much money makes parenting very hard. How do you teach a kid how to work hard and understand the value of money when he never has to worry about money and sits court-side at basketball games? Having too much wealth, though seemingly an advantage, is clearly a disadvantage for parenting in this case

- What if class size follows the same curve? Too many students obviously creates all sort of problems: less attention from the teachers, too much load on the teachers so they stop caring, not enough school resources to go around, etc. This is why people are so obsessed over small class-size. However, too few students also creates problems: the environment is too intimate for a handful of adolescents to share ideas, less diverse pool of opinions and healthy competition, and let's face it, if you're a teacher and you have a choice of teaching a 20-student vs. 30-student class and still get paid the same, would you try as hard for the 20-student class as you would the 30-student one?
- It's good to be bigger and stronger than your opponent. But it's not very good to be so big and so strong that you're a sitting duck against a stone traveling 150 mph toward your forehead. Goliath didn't win because he was too big. The Hollywood mogul couldn't be as good of a parent because he was too rich. Hotchkiss couldn't be a good school because its class-size was too small. We assume bigger, stronger, and richer are always in our best interest, but let David, Vivek Ranadivé, and Teresa DeBrito of Shepaug Valley Middle School beg your differ

### Chapter 3: Caroline Sacks

- About 150 years ago, art was a big deal in Paris. Painter was a very highly regarded profession, much like engineer, lawyer, and doctor nowadays. Before their paintings got hung in every major art museum in the world, Manet, Monet, and their fellow painters struggled to get recognized. They were poised to start a movement - the Impressionism movement - that kept their legacy for generations. In Paris at the time, getting in the Salon - the largest, most prestigious art exhibition in the entire Europe - was a milestone that every painter would like to achieve. People shot themselves in the head for getting rejected from the Salon. The Salon's jury had a very specific benchmark that they used to accept or reject paintings. They expected artworks to be microscopically inspected; the brush strokes needed to be very refined and exact. The subjects in the paintings needed to be very accurate and the emotion needed to be very uplifting. Impressionism was everything but. Monet and his friends needed to make a decision: whether to give in and create meaningless works to get accepted to the Salon for the sake of fame and wealth OR start their own little exhibition and paint the work they desired. It was a "small fish in the ocean" vs. "big fish in the pond" type of dilemma. They picked the latter and it's pretty clear now that they made the right call
- During one of their many discussions, the painters wanted to have their own exhibit, where they would be able to paint whatever they wanted and show as many canvases as they liked. They did pursue with their own exhibit; they picked freedom over selectivity and visibility over prestige
- Caroline Sacks was a straight-A high schooler with many great college options. She decided to attend Brown instead of UMaryland. She decided to become a little fish in a big pond, whereas the painters decided to become big fish in a small pond. There are times and places where the latter pays off so much more. Sacks started learning that she was the little fish in a very, very deep and competitive pond. She compared herself to the big fish, which shattered her confidence. But if you were to rank her among the rest of the students in the country, she'd probably be in the 99th percentile
- Sacks was experiencing 'relative deprivation' - a fancy term for the "Big Pond Little Fish" effect. She compared herself to the best of the best and had an illusion that she was the worst of the worst. In fact, she was probably only mediocre of the very best. But she failed to look at a global context - she narrowed her view into a very local context and consequently crushed her will to tackle more challenging problems. Then the trickle-down effect kicked in
- The same concept could be applied to the Air Corps vs. the Military Police. Air Corps was very prestigious; promotions rate was twice that of MP. But officers in MP were a lot happier than those in the Air Corps. Why? In MP, it's an extremely rare accomplishment when you get a promotion, so you're extra happy. On the flip side, most of your peers don't get promoted anyway, so you're probably not that much unhappy about it. In the Air Corps, since the majority of your fellows get promoted, you don't feel as good when it's your turn or extra shameful if your turn never comes. This is also why the so-called "happy" countries like Switzerland and Denmark have such high

School	Top Third	Math SAT	Middle Third	Math SAT	Bottom Third	Math SAT
1. Harvard University	53.4%	753	31.2%	674	15.4%	581
2. Dartmouth College	57.3%	729	29.8%	656	12.9%	546
3. Williams College	45.6%	697	34.7%	631	19.7%	547
4. Colgate University	53.6%	697	31.4%	626	15.0%	534
5. University of Richmond	51.0%	696	34.7%	624	14.4%	534
6. Bucknell University	57.3%	688	24.0%	601	18.8%	494
7. Kenyon College	62.1%	678	22.6%	583	15.4%	485
8. Occidental College	49.0%	663	32.4%	573	18.6%	492
9. Kalamazoo College	51.8%	633	27.3%	551	20.8%	479
10. Ohio Wesleyan	54.9%	591	33.9%	514	11.2%	431
11. Hartwick College	55.0%	569	27.1%	472	17.8%	407

suicide rate

- What happened to Sacks were very common among STEM majors. In the modern economy, where STEM degrees are more in demand, getting a STEM degree is even more challenging. But surprisingly, the probability of you getting a STEM degree isn't necessarily dependent on how smart you actually are, but how smart you feel relative to your peers. Take a look at the table above. It's mind-boggling how the most prestigious universities have a very similar distribution of students getting STEM degrees as colleges you probably have never heard of before. It's way the top third that account for more than half of the entire school's STEM degrees. The bottom third of the school only accounted for a *fifth*. Do notice that the bottom third of a really prestigious school can easily beat the top third of a no-name school. This is Sacks' case. She would be so much better off at a no-name school since she would be the top dog. By picking Brown, she decreased her chance of getting a STEM degree by 30%. This is not to discredit going to a prestigious school; the brand definitely gives you a leg up, only if you're already the top dog of the tops OR you're strong-willed enough to compete with them. In this STEM-demanding market, is that a wise move if you know that you're weak and can't compete with the top dogs?
- Many companies have "only hiring from Ivy League schools" policy. Is this a good strategy? The tables to the right say not. These are the numbers of articles dozens of economic PhD students published to very prestigious journals throughout their academic career. This is how economist measure one against another. What's astonishing is that the 99th percentile students from "mediocre" schools outrank everyone but the 90th percentile students at the very stop schools. You're absolutely better off having a second look at the top students of "mediocre" schools
- Harvard even once recognized this problem. They attempted to solve this problem by allowing very gifted athlete students with mediocre academic track record to enroll. The rationale was even when these students bottom the academic battle field, they'd shine and feel fulfilled on the basketball court
- Affirmative action - when we try to give black students a chance to attend prestigious institutions. We think we're helping them, but we end up placing them at the bottom 10% of every major law school out there. We're turning them into Caroline Sacks

	99th	95th	90th	85th	80th	75th	70th	65th	60th	55th
Harvard	4.31	2.36	1.47	1.04	0.71	0.41	0.30	0.21	0.12	0.07
MIT	4.73	2.87	1.66	1.24	0.83	0.64	0.48	0.33	0.20	0.12
Yale	3.78	2.15	1.22	0.83	0.57	0.39	0.19	0.12	0.08	0.05
Princeton	4.10	2.17	1.79	1.23	1.01	0.82	0.60	0.45	0.36	0.28
Columbia	2.90	1.15	0.62	0.34	0.17	0.10	0.06	0.02	0.01	0.01
Stanford	3.43	1.58	1.02	0.67	0.50	0.33	0.23	0.14	0.08	0.05
Chicago	2.88	1.71	1.04	0.72	0.51	0.33	0.19	0.10	0.06	0.03

	99th	95th	90th	85th	80th	75th	70th	65th	60th	55th
Univ. of Toronto	3.13	1.85	0.80	0.61	0.29	0.19	0.15	0.10	0.07	0.05
Boston Univ.	1.59	0.49	0.21	0.08	0.05	0.02	0.02	0.01	0.00	0.00
Non-top 30	1.05	0.31	0.12	0.06	0.04	0.02	0.01	0.01	0.00	0.00

## Part Two: The Theory of Desirable Difficulty

### Chapter 4: David Boies

- Dyslexia: a disorder in which the victim's brain is too sluggish to distinguish sounds of words, hence making it very hard to develop reading ability. Dyslexics use their right brain when they try to read, which is the wrong part of the brain for more rigorous and precise tasks like reading or recognizing words. They also have less gray matter in the areas responsible for language processing
- We explore the concept of "desirable difficulty": when something seemingly disadvantageous turns out to be the opposite. Consider this question: a ball and a bat cost \$1.10. The bat costs \$1.00 more than the ball. How much does the ball cost? If you just glimpsed over the question, the impulsive answer was probably 10 cents. But the correct answer is actually 5 cents. Survey showed that if the puzzle was written in 10-font size italic Myriad Pro font with light gray color, people actually have a better chance getting the right answer. It was theorized that it was because people needed to squint more and read the question more than once to even understand the question. About a third of dyslexics are successful entrepreneurs and businessmen
- David Boies, a dyslexic and former construction worker, is now one of the most famous lawyer in the law profession. He didn't finish his undergrads but still got through law school. His ability to remember things he listened to helped him win a lot of high profile cases. He had to break every problem down to their most basics

and then ask questions

- Boies became an extremely good listener. Most of us use "capitalization learning" to excel, meaning we use the strength and ability naturally gifted to us and build on those. If you have a good voice, it wouldn't take much to join a choir. If you were unusually coordinated like a little boy named Tiger Woods, it wouldn't be too hard to convince you to practice golf day in and day out, making you even better. Dyslexics like Boies don't have that luxury; they have to use "compensation learning", meaning they'd have to turn their weakness into their best asset. Boies couldn't read efficiently, so he would have to concentrate and memorize everything his mom read to him and repeated them in a way that makes sense to others. It takes a tremendous amount of concentration and will power to overcome your disability, but when you do, you're much better off than normal people
- Why do more than a third of dyslexics become excellent entrepreneurs? The three most common traits found in entrepreneurs are openness, conscientiousness, and agreeableness. They have to be open; to be able to imagine things that others cannot. They also need to be conscientious, because brilliant ideas without discipline and persistence are merely dreams. But most importantly, they have to be disagreeable. Not in an obnoxious way, but similar to the willingness to take social risks or to do things that people disapprove of. That is definitely not easy. Humans are naturally hardwired to seek approval of others. Agreeable people will be reluctant to carry out their ideas if they might hurt other people's feelings or disrupt a social expectation
- Ingvar Kamprad, owner of a little Swedish furniture retailer, was an excellent entrepreneur that possessed these traits. He realized the cost of furniture would be way too high to retail if they were shipped assembled. So he started selling unassembled furniture in flat boxes and undercut his competitors. In 1950s, Kamprad ran into a little problem: Swedish manufacturers were pissed off and stopped fulfilling his orders. Desperate, Kamprad looked South across the Baltic sea - Poland, a country with cheap labor and plenty of woods. That was his openness. Very few people would outsource like that in the 1960s. It wasn't easy to get connection to Poland working. 1960s Poland was a mess; it was a Communist country and had none of the infrastructure or machinery or trained work force or legal protection from Western countries. That's where Kamprad succeeded and others failed. He was a micromanager; he went to unpleasant places and made sure things work out. That was his conscientiousness. The most striking thing about all of this was the year Kamprad went to Poland: 1961. The Berlin wall was going up. The Cold War was at its peak. Within a year, the East and the West would come to a nuclear war during the Cuban Missile Crisis. That would be like Walmart opening up a store in North Korea. Most people wouldn't do business in Poland because they wouldn't want to be seen as a traitor. Kamprad didn't give a flying fuck. That was his disagreeableness. Very few people had the creativity to think of shipping furnitures in flat boxes. Even fewer people had the discipline to build out a first-class manufacturing operation in a middle of a war zone. But they have the strength of mind to not give a fuck amid of the Cold War, that's rare. And thanks to Kamprad, we now have IKEA to stuff our houses with. Dyslexia doesn't necessarily make people more open or conscientious, but it definitely makes it easy to be disagreeable
- Gary Cohn grew up in a suburb of Cleveland in northeast Ohio in the 1970s, when dyslexia was not routinely diagnosed. He was bullied at school, even by his teacher and got expelled after punching his teacher in the face. He tried days after days, telling himself that today would be better. But after trying for a several years, he realized today would probably be no different. He stopped trying to do funny things to compensate for the fact that he was an idiot in everyone else's eyes. At 22, he got a job selling window frames for U.S Steel in Cleveland. One day after visiting his the company's sales office in Long Island, he persuaded his boss to let him take a day off and wander off to Wall Street. A few summers earlier, he interned for a local brokerage firm and became interested in commodities trading. He visited the commodities exchange in the old World Trade Center. He waited outside the gate until after market closed, a well-dressed guy ran off the trading floor, yelling to his clerks "I gotta go. I'm running to LaGuardia, I'm late, ..." Cohn jumped into the elevator with the guy and said "I heard you're going to LaGuardia. Can we share a cab?". The well-dressed guy was running the options business but did not know what an option was. Cohn lied to him all the way to LaGuardia and by the time they reached the airport, Cohn got his number. He called the guy on Monday and started working at his firm the following Monday. During the week before, Cohn read McMillan's *Options as a Strategic Investment*. Being dyslexic, it would take him 6 hours just to get through 22 pages on good days. He made sure to repeat the sentences one word at a time until he understood. When he started working, he literally stood behind his boss and said "buy this, sell this, sell that, but these...". Maybe his boss found out, maybe he didn't. He probably didn't care because Cohn made him a ton of money. Cohn isn't exactly proud of his way to success, but he's just being honest. Most of us normal people would not have jumped into that cab. We would be concerned what our friends and family would think of us when they find out. We would be afraid of making a fool of ourselves when the well-dressed man finds out that we were a bluff and announces it to Wall Street. Cohn didn't give a fuck. Worst case scenarios, he would go back to selling aluminum sidings. He had nothing to lose. Cohn said that dyslexics often deal with failures much more efficiently than normal people, since their lives thus far have probably been a failure anyway. They're accustomed to the downsides of things. Cohn turns out to be a really good trader and learning how to deal with the possibility of failure has really prepared him for his career in business. Today, Gary Cohn is the president of

## Chapter 5: Emil "Jay" Freireich

- Jay Freireich grew up in a very poor Hungarian immigrant family during the Great Depression. His dad committed suicide after losing the family's restaurant, leaving Freireich's mom and his siblings behind. His mom had to work 18 hours a day and 7 days a week to afford an apartment. She had to hire an Irish maid who was working for room and board. The Irish maid was practically Freireich's mom. He remembered very little about his actual mom. She remarried when he was 9 and had to fire the Irish maid because they couldn't afford her anymore. To Freireich, that was an equivalent of losing his mom. When interviewed with Gladwell, Freireich was 84 years old and couldn't remember the name of the Irish maid. It was not because of his age that he forgot; he was the type of person that would recall everything he said with the exact time stamp. It was just the days with the Irish maid were so dark that he had to push them down memory lane
- During WWII, the German's Blitz raided the sky of London. British authorities prepared psychological hospitals and tried to evacuate everyone to the country side. The bizarre thing was that the mood of Londoners were pretty calm and positive, given the situation they were in. The hospitals turned into military outposts because no patient showed up. People were generally calm and positive about the entire thing. It was later theorized that during the 2.5-month Blitz, London's population was divided into 3 groups: the dead, the nearly missed the explosion, and the remote miss. The last group was the majority; they felt invincible because they never got close to being hurt or killed despite the daily bombarding
- We often times expect failure to have a definitive negative effect on us, just like the British government. Yes, not everyone is as good of a listener as Boies or as courageous as Cohn, but there are always 2 sides to the story. Hardships may not always bring the worst of news like we always expect. Just ask the Londoners who survived
- Freireich aspired to be a doctor when he saw one for the first time. His physics teacher urged him to attend college. His mother somehow got \$25 from a widow for Freireich to attend UIUC for a medical degree. He became a doctor. It was later revealed that Freireich had a really hard time sympathizing with others. When one of his colleagues gave the wrong dose to a patient, Freireich yelled "murderer!". Most of us wouldn't do that because we have been raised in the love of our parents. We understand empathy and how it feels like to be loved. We understand that hurting others' feelings is not a good thing. Not Freireich; his early formative years left him utterly confused about empathy. We might think there could be nothing good about losing a parent at an early age. Or could there? Studies have collected data and revealed that more than 59% of creatives lost a parent before age 15. 67% of British Prime ministers lost a parent before age 15. 12 of the first 44 U.S presidents lost a parent before age 15. It is theorized that singly-orphaned children are more disobedient and struggle with development more. But once they come out of their hardships, they are the disruptive type. This is not to say losing a parent is a good thing. Of course it's the most horrifying thing that could happen to a child. A singly-orphaned child is 2-3 times more likely to become a criminal. But this is just to show even in the darkest hours, not everything is a direct shrapnel hit
- When Freireich started working at the National Cancer Institute, he was put on the second floor, where kids with leukemia, the worst form of cancer for kids - their blood produces abnormal white blood cells that don't fight infections like normal white blood cells do. Eventually they keep dividing and overcrowd the red blood cells, causing internal and excessive bleeding. The worst part is there is very subtle symptom. 90% of the kids with leukemia die before 6 weeks into the hospital. Anyone who worked on this second floor was pretty much psychologically traumatized, if it's not because of the blood, it's because the sheer amount of kids dying on your watch. Anyone but Freireich - *I was never depressed. I never sat with a parent crying about their child dying.* Freireich noticed that the lack of platelets - a disk-shaped cell fragment without a nucleus and involved in clotting was that causing the bleeding. At the time, blood transfusion required steel needles and rubber bags, but platelets would stick to those surfaces. Freireich came up with an idea to use Si needle and big plastic bags. NCI management was skeptical and threatened to fire Freireich if he continued to conduct blood transfusion. Being a Freireich, he ignored. The bleeding stopped
- What gave Freireich so much courage? Courage is not something you were born with. It's a gradual and progressive progress that you have to accumulate over hardships in life. When you have overcome your hardships and realized you're still standing, that's when you get more courageous. It doesn't necessarily mean you are any more skilled than you were before (though definitely a high possibility), it adds a layer of psychological armor. And that's how remote misses work. The Nazi blitz bombed London, only to make Londoners so much more courageous. The KKK bombed Fred Shuttleworth's house, only to make him less afraid. We're hard wired to be afraid of being afraid, so once you get through something, you tend to get tougher. The same concept goes to losing a parent. It's probably worse than getting bombed by the KKK, but once a child has overcome that loss before succumbing to crimes, that child is going to be quite extraordinary
- Freireich and Tom Frei came up with an ingenious idea of combining 5 toxic chemicals together with aggressive doses to treat the patients. The compound would bring patients to the brim of death and back. It was super

controversial. Everyone thought Freireich was crazy. His colleagues made fun of him and insulted him in meetings. He and Tom persisted; their work pioneered a cure for leukemia that works more than 90% of the time, saving thousands of patients to this day

- So is it a good thing that a child loses a parent? Absolutely not. No child should have to suffer from such a trauma. Would you wish dyslexia on your child? Brian Grazer, David Boies, and Gary Cohn certainly wouldn't. A renowned Hollywood producer, a successful trial lawyer, and a powerful Wall Street banker all understand the cost of their successes, yet they still wouldn't wish such a cost on their children. A hard fact to contemplate is we desperately need people who have been hardened from hardships. They pay a higher cost than us fortunate people have to and hopefully we can learn a thing or two about overcoming hardships. Disadvantages are everywhere in life and it takes a lot to overcome them, but when you do, you partake in pushing the human race forward

## Chapter 6: Wyatt Walker

- Birmingham, Alabama was the most racially segregated place in the U.S during the Civil Rights movement. Dr. King was an underdog who was outgunned and outmatched by the segregationists. African slaves often take trickster tales to heart. A common trickster tale was about a rabbit who got stuck deep in a well. Instead of crying, he sang and whistled and told the wolf at the well's opening not to jump down, since there wouldn't be enough cozy, warm for two at the bottom of the well. The wolf did exactly that by jumping into a bucket, lowering himself into the well as the rabbit went up. Dyslexics compensate their disability by developing skills that prove extremely advantageous at critical time. That's the first desirable difficulty. Unpleasant experiences that turned out to be remote misses hardened people's mental strength and left them stronger. That's the second. The trickster tale is the third: the unexpected freedom to break rules - they have nothing to lose
- African slaves did a lot of malicious things like breaking their tools, mistreating the cattle, and putting rocks in their cotton baskets, all of which was to outsmart their white masters and escape work. Dr. King wanted to use the trickster tale against Bull Connor, an international symbol of racism who used attack dogs and fire hoses to suppress civil rights activists. Wyatt Walker, one of the leaders in Dr. King's org, did just that. The photo of a boy leaning toward a German shepherd in a calm, saintly manner was the most famous photo of the 1960s, shaking up the civil right movement



- If Dr. King was the leader and the saint, then Walker was the trickster rabbit. He had a hard time practicing the nonviolence and the whole turning the other cheek idea. Dr. King and Walker needed to make Connor tip so that he'd look like a violent segregationist. One of the reasons why Dr. King wasn't successful in places like Albany was because the segregationists were actually polite and nonviolent. There was no way to make them look bad. Walker had a hard time persuading black adults to protest and get thrown in jail all at the same time so that Connor's jail would be full and he would have to deal with the problem instead of just arresting people. There were only a dozen of blacks marching that day, but thousands of people were watching on the side. Nevertheless, the newspaper reported that thousands of slaves were marching to protest. Walker's light bulb went off. He got hundred of black students to skip school to go pray at a church. Hundreds of them were arrested and filled Connor's jails. The next day, the same thing happened. Connor ordered the fire department to use fire hoses to push back the students. When that didn't work, he released the K9 German shepherd. The result was the provocative image above which showed up on the front page of every newspaper the next day
- Does this make you feel uncomfortable? Putting children on the fire line? Even Malcom X condemned King's action here. They acted like they were surprised Connor pulled out the attack dogs. They acted defeated and victimized in front of the press. They acted indifferent to the students' parents, telling them jail time was a perfect time to catch up on reading. They rejoiced behind close doors because Connor tipped his hand. They were a bunch of trickster. In the Tortoise beats the Hare fable that got told to every Western young student, "steady and slow win the race". Of course the lesson of effort and persistence is a very powerful one, but it is only applicable if the race is fair and every effort is rewarded accordingly. 1963 Birmingham was everything but fair. Brian Grazer and Gary Cohn were also tricksters. Grazer worked as a clerk who pushed mail cart around at Warner Bros. He used his position to read every contracts and submissions to Warner Bros. He would call up important people in the industry and say "I'm Brian Grazer. I work at Warner Bros. I'd like to meet you." He eventually got fired but only after he sold 2 ideas to NBC for 5 grands each. Cohn didn't even know what options were, yet he had the audacity to jump in a cab and asked for a job. Grazer, Cohn, David the shepherd, King, and Walker all have something in common: they have nothing to lose. That allows them to bend the rules and thumb their opponents' nose
- The student in the picture was a fifteen year old boy named Walter Gasden. The dog's name was Leo. The officer's name was Dick Middleton. Now look closely to the people around Walter. They weren't horrified at the scene. They were practically watching Walter as if nothing was happening. Now look closely at officer Middleton - he was trying to restrain Leo. Now, look closely at Walter. At first it seemed like he was sacrificing himself - "here I am, take me, dog". But in fact, he was steadying himself. A basic move to protect yourself from dog attacks is to raise your knee above the dog's head. Words had it that Leo's jaw was broken. Was Walter a martyr? Not necessarily. Did the picture get the job done? Absolutely.

### Part Three: The Limit of Power

#### Chapter 7: Rosemary Lawlor

- 1969 Ireland was chaotic. There were a lot of conflicts going on between the Catholics and the Protestants. Rosemary Lawlor's family was caught in the middle of all of this. They fled to Ballymurphy - a Catholic community under British protection. The Brits, however, were locking the neighborhood in their houses
- At the time, everyone read *Rebellion and Authority* by Leites and Wolf. The report suggested that "influencing popular behaviors required no sympathy or mysticism." It's all about the cost and benefits and how they are calculated
- General Freeland of the British army was a man straight out the pages of the report said above. But that's where they went wrong. Consider a classroom where the teacher is doing a horrible job at engaging her students. It's the teacher's fault that the students are disengaged disobedient. You can't just ignore sympathy like Leites and Wolf suggested. You have to follow the principle of legitimacy to influence people's behavior. This means you must make people feel like they have a voice. Your policies need to be predictable, consistent, and very fair. If you want to teach your son not to hit his sister, you have to let him explain his side of the story. Then prepare predictable punishment and treat his sister the same way when she hits him
- An example of principle of legitimacy: Brownsville, New York, was plagued with robberies and smuggling committed by teenagers in 2003. A new police chief Jaffe came on board and initiated a program called - JRIP (Juvenile Robbery Intervention Program). The program would basically provide these juveniles with the resources they need to finish high schools and get employed. At first, no one cared about the program. Jaffe realized this was because the juveniles didn't see the police as legitimate. After all, these are the people who put their father and cousins into jail. Jaffe came up with an ingenious idea of buying turkeys for these juveniles' families for Thanksgiving. She got the money from the department and bought turkeys for 106 families in Brownsville. When she and her task force delivered the turkeys, the families were first surprised and then welcoming. There was a lot of hugging and crying. A year into the program, annual robbery cases went from 350+ to less than 50. What



Jaffe did was very hard to replicate. If your city is plagued with crimes at an all time high and your police chief wants to use your tax dollars to buy food for the criminals, how would you feel?

- Back to Northern Ireland. One day, women started marching outside of their houses, violating the curfew. The Brits were confused as to what to do. They started hitting the women. People started to come out of their houses because of the crying. The Brits general had to tell his men to stop harrasing the women. Evtentially everyone came out of their houses and broke the curfew

### Chapter 8: Wilma Derksen

- In the summer of 1992, Kimber Reynolds came back from dinner with a friend. As she was trying to get into her Isuzu, two men riding on a stolen Kawasaki pressed her against the door. One pulled out a .357 magnum handgun and put it against her ear. She resisted and the man fired. Kimber died the next day in Fresno, California, where the murder per capital rate was national high. Her father, Mike Reynolds called for a meeting the next day with the officials. Together they drafted what was called the Three Strikes Law. The draft was to intensify the penalty for repeating criminals, in hope of lessening the crime rate. The draft received enormous amount of support from California voters and was signed into law in 1994. Shortly after, it was said somewhere that the murder rate in California went from 12/day down to 6. Mike feels like the work that he has done really prevented 6 people a day from living a life that he has to. When the British came to Northern Ireland, they didn't understand the limitation of power and thus got themselves into a 30-year bloodshed. Mike, however, had the power to influence a lot of people from his generation. Power seemed to work its purpose in Mike's case
- Let's think back to the inverted parabola in the class size chapter. Is there a point where more punishment (Three Strikes law) started having the reverse effect? Devastated by his daughter's death, Mike Reynolds, along with his crusade, tried to make would-be criminals think twice before committing crimes. What they didn't realize was this wasn't how criminals think. Reynolds, his crusade, and the majority of us would think twice because we have a stake in society. Would-be criminals don't think like that; they get high to put their mind off the consequences that might happen. Joe Davis and Douglas Walker, the people who shot Kimber, were heavy meth-addicts. They used meth to take their minds off the possibility of getting arrested. These weren't the kind of people who would think twice just because the consequences would be more severe. Shortly before the Three Strike law was passed, the average prisoner was 43 years old. They would have got out of jail by the time they turned 48, but Three Strikes Law pushed that back till they turn 68. Now the question is, how much crime would a criminal from age 48 to 65 commit? The answer to this question would give some insights into the cost and benefits of imprisoning people longer. Young men and adolescents from age 13-20 are the most likely, far from any other age group, to commit crimes. Longer sentences work on young men, but less so on older criminals. Now to the crucial question: at which point, if any, does longer imprisonment start having a reverse effect? Older prisoners are fathers or oldest siblings who were the financial pillars of their families. Children whose father-figures were sent to prison were 300-400 percent more likely to follow the broken trail. When the prisoners get out and return to the families they shattered, they would be emotionally damaged. They would be jobless and who knows what they would do next. In most cases, locking up people longer brings more benefits. But it was found that if more than 2% of any community got sent to jail, the effect started to reverse. It is very possible that these neighborhoods would turn into Brownsville. Mike Reynolds and his crusade thought that Three Strikes saved 6 lives per day in 1994. But statistics reported that crime rates were already tumbling before Three Strikes went into effect. In fact, crime rates dropped where police weren't even tracking down crimes. There were may theories as to why this was the case; my favorite theory was explained in Steven Levitt's and Stephen Dubner's *Freakonomics*. Many criminologists believed the money spent on Three Strikes would have been better invested elsewhere. Many others believed Three Strikes reduced overall crime rates, but raised the violent crime rate. After 20 years of America's greatest penal experiment and tens of billions dollars spent, California finally gave up in 2012 and scaled back Three Strikes Law
- A decade before Kimber was murdered, Wilma Derksen experienced a tragedy just as horrifying in Canada. Her daughter, Candace, was found tied up and frozen to death after 7 weeks since she went missing after school. The Derksen's, like the entire community, were devastated. Their grief was starting to consume them day in and day out until one night, a stranger knocked on their door and claimed that he too was a parent of a murdered child. He warned the Derksen's about the horrifying things that would come if they continued to let the grief consume them. The Derksen's listened and started responding to press requests. Wilma said in one of her interviews that though she hadn't been able to forgive the murderer at that point, she and her family would move on. Wilma, like Mike Reynolds, had the power at the time to really influence the legality of Canada. But she understood the limits of power. There are certain times when powerful forces do certain things with great intentions, only to find out the hard way that everything backfired. Mike Reynolds, though very sympathetic, had left California worse off than before. He let grief consume the rest of his life

### **Chapter 9: André Trocmé**

- After France fell in 1940, the Nazis made Philippe Pétain the dictator of the city of Vichy. Pétain stripped French Jews of their rights and slowly rounded them to concentration camps, where they were brutally murdered by the Nazis. Pétain also did a number of dictatorial things, such as having his portrait displayed at every school and forcing the schoolchildren to salute the flag every morning - right arm stretching out, palm facing the ground. A small village named Le Chambon was one of the fews that dared to oppose. André Trocmé was a preacher. "Loving, forgiving, and doing good to our adversaries is our duty," he said. "Yet we must do this without giving up, and without being cowardly."
- Power without legitimacy will only cause defiance, not submission