

Talent, Perseverance, and Resilience

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July 15, 2019

I have been always interested in understanding what it takes for a person to be successful in his/her career and life. While my main interest is in Computer Science, I have looked at other fields. I have also read articles on this topic such as those by the Harvard Business Review and more recently the book on Grit by Dr. Angela Duckworth.

However, it is only yesterday after watching the thrilling Wimbledon Final between Roger Federer and Novak Djokovic that it dawned on me as to what it was all about. I have been an ardent fan of Roger Federer since he first won Wimbledon in 2003. Every match he plays, especially against Nadal and Djokovic is nerve racking for me. Of course, I was extremely disappointed especially since he was so very close to winning yesterday. Then I listened to a post-match interview given by Djokovic. When asked how he won, he summed it up in just one word. RESILIENCE.

Soon after the match I was leaving for Atlanta and usually I read a book in my field on the plane. Currently I am reading a book on Data Science with R. However yesterday I replaced it with Dr. Duckworth's book on Grit to re-read it (since I only had a carry-on luggage, I did not have space for two books). So, on the way I skimmed through a few chapters and then compared Federer, Nadal and Djokovic. All three certainly are highly talented. I would put Federer at the top. Yes, they have perseverance (or Grit as Dr. Duckworth would call it), if not they would not have accomplished so much. However, with respect to Resilience, Djokovic is second to none. He can get out of extremely difficult situations in a match. That is the reason I believe, should he be healthy, he could likely win at least 10 more slams. Then I remembered reading about him – how he and his family coped in the late 1990s in war torn Serbia. They had to move frequently and hide in shelters during the bombing and he was around 11 or 12 at that time. Such a situation can make or break a man or woman and in Djokovic's case it made him.

Now back to Computer Science, I was thinking last night what made some people achieve so much and some very little. Now, I believe that there are around 10% of the people in any field who are brilliant – that is, they have exceptional talent. Then another 10% at the bottom with not much talent. The rest of us are I believe in the middle 80% bucket with moderate talent (with little difference amongst us). But talent is not sufficient. We must have perseverance and that means work steadily, develop a passion for the work and complete all the tasks and go beyond what has to be done. This has to be carried out daily not once a week or two days a week.

So, let's say we have talent and perseverance. Yet not everyone in the middle bucket have become successful in their fields. That I believe is due to possibly a lack of resilience. Building a career is tough with competing interests at work and even at home. Jealous coworkers may throw obstacles in your path. There may be pressure to do household chores. Then some very unfortunate events such as an illness, job loss, divorce or death of a loved one could completely throw you off. You may get into a rut or even serious depression. This is where resilience comes in. That is, one has to be resilient in order to handle adverse situations. This is what Djokovic showed us yesterday – every time he was in trouble, he survived by making amazing extraordinary shots that is usually humanly impossible. Why? I believe (and as he said) it was his resilience.

So, the main question is how do you develop perseverance and build resilience? To answer that question, let us now give definitions of talent, perseverance and resilience from the Merriam Webster Dictionary.

Talent:

“a special often athletic, creative, or artistic aptitude
general intelligence or mental power: ABILITY
the natural endowments of a person”

Perserverance

“continued effort to do or achieve something despite difficulties, failure, or opposition
the action or condition or an instance of persevering: STEADFASTNESS”

Resilience

“an ability to recover from or adjust easily to misfortune or change”

First, talent is often considered to be a gift at birth. However, articles also state that it can be acquired through learning. We have often heard statements such as he/she is wasting his/her talents. That means he/she is not persevering to realize his/her full potential. This is regarded to be a sheer waste of talent. Next, one may have talent and perseverance, but could collapse during a difficult situation and that means the person may not have resilience. For example, one may work really hard all year and panic during exam time or during a sports match. We then blame it on “nerves”. But what does it really mean? That means the person is not resilient. Now, perseverance and resilience do not appear magically. They have to be cultivated from a young age, but then it's never too late to learn good habits. Some articles have argued whether there is a genetic factor in acquiring perseverance and resilience just as there might be with respect to talent. Since I am not a geneticist, I am not going to take into consideration the genetic factors involved. I am going to discuss how through some very good habits and traits one can master the skills of preservice and resilience with examples from my own life.

We need to use many tools to build/develop perseverance and resilience, and most important we must practice daily and train ourselves. And what are these tools? – at the top I believe is self-control. To me that means controlling one’s emotions so that bad behaviors are avoided and eventually eliminated from one’s life. These bad behaviors could be eating unhealthy food, not exercising regularly, and not meditating. Of course, some bad habits like drugs and alcohol need extensive help and therapy to overcome and I am not going to discuss therapy since I am not a psychologist. But we must take a holistic approach to cleansing our mind and body. When thoughts such as “let me study tomorrow” or “let me workout tomorrow” occur, then they have to be stopped. We have to study and/or workout now. It is hard in the beginning to start a routine, but once you get going, it becomes second nature. Once you get yourself into the right frame of mind especially with meditation and muscle relaxation exercises, then perseverance would become second nature. I have tried to persevere as far as I can remember and have had good success most of the time. Of course, I have a tendency to get distracted (e.g., watching a lot of sports on TV) and that gets me off my schedule. Then it takes a while to get back into my routine which then helps me to persevere.

But what about resilience? I find this much harder to achieve because it does not usually depend only on me. It also depends on others and situations well beyond my control such as losing my father at 16, one of my older sisters undermining me when I was 14 by saying she was more beautiful than me, coping in an arranged marriage when I was just 20 and starting grad school in England at the same time, or a jealous coworker who wanted my downfall. All these events were extremely stressful and some caused a lot of sadness. So how did I cope. Each time I made a resolve looking at the bright side. Even after my father’s death I started thinking about working hard, going to college and doing well so that I make him proud wherever he was. When my sister undermined me, instead of getting depressed I started dressing up and presenting myself well which I do to this day – and two female professors junior to me have told me that I am the most elegant computer science professor and that would not have happened had it not been for my sister. I try my best to convert adverse situations to my advantage. Here are a couple of additional examples from my professional and personal lives.

First, what happened at work almost 30 yrs. ago. There was a very jealous and nasty coworker who used to say horrible things about me and my work behind my back to colleagues; some of them believed this coworker and some others did not because this person already had a negative reputation with many. Still it caused me stress as some of this person’s friends were also out to get me (is what I heard from my friend). Also, this person tried to sabotage me by preventing me from publishing papers which was very important for me. Now, I could have broken down. But no, that meant these nasty people would have won. I was determined to be a success and got even more determined to work harder, published top tier papers (forged ahead even though they were trying to stop), wrote books, got numerous awards which then shut this jealous person up. Also, I was extremely nice with everyone else, especially my managers who

found it really hard to believe this person. Now fast-forward almost 30 years later, this person is nowhere and look where I am – Fellow of prestigious organizations such as ACM, IEEE, NAI, AAAS, BCS and numerous awards from organizations such as ACM and IEEE. My husband helped a lot during those days. He wrote the following on two pieces of paper. “Only your enemies will benefit from your downfall” and “Everyone make mistakes, the failures dwell on them and the successful learn from them”. Resilience was not easy for me. I was new to meditation. I developed it step by step by meditating, deep breathing and developing a steely determination to succeed and thwart the ugly plans of my enemies.

My resilience was also built during the early years of my marriage. I was 20 and my husband 28 when we married in 1975. It was an arranged marriage and my husband was a gentleman in every way, he was kind, educated at Cambridge University and strongly supported me in my graduate studies at the University of Bristol. However, having gone to one of those exclusive British boarding schools, he was also highly disciplined and had many rules that we had to follow at home – such as drapes were drawn at a certain time (6pm), lights off at a certain time (10pm), waking up at a certain time (6am), we can rest on the bed only with the night clothes, no outside shoes inside the home (that is they have to be changed at the entrance), few days of vegetarian meals a week (3 days – he is a vegan now) and spotless home (e.g., not even a drop of tea stain on the kitchen counter – and I drink a lot of tea). It drove my mother crazy and she would constantly complain to me why I had to follow his rules and wanted me to argue with him and have my rules. I did not want to waste time arguing as I had so much of studying and research to do – my M.Sc. and PhD. So, I told her, “Look here mother, if I fight with him and then my marriage ends, what are my chances for another marriage? Also, do you have the money to support me?” She said she will not be able to arrange a marriage for me as a divorced woman and she had no money. Then I essentially told her to shut up (in a polite way). By the way I had absolutely no intention of divorcing or remarrying but that was the only way to keep my mother quiet. While my husband and I really enjoyed our life together I did not like many of his rules, especially being in bed by 10pm was hard for me and being a vegetarian for 3 days a week was even harder. So, I said to myself be patient, it is only a few years before I get my PhD and get established in a high paying job and then discuss the issues with him. But then I had my wonderful son and so took visiting faculty positions in the US for 3 yrs. before I felt I was ready for a job in the computer industry. So, the first three yrs. in the US I earned I believe 12K, 15K, and 18k (1980-1983), respectively which was not enough to be comfortably self-sufficient. Then in Fall 1983 (when my son was 4) I was ready for an industry job and was offered a salary of 36K in the computer industry and made an additional 9K or so as an adjunct professor at the university of Minnesota. That was a very good pay at that time especially living in Mpls and I was more than self-sufficient. That’s when I discussed the rules with my husband. I said “Look you have been kind to me and supported me and I am grateful. But I cannot live by your rules. So, we have to come to some agreement”. He knew I was very serious and agreed to my terms (which was a compromise). This is what I mean by resilience.

I could have been angry and ranted and raved at him while studying and it could have gotten me nowhere and I may not have finished my PhD with all the stress. Instead I waited patiently got my education and a great job and then stated my terms – that was a very good example of resilience. The end result, my husband and I have built a very solid marriage since then (touchwood).

So, the main question is, how did I do it? How did I control my frustrations? I did it by meditating. This means body relaxation, breathing, stretching and seated meditation every day for 60 minutes. I try to do it to this day. But then there are periods when I slack – such as indulging in chocolates and vanilla ice cream and not meditating. I find that whenever I slack, I lose perseverance and especially resilience. It is then hard to get back my perseverance and even harder to maintain resilience as I get stressed and irritable. Then I have to start all over again and build my confidence. That is, it is not just acquiring good habits; the challenge is on maintaining them lifelong to be successful in every aspect of one's life and more importantly overcome adversity and the horrible things that life can throw at you.

I would also like to share a recent experience. With some recent prestigious awards, I had fulfilled most of the career goals I had set for myself. I was happy. But then I was also swamped with work as I had taken on some extra projects. So, I was working night and day, and stopped meditating and as a result stopped working out and started eating comfort food and drinks like pizza and sprite. While I was getting my work done, I was getting irritable and got out of bed every morning thinking why do I have to work so hard. Even my husband asked “why are you feeling irritated?” Then I decided that's it, I can either start meditating and get my life back in order or continue like this feeling sorry for myself and get into a rutt. So, I started meditating and the results were almost immediate (after just one session). I am back to my motivating self and relaxed and even though still overworked, look forward to every day with enthusiasm. That is, I am re-building perseverance and resilience. Main thing is not to get discouraged if you slack, get back to the routine as soon as possible. Once you start meditating and get relaxed then everything else like diet and exercise and sleep all fit in nicely together.

One has to cultivate perseverance and resilience step by step. You cannot be an expert at once. So, start small – such as reading a chapter in Machine Learning Day 1, two chapters Day 2, do some problems Day 3 and so on. But do it every day and you will then get the art of perseverance. What about resilience. Here again you have to start small. If you have not practiced say meditation, then you may not be able to handle the death of a loved one without collapsing. Look at the little irritations in life such as getting a C grade in class or losing your wallet. It can get you extremely anxious – especially losing a wallet with not just your money but all the ID information. On the one hand you can create a tantrum and scream and cry or take the first step and report it and start taking immediate steps to protect yourself such as contacting your banks, driver's license office etc. and get new numbers, and relieve the anxiety by meditating. Because time is of essence. Once you overcome that, then you may be able to handle a

more serious situation such as job loss better. That is, you would have built up some resilience to handle adverse situations. Then from there you get stronger and stronger. Writing it down helps so that you can review your accomplishments on perseverance and resilience.

On another matter, let's take a look at workforce development in companies. So, when companies search for talent, they should also pay attention to whether the person has perseverance and resilience. I don't know how to detect these characteristics in a person but a good human resource officer who is trained in psychology should work with the technical hiring manager and make a determination. I have been a hiring manager and have served on search committees and don't hear such discussions at meetings. Perhaps these are politically incorrect questions/discussions (e.g., is the candidate emotionally stable?), but I believe that such questions must be included in the discussions (in confidence). After all we are not just hiring only talent, we want to make sure that the talent would be put to excellent use for the organization and for that we need perseverance and resilience (which also includes being a team player, trustworthy, responsible and reliable, etc.).

In closing, I want to stress that talent is very important and it's great to have talent. But most of us including me are in the middle bucket with respect to talent. So, what would give us that unique edge is perseverance and resilience. Remember the sentence: Talent, Perseverance and Resilience go hand in hand for a successful and meaningful life and career. Finally, back to where I started – the Wimbledon men's final. Even though my favorite player lost in a devastating way, the words of the winner still ring in my ears. Its all about RESILIENCE.