

What if you had access to the greatest, groundbreaking ideas generator. How would it transform your business, grounds or research? And what will likely take place if you put your brilliant generator into someone else's, to join their power?

The reality is, all of us have access to such a generator. Maybe you reason that your brain can serve the role of Ultimate Ideas Generator. Whereas it's undisputable that intelligence is important in dealing with complicated tasks, there's also another important element we must look for, discover and incorporate into the mixture if we need to be successful.

This element has incredible powers. It can cause blind-spots to disappear, expand our expertise, and discover all infant ideas and enable it to thrive.

As you'll get to know in these chapters, that element is cognitive diversity – it is the diversity of the minds we engage with. Once you know how to utilize its power, you'll become a monumental force.

Chapter 1 - Working with people that are the same as us weakens our potential for success.

Assuming you're a CEO employing a new financial manager. The last two candidates have the same merit and experience. One has the same perceptions as you on company policy, and the other has stated some issues about your five-year plan. Who will you employ?

We have a habit of surrounding ourselves with people we relate to, in appearance, opinions, and viewpoints. This subconscious habit is called homophily, which happens because it's validating to have our own ideas imitated back to us by the people that surround us, even if it's friends, family or colleagues. However, the fact is that homophily meaningfully hinders the success of a team.

The issue with homophily is that it forms collective blindness. Even if a team consists of extremely intelligent people, if they all think alike, they won't know what they're not seeing. These blind-spots regularly aren't the outcome of failure on any person's part. They can occur

from incidental causes we have no control over, like the culture we grew up in or the professors we had in university.

We can notice the devastating repercussions of homophily if we observe the CIA's former recruitment patterns. Before 9/11, the CIA had a long custom of mainly employing officers who reflected existing staff: white males from both the middle and upper classes who studied liberal arts in college.

This homogeneity entailed that, in spite of having a lot of personnel with a difficult budget at their disposal, CIA agents suffered from collective blindness. They ignored essential hints about Osama bin Laden's increasing power. For example, their lack of knowledge about Islam made them let go of him as primitive since he stayed in a cave, had a long beard and dressed in a simple cloth robe.

They were unable to identify that he had purposely shown himself on the Prophet and that a cave is totally a religious symbol to the Muslims. Their blindness signified that they misjudged the threat bin Laden caused, adding to the horrifying disasters that happened in America on the 11th of September, 2001.

Therefore, how do we conquer homophily since it's part of human nature? In the next chapters, you'll find out how to step away from collective blindness by accepting the rebel within.

Chapter 2 - When dealing with difficult problems, diversity is only as essential as intelligence.

Think of this hypothesis: if the fastest relay team can be made by cloning Usain Bolt, then the most precise team of economists can be made by cloning the world's best competent forecaster. Does that make sense?

Even though the above statement looks logical, it's wrong. Dealing with difficult problems needs more than only intelligence and skill. It needs diversity. Also, this diversity shouldn't be restricted to demographic features, like gender, race, age, sexual orientation or religion. It needs to be a

diversity of the mind, or cognitive diversity, something we wouldn't realize by cloning our genius forecaster since we'd be copying the exact brain.

Cognitive diversity in itself is difficult and realizing it needs more than only a perfunctory review of demographic data. To form a diverse team, we have to think of our candidates' certain skill-sets. For example, two economists may possess different genders and nationalities. However, if they use the exact economic model to deal with problems, they'll get the exact results.

But, if we employ economists who make use of different models, they'll use different information, ask different questions and have different assumptions. This diversity of methods will increase the team's chance of creating accurate economic guesses because significant factors won't be ignored.

When we form a team that is cognitively diverse, we increase what's called group wisdom, that is the extensive range of views in the team gives it full coverage. But this collective intelligence doesn't only occur from academic knowledge. True group wisdom needs a profound knowledge of human behavior.

We can see a great illustration of group wisdom at work in the hiring process used by Alastair Denniston at Bletchley Park during the Second World War. Together with mathematicians and intellectuals, Denniston employed demographers to decode German codes. The team saw that every encryption started with three letters that weren't part of the message.

These letters showed the cipher settings on the German encryption machine. After thinking of where a signal operator's mind go in an instant of severe pressure, the team recognized that the letters were gotten from either the start of a German girl's name – may be a girlfriend – or a swear word. In the absence of a diverse team that had group wisdom, this significant information may have been ignored.

Denniston's team was successful not just because it was demographically and cognitively diverse; however, because it was nurtured in the appropriate manner. Next, let's look at what a diverse team requires to succeed.

Chapter 3 - In the absence of effective communication, the advantages of diversity are lost.

Have you ever been to a meeting where you are nervous because you don't agree with your boss and you don't feel at ease opposing? Or maybe you have an excellent idea to give, however, between your manager and your confident colleague, it's difficult to voice out your opinion.

These cases are popular even in the most general workplaces as a result of the dominance hierarchy. In any group state, either a leader will be chosen or one will occur. And since humans have been functioning under hierarchical social structures for thousands of generations, we don't even recognize them all the time. However, these structures are a threat to cognitive diversity since they don't allow non-leaders to voice out their opinion, just like how you were silenced in your meeting. Except leaders encourage open communication, brilliant thoughts like yours are lost.

Can we conquer this dominance hierarchy, then, by communicating more on an individual level? Not really. In December 1978, the death of twenty people on a flight to Portland tragically demonstrates this. The plane didn't crash because of landing gear failure – which was the pilot's first worry –however, it crashed because it ran out of fuel. The pilot's onboard engineer knew of the issue problem; however, he failed to mention its implication. The work culture, where the pilot was called “sir” and questioning his ability was unfathomable, signified that the engineer didn't talk until it was really late.

Would putting an end to leaders completely fix the issue caused by the dominance hierarchy? Unluckily, without leaders, we will be in a state of conflict and indecision. However, by forming psychological safety, leaders can use the advantages of cognitive diversity by creating an environment that supports the sharing of ideas.

Amazingly, it isn't really hard to form psychological safety in the workplace. For instance, Leigh Thompson of the Kellogg School of Management asserts that using an easy approach like brainwriting – where workers provide ideas by jotting them down anonymously and then voting on the best idea –conquers a lot of difficulties caused by a dominance hierarchy. Brainwriting

guarantees that everybody has a voice and that ideas are measured based only on their standard.

Psychological safety is the most significant element if you want to be successful because producing ideas is an important step in getting at best solutions. Not all ideas will be brilliant; however, it may cause something that is ground-breaking.

Chapter 4 - To be really innovative, a diverse team needs to consist of people who are diverse within themselves.

What do Ariana Huffington, Sergey Brin, and Elon Musk all have common? They are all successful entrepreneurs and they stay in the US, however, they all have another thing in common too. It is either they were born elsewhere from the US or their parents were. And being a foreigner primes the human brain for innovative thinking.

Innovation can happen slowly progressively –just like when a species evolves – or it can occur really fast when two concepts collide in an exciting and unanticipated manner. People that aren't regularly outside their comfort zones are less likely to feel these surges of inspiration since their minds have developed into what they are used to. This is the reason why a lot of influential innovators and entrepreneurs are migrants or children of migrants because they're not familiar with the habits and characteristics of their new environment.

In changing two or more cultures, the minds of migrants are taught to recognize new opportunities. They can recognize how their own ideas might combine together to create great solutions and, essentially, they recognize how they could merge their own ideas with the ideas of others in innovative manners. This mindset initiates innovation.

Thus, how do we think innovatively without having to migrate to a different country? The solution depends on what we intentionally expose ourselves to. Our thinking can be diversified by making sure that we don't turn to a slave to one area of interest, crossing conceptual borders if not geographical borders. This was a routine Charles Darwin used. Switching his research

between botany, zoology, geology, and psychology provided him a new perspective and enabled him to bring ideas together across fields.

Equally, it's essential that the network of people we interact with is as diverse as possible, if not, we might not see that important piece of information that would enable our idea to be successful. History has a lot of cases where an idea didn't attain its complete potential since it didn't have access to the appropriate network. Consider the mathematician and engineer, Hero of Alexandria. During the first century AD, he created a steam-powered engine. However, it appears that news of the engine didn't get the right cart designers, who may have assisted Hero completely use his innovation.

Regularly engaging with diverse ideas and people working in different fields enhances our brains; therefore we can make great ideas. When we allow these ideas to mix with an extensive community, we form the potential for revolutionary innovation.

Chapter 5 - For us to foster our cognitive diversity, we have to interact with other opinions in meaningful ways.

Let's say you go to a party where you know just a few workmates. You're happy with the thought of meeting new people. However, when you leave a few hours after, you get to know that you didn't speak to anyone you didn't know before. You had an awesome night; however, you didn't increase your social circle.

It's human nature to find people we recognize. Ironically, the wider our social options, the less likely we are to create diverse friendship groups. Although it's normal to interact with people of the same interests and values, it shows that we're at risk of being in an echo chamber.

Echo chambers occur when our own beliefs are regularly repeated by the people that surround us, whether in person or online. And surprisingly, if contradictory beliefs find their way into our echo chamber, they don't allow us to question our own positions; they essentially oppose us more.

This feature of the echo chamber –called the epistemic wall – was observed by mathematician Emma Pierson in 2014. She examined tweets relating to the death of a black man named Michael Brown that was shot by a white police officer named Darren Wilson. Two different groups were created– those who viewed Brown as a victim and those who viewed Wilson as a scapegoat.

Tweets turned to personal attacks when both groups interacted, and Wilson’s defenders accused Brown’s main defender of being a hate-spreading communist with a mental illness. This sabotaging act made rational conversation and thought of a different viewpoint impossible.

So, how do we leave the echo chamber, in order for us to seriously explore other perspectives? The answer to that question lies in creating meaningful connections with people, regardless of being different. This was what Orthodox Jew Matthew Stevenson experienced with a fellow college student Derek Black. After knowing that Black was a full advocate of white supremacy, instead of avoiding him, Stevenson called Black to Shabbat.

Knowing that Black was a creation of his family surrounding, Stevenson tried to create trust with him through their common academic interests. Ultimately, Black understood that he’d been brainwashed by his family members – who were his echo chamber. This made him leave his political beliefs, in spite of the consequences it had on his family relationships.

The friendship formed between Stevenson and Black illustrates the transformative power of meaningful relations. We can work with another to undo echo chambers through empathy and trust.

Chapter 6 - When we enforce certain standards on people, we lessen the chance of successful results.

Let’s say you’re at your friend’s house and someone mistakenly spills a jug of juice on you. Your friend offers you some of their clean clothes, however, it doesn’t fit you. This is weird since both of you have the exact height and a similar weight.

Clothing is only one of the numerous day-to-day encounters we have with standardization. Because few of us have the money for a bespoke wardrobe, we buy clothes in fixed sizes. However, body shapes vary, even within a particular size range, that is the reason your friend's clothes might not size you.

Standardization is practical in several cases—for instance, clothes manufacturing –however, it becomes an obligation when it is enforced on people. Since it denies our individuality and doesn't give us room to play to our personal strengths.

The advantages of giving this scope were detected at Google in 2014 after a group of psychologists had a workshop with sales and administrative staff. The staff was motivated to reflect on their gifts and look for approaches to use them in their work practices, instead of just following a well-known system. Staff who were at the workshop went on to outdo their coworkers, stated being happier, and were an impressive 70% more likely to change to a new role they want or be promoted.

When we talk about health, denying our diversity can have extreme consequences. For instance, obesity is one of the severe health issues in the world. There are numerous diets available to fight it, however, the effects are limited or short-term mostly.

This was demonstrated by Eran Segal a computational biologist, who did an experiment on the subject in 2017. He measured the blood sugar response of healthy participants who only got their wheat from either homemade sourdough or commercially made white bread. He discovered that, averagely, there was no difference between the two groups. But, there were noteworthy differences in the individual findings.

This reason for that is because our stomachs host exceptional communities of bacteria which determines how every one of us digests what we eat. Diets don't take this into consideration; hence, except we shape our nutrition to our bodies, we won't essentially become healthier even though we're consuming a balanced diet.

Humans are exceptional, both inside and out. A "one size fits all" method may lead to everyone being dressed, however, only a few will be dressed appropriately.

Chapter 7 - Before we can use the advantages of diversity, we have to defeat our biases and be ready to listen.

There's something really special about learning how to read as a child. For a lot of us, books were a reason to move into a comfortable lap while an adult brought understanding to squiggles on a page. Gradually, those squiggles turned to letters, then to words, then sentences, causing that wonderful instant when we could read on our own.

This ability to acquire new skills from others makes our species different from others. However, if we truly need to improve our collective intelligence – the combined intelligence of a group – we need to defeat bias.

Back then during the 1970s, members of American orchestras were mainly male since men were seen as better musicians than women. Cecilia Rose of Princeton and Claudia Goldin of Harvard questioned this assumption by proposing that musicians audition behind screens. Once this practice had been accepted, the number of female performers rose from five to closely forty percent, demonstrating that a lot of talented women had been ignored as a result of gender bias and that the procedure used for selection had not been objectively based on merit.

Another bias that can hinder success is Ageism, something the fashion brand Prada discovered the hard way. Between the years 2014 and 2017, their slow interaction with digital channels caused a huge profit decline. On the other hand, Gucci's sales increased by 136% between the years 2014 and 2018, due to its digital tactics. This amazing result was the effect of a shadow board – a group of young people who instructed Gucci's executives on important decisions. Knowing the valuable understandings that its digitally-native younger workers could propose gave the company its advantage.

Shadow boards emphasize the significance of sharing wisdom and individual point of view. Because complicated difficulties are really hard to fix alone, we need to work in teams to fix issues effectively. Sharing ideas in a cognitively diverse team forms a mutually beneficial surrounding in which recipients acquire wisdom and givers get linked within a supportive network.

When we set our biases apart and surround ourselves in the midst of minds that have understanding and experience that is different from our own, we form a team with wide understanding. This, eventually, improves our chances of success.

Rebel Ideas by Matthew Syed Book Review

In previous years, success has been the outcome of intelligence, skill, and dedication. This is still a winning mixture of skills when we're encountered with difficulties that we can solve on our own. However, the difficulties we encounter nowadays are really complicated for people to solve alone. In order to tackle them, we need to work as teams. Also, how we build those teams will decide if we will reach our goal or not.

Demographic diversity isn't sufficient to make sure that we acquire a detailed understanding of every difficulty we face; our teams need to be cognitively diverse, with each team member adding their idea and viewpoint in a surrounding that supports communication. That is the only way will we be able to prevent the risks of homogenized thinking and get really innovative solutions.

Foster cross-pollination where you work.

Brilliant ideas regularly occur when workers have the opportunity to meet with colleagues from other departments. Perform an audit to see if you can discover methods to foster this kind of incidental mingling, by reorganizing cubicles that are isolating people from each another, finding facilities such as the bathrooms in spots where different departments will meet, or arranging to a seat in order for diverse departments to be placed close together. It may look ineffective or irrational; however, that will help innovation succeed!

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