

Innovation comes from the individual

Örjan Strandberg

The thing with us humans is that we're first and foremost individuals, with different talents, preferences and assets.

Not only do we possess different temperaments – the ancient Greeks divided us into four groups;

Flegmatics, Sanguins, Choleric and Melancholics –all based on the presumption that different proportions of our bodily fluids; mucus, blood, bile and black bile, somehow reflected in our personalities. The flegmatic person being slow, the sanguin being alert, the choleric being angry and the melancholic being sad.

Nowadays we exchanged those labels with letter combinations ADHD and other psychological diagnoses; borderline, bi-polar, asperger, autistic.

In a way, it was easier before, when you were simply considered grumpy, or anxious, hyperactive or anything that didn't sound like a serious mental condition.

Humans have different talents, preferences and skills.

Some of us are really skilled in the kitchen, composing magnificent meals and award winning dishes. Others are very handy and will fix your leaking pipes in a jiffy or find what's wrong with your cars' engine. Also others are extraordinary talented in pursuing discovery, truths and facts, be it medical, biological or space related.

Some studies and research results speak of a 5% fraction of the population as "serial creatives".

It is among these approximately 5%, that you will mainly find; composers, artists, painters, writers and authors, film & theatre directors, choreographers and – behold! – inventors!

The common denominators within this group, is the special catalytic talent. Namely, the ability to - from 2, 3, or more disparate components - generate something brand new.

When giving lectures on the craft of musical composition, I often pose the question "so how did this piece of music sound from the start"

And the answer is: “

“

Because that's the thing with creativity, as well as with inventing. **It doesn't yet exist!**

There's a big difference between science and for instance arts. In science you deal with something already existing and your calling or occupation is to investigate its origin, its functions, its components, effects, energy, motions or what.

While in for instance art, you might have references from other works of art, but nevertheless, you're quest is to produce something that has never existed before. Regardless if you're a writer, a sculptor, a choreographer, a composer or a painter

But with the finished piece of art, new knowledge is also generated as a result. Knowledge that will constitute the foundation for a next generation of artists, maybe labled as 'cubism', 'post-modernism' or something else. Definitely a matter for art analisys and in many cases a subject for a doctoral at a university.

Let me share an example with you:

You see this book? This is a very thorough piece of work where Mr Dominic Pedler has conducted a very extensive research project, doing an almost complete musical analysis on the compositional components of the Beatles music.

He has twisted and turned every harmony, each melodyline, in order to conclude what made this British quartet the commercially biggest musical phenomena in history.

EXAMPLE

Throughout this books' 790 pages, I think he must have disclosed most of the Beatles' songwriting secrets.

And I'm really impressed! Myself being both a composer and a Beatles-fan.

But I still have to ask myself: Why then, isn't Mr Pedler a multy-billionaire, having acquired the exact recipe for the music that has sold more than 1,3 billion copies? Why hasn't he himself made a fortune by now, producing that music, that he has acquired the full and detailed recipe for?

While these four guys received both fortune and fame during their one-decade career. Believe me: THEY didn't know, that the music they made was THAT complicated, they just DID it!

My point here, is that we are talking about two very different skills;

One being the analytic, compiling, conclusive - and **very patient** mind - , which is the very prerequisite for man's research, discoveries and ever expanding knowledge of the planet we live on.

The other skill is that of the creator. The woman or man who – from a blank paper – accomplishes something never before heard or seen. - And I don't distinguish between art, music, books or inventing. They all have several common denominators.

One thing, for example, is their over representation in low performance at school:

Leonardo da Vinci, Benjamin Franklin, Beethoven, Mozart, Alexander Graham Bell, Thomas

Edison, Nikola Tesla, Orville Wright, Wernher von Braun, Bill Gates, Steve Jobs and many utterly creative people performed very poorly in school, due to ADHD, Asperger syndrome, dyslexia and other diagnoses not even invented back then!

As you may have noticed, the group of persons I just mentioned, involves both scientists, entrepreneurs, artists, and inventors.

Creativity is not a talent given only to people in the entertainment industry. It takes a lot of creativity and genius to approach many of the scientific mysteries that man still has left to discover. Sometimes even mistakes or random events play a crucial part for breakthroughs. But it is the creative mind that picks up from that mistake or random event and develops it into something substantial! The talent of serial creativity can be found in any environment and any line of business. And it is an absolutely necessary talent for society to acknowledge and nurture within all fields of society.

Rex Jung, a clinical neuropsychologist and assistant professor at the University of New Mexico, defines creativity as “the ability of the brain to use abductive reasoning, to solve adaptive problems in the environment, in novel and useful ways.” Ultimately, these pillars help create narratives, create music, engineer solutions, and, of course, to invent.

Should the incentive for universities primarily be to invent, I am positive that the very many creative scientist and researchers would do so. But that is not the case. Universities and research institutions primary incentive is to discover and document all phenomena, materials and organisms that define the planet we live on. That’s a commendable task as it is.

The inventor is the one – many times – defying what is established as a fact: “This is how it works”

“Noone has ever succeeded doing THAT before”

“The laws of gravity forbids that your invention could function” Etc

etc

What the inventor accomplishes, may very well be the material making up the future university classes. The inventor will – like the scientist – move boundaries, and expand our human knowledge.

The scientist will do that by pursuing discoveries while the inventor does it by coming up with new ideas, products, methods and so forth.

Let me linger a while longer at the fascinating biology of the creative mind.

It has been shown that their very brains are actually differently connected.

Kenneth Heilman and his team at the Department of Neurology and Neuroscience at Cornell University discovered that the brains of artistically creative individuals have a particular characteristic that may enhance creativity.

The brain is divided into two halves, or hemispheres, that are joined by a bundle of fibres called the **corpus callosum**. Writers, artists and musicians were found to have a smaller corpus

callosum, which may augment their creativity by allowing each side of their brain to develop its own specialisation. The authors suggest that this "benefits the incubation of ideas that are critical for the divergent-thinking component of creativity".

A team of researchers from the University of Helsinki observed increased creativity in participants with duplicate DNA strands, containing a gene that affects the processing of a key neurotransmitter called serotonin. This finding has been backed up by a newly published neuroimaging study which found that elevating serotonin levels in the brain increases connectivity in one of its most important "hubs" – an area called the posterior cingulate cortex.

The result is particularly interesting because while serotonin is widely known for regulating sleep, body temperature and libido, the varying levels of this chemical have been implicated in neuro-psychiatric disorders such as bipolar depression.

Nicolau et al (2011) states that "genetic variations of dopamine receptors in ADHD are associated with increased novelty-seeking and risk taking. This may be directly related to increased propensity for entrepreneurship because it is a context that rewards novelty seeking and risk taking".

Kasof (in 1997) suggests that "it is the wide breadth of attention associated with ADHD that is responsible for greater creativity."

Nicolaou further theorizes that "the genetic variation of dopamine receptors associated with increased novelty-seeking and risk taking in ADHD, would be directly related to increased propensity for choosing entrepreneurship as a profession because entrepreneurship is a context that rewards novelty seeking and risk taking."

Logan (2009) found that dyslexic entrepreneurs used compensatory strategies they had developed early in their lives to successfully rely on intuitive decision making, to delegate, and to communicate and motivate employees.

Even psychopaths differ biologically from 'common people'. The brain region called Amygdala holds specific functions for how we perceive and process emotions, such as fear. Studies of psychopaths show that the amygdala has a much thinner layer and is smaller.

Thus, the psychopath is less affected by fear. You'll also find reduced activity towards the center of the brain in the area "orbital cortex", thought to regulate emotions as well as morality and aggression. Also, indicative is the gene known as MAO- A (MonoAmine Oxidase A).

This "warrior gene" controls the production of a protein that breaks down brain-signaling chemicals like dopamine, noradrenalin, and serotonin, which all influence mood.

There is even physical evidence that there's a difference in a psychopaths smell perception. They are said to have very big difficulties distinguishing different smells from others. Maybe a smelling test should be added to future recruiting interviews?

Anyways! Back to personalities of the creative individual.

There is one very significant common parameter which is negative. That is the lack of entrepreneurial talent. In short, most creative individuals are very bad businessmen and women.

A Swedish survey we conducted among our inventor members, showed that 2 out of 3 – 63 percent - wouldn't, couldn't and even shouldn't run their own business.

An inventor is not the same as a scientist. Neither a scientist nor an inventor is the same as a sales person, someone with entrepreneur skills.

Going back to the Beatles again, one of the fundamental explanations to why they made it big is their personalities and their different musical functions; John and Pauls primary talent was their excellent songwriting talent, even though they were also good musicians. Ringo never stood out as a composer, but is a well respected rock drummer.

In order to succeed in projects, you will have to find the special talent required for each task. With the Beatles, their repertoire required bass, 2 guitars and Ringos drums. I'm pretty sure that they wouldn't have gone very far without drums.

In our country, the condition for an inventor to receive governmental financial support is that he or she run their own business. As I already told you, the inventors' talent is not that of the businessmen'.

In fact, 4 out of 5 invention based startups statistically fail, when conducted by the inventor himself. While – on the contrary – around 60 percent of most general start-ups succeed.

This could teach us that there are two different skills involved here.

At STIK we are right now conducting a project where we combine our inventors, with skilled, hungry and eager entrepreneurs. By matchmaking these two skills, we are sure that we will help generate successful, viable new companies around very often unique, and sensational inventions that would otherwise have sunk into oblivion at the bottom of an inventors desk drawer.

We call this project "the Green House". Having realized that the recipe for success simply lies in how different talents are combined – just like with the Beatles – could open all new channels and opportunities for inventors, collaborating with the talents best suited to realize business ideas – the entrepreneurs.

I'm sorry if you think it took me unnecessary long to get to the point of my lecture, but - as stated – it's probably because I'm different.

Thank you!