GENIUS
Gnorizon

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Global Evolving Network for an Intellectually Upgraded Society (GENIUS)
GENIUS High IQ Network

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President's Message

Dear Readers, we are proud to present to you the first issue of GENIUS, the official journal of the GENIUS High IQ Network. It is called the Gnorizon Edition, from the Greek word "gnorizon," which means to be aware and knowing.

GENIUS is going to have four quarterly editions per year, called Gnorizon, Logicon, Thymicon, and Noemon. Each edition will include all types of content (articles, essays, poems, puzzles, news, tributes, etc.), but will emphasize a particular aspect of human cognition:

- Gnorizon → Science & Knowledge
- Logicon → Logic & Philosophy
- Thymicon → Art & Literature
- Noemon → Intelligence & Psychology

GENIUS was founded in 2019. It belongs to a series of significant initiatives by GENIUS High IQ Network, the other two being the Facebook advertising campaign of GENIUS in summer 2019, where we reached more than 120,000 people worldwide, and, of course, GENIUS AT WORK Initiative (in cooperation with AtlantIQ Society and STHIQ Society), four challenges to solve significant issues in our world: Clean Water, Increase Food, Reduce Plastics and Free Education.

GENIUS will mark a milestone for the global high IQ community: the era where people from high IQ societies will start contributing to the intellectual advancement of the society in a meaningful way. All editions will be including high-quality articles, essays, poems, puzzles, news and tributes, written by verified members of GENIUS High IQ Network, while we will be publishing genius-level work of non-members. GENIUS High IQ Network is the creative family of the high IQ community, and the GENIUS Journal is its child. I hope you will all join us on this exciting and creative journey.

Sincerely Yours,
Iakovos Koukas
President & Founder
GENIUS High IQ Network

Editor's Comments

Dear Readers, welcome to the first issue of GENIUS!

My name is Daniel Pohl (please feel free to call me Dan). For those members who do not know me yet, I am a Nuclear Engineer from Canada. I am a happily married man with three beautiful children. I am a member of all 8 GENIUS High IQ Network Societies, and now the proud Co-Founder and the first Editor-in-Chief of this new and exciting journal.

"Gnorizon" is the Greek word for knowledge or awareness, which is a fitting name for this first Edition as we are aiming to represent a network of genius-level individuals with a wealth of knowledge to share. The primary purpose of this journal is to facilitate collaboration and coordination of ideas across the GENIUS High IQ Network of Societies to raise our collective intelligence. I feel this journal has excellent potential to be such a vehicle. Let's choose to be an intelligent collection of people instead of a collection of intelligent people. I am extremely pleased you are joining me in the first step of this exciting endeavour.

I would now like to take the opportunity to thank all members who have taken the time and effort to provide submissions for our first issue. For those that want to make contributions in the future, please send me any potential contributions; including articles, essays, artwork, poems, summaries of events, puzzles, etcetera. I want this to be our journal so that necessarily includes you! Please do not hesitate to get in touch with me regarding any other questions related to the GENIUS Journal.

Best regards,
Daniel Pohl
Editor-in-Chief, GENIUS

Profiles

Learn how to see. Realize that everything is connected to everything else.

–Leonardo Da Vinci

The Philosophical Genius: W.M. Fightmaster

Introduction

Dr. W.M. Fightmaster joined the network of high IQ societies several decades ago after taking the WAIS II-R for funding university from the state department of vocational rehabilitation. His psychologist suggested Mensa as a means of socializing. Fightmaster attended a few local meetings, but the test gave him the qualifications to join other similar groups. The online development of high IQ groups changed the role of such groups. It allowed qualified members from around the world to communicate and meet in real life.

After Fightmaster went through undergraduate school and several graduate programs leading to his doctorate for practicing psychology (PsyD), he began participating in various online communities. After Mensa, Intertel, HighIQWorld, and HellIQ, he discovered the World Intelligence Network (WIN), and several of Iakovos Koukas' groups including, 4G High IQ Society, Global Genius Generation, and several other societies within the WIN Network. It is within these groups and with Iakovos' support that Dr. Fightmaster has found comradery and valuable interactions. Dr. Fightmaster is happily married to his wife Ramona, a Master of Science in Nursing and a Certified Nursing Midwife (MSN_CNM). They live in coastal Southern California.

Q & A Session

The title of this article is "The Philosophical Genius: W.M. Fightmaster," how do you feel about that?

I knew Iakovos planned to include me in a new project, but I was taken aback by the title Philosophical Genius. I am well-read in Philosophy and have a good command of the subject, but I don't consider myself a genius. It is interesting to note that neither the Cambridge or Oxford Dictionaries of Philosophy include the word, genius; genus, but not genius. Regardless, it's safe to assume I am very honored by this selection.

In terms of geography, culture, and language, where does your family background reside?

My family comes from Southwestern Europe and the British Isles according to DNA analysis of Ancestry.com. More immediately, my family settled in Northern Kentucky, across the Ohio River from Cincinnati. I rebelled against the Midwestern culture, which was very rigid and traditional. However, loyalty and appreciation of family were values inculcated from my parents and also embraced by that culture. There are usually both good and bad, dark and light, dichotomies in most issues.

I have one adult daughter and two grandsons which has been a real learning experience. My oldest grandson is a successful screen actor

who began starring in films at age eleven. He was the male lead in The Hunger Games series of four films. Currently, he is filming the final season of a television comedy and sci-fi mixture, Future Man. His younger brother recently received his engineering degree from Georgia Tech. My daughter and grandsons live near me in the Los Angeles Area. The older one, Josh Hutcherson, credits me as the inspiration in pursuing the arts and developing a philosophical attitude.

What was growing up like for you?

I was very fortunate to grow up with loving parents and an extended family whose members were all loving despite any personal problems. My father was a WWII hero, receiving the Distinguished Flying Cross for bravery in aerial combat. He completed university, setting several academic testing records at the University of Kentucky where he studied Chemistry and Psychology. My mother was educated at the University of Cincinnati in Education. Both parents were employed at one employer all their lives. My father was chief chemist for the Gulf Oil company until they were purchased by Standard Oil, retiring at age 58. Mother retired ten years later from teaching after I had left home for university.

My early experience in education was fun and easy. The public schools had only basic assessments for intellectual ability. By the time I was old enough for secondary education, I had been advanced as far as possible. I had taken Advanced Chemistry, Semi-micro Qualitative and Quantitative Analysis, Trigonometry, Logarithms, Calculus I and II, Honors English, Honors History (Global and American), and every advanced class available by sixteen years of age. I took all the Spanish and French classes available at my high school, Dixie Heights High in Ft Mitchell, Kentucky. I graduated with high honors at seventeen.

However, it was in my junior and senior years during the sweeping societal changes of the Sixties that I became involved with the hippie movement and all it entailed, including abundant and indiscriminate sexual activities in the name of "free love." Additionally, I experimented heavily with Lysergic Acid Diethylamide tartrate -25, better known as LSD. In pursuit of spiritual enlightenment, I traveled to San Francisco and other "happening" places. I used Mescaline, Peyote, STP, and smoked hashish,

attempting to discover the true nature of reality and the reason for my existence.

Unfortunately or perhaps, fortunately, after high school before university, I was arrested by an agent of the FBI for selling LSD. My social group all sold various psychedelics to one another. It wasn't a business, but I was treated as if I supplied the entire East Coast. My arrest offered the opportunity to turn in another more prominent seller than myself in exchange for friendly sentencing. I could not ethically justify submitting someone else to my misfortune so I refused to cooperate. At 18 I was sentenced to 20 - 40 years at the Ohio State Penitentiary at Mansfield, Ohio. This was the foreboding prison used in filming Morgan Freeman in The Shawshank Redemption. By fate or luck, my sentencing judge died before he signed my shock probation form, which would have meant a minimum of ten years before parole eligibility. My parents had helped pay for the best attorney in our area. I received shock probation after one and a half years of incarceration. Had I been from a low-income family or a different ethnicity, I'm sure I would have spent a minimum of ten of the possible twenty to forty-year sentence.

When did you first become aware of your philosophical abilities?

I first became aware of my philosophical interests during the summer of 1967 while participating in the Vietnam anti-war demonstrations. I became immersed in philosophy while incarcerated and working as the librarian's clerk. I first read Sartre, Dostoyevsky, Plato, Kierkegaard, Aristotle, and practically all Western philosophers whose texts were in our prison library. My interest led me to begin a GED program bringing in volunteer professors from schools within a two hours drive. I believe this program has continued to this day.

You are a retired professional psychologist and academic philosopher. Did you enjoy one more than the other, and if so, why?

This is a good and evocative question. I enjoyed and continue to enjoy academic or scholarly philosophy. Several years into my doctoral program in philosophy at a prestigious program, I realized most of the recent doctorates awarded to fellow students, left these men and women unemployed for the greater part or scrubbing toilets on Cape Cod. In the mid-Eighties, Philosophy saw shrinking

departments as technology, mathematics, and the sciences began growing exponentially. Consequently, I decided a doctorate in Psychology would be more practical, and most states had accepted doctoral psychologists into licensing programs. After a year as a clinician in an alcohol and other drug clinic and another year of setting up an EAP (a mental health and personal problems programs for organizations) for the most extensive hospital system in Greater Cincinnati, I partnered with our other licensed psychologists and licensed masters level clinical social worker, to start a private practice for behavioral health. We quickly grew from the two hospital offices to seven of our own clinical offices throughout SouthWestern Ohio, South Eastern Indiana and Northern Kentucky. It became the most extensive practice in the area, and as a founding partner, I was remunerated very well. A large national insurer put out bids to gatekeep their mental health products. Fortunately, my proposal was awarded the contract, and I sold the practice, allowing me to retire at the young age of fifty years.

I enjoyed philosophy more, but I received more tangible benefits from psychology. It is essential to realize it requires a doctorate to practice in most states. Additionally, there was satisfaction from helping patients that comes from practicing psychology. However, for my edification and pleasure, nothing beats philosophy. Academically, I received many honors. I was named the Outstanding Senior in Philosophy, Who's Who Among Students in American Universities and Colleges, Alpha Chi Honor Society, and full funding for every degree. Along with the BA, I have an MPA, M Phil, and PsyD. Education has been very good to me.

Who is your favourite figure in the history of philosophy, and why?

My favorite philosopher is Maurice Merleau-Ponty. I wrote a thesis on his work, but it would not be possible to represent his work here adequately. However, I chose him because of his emphasis on embodiment. As a phenomenologist, the scholarly rigor with which he approached the human subject and all the issues of agency, volition, identity, and the effect of space and time on 'being' surpassed anyone I was familiar with in graduate school, and honestly, to this day. With the caveat of "in the history of philosophy," I would have to say Plato followed closely by Aristotle. Of the pre-Socratics, I would choose Heraclitus and Parmenides.

What difficulties have you endured to attain your level of success?

As stated above, the conviction of selling drugs and the attendant prison time, created obstacles to any job, position, or formal education; basically, anything requiring a background check. I believe it has been so long ago it would not affect today. As a married father of a young girl, after leaving prison, all of my decisions had to consider her. My parents, again, and my brothers were infinitely magnanimous in their support for my young, almost adolescent family. Of course, I had to deal with all the problems and challenges that go with switching from one doctoral program to another. Like most readers of this piece, I was benefited by an unusually high intellectual ability. And as most know, this can be a problem too when interacting with professors and instructors who might be insecure when challenged by a student.

What currently is your favourite passion project?

I have begun writing screenplays and fiction as well as philosophical papers and comments. I am currently working on several screenplays with another member of this and other high IQ societies and groups, Christian Nielsen. We make an extraordinary team, and our mutual support and encouragement are unlike any previous relationship; whether friendship or professional.

What are the main benefits of engaging with the high IQ community?

I like the company of wolves. Seriously, I find commenting and posting in certain groups, many of which are the result of Iakovos, are very rewarding considering the level of feedback and constructive criticism. It is this factor that permits me to experience the occasional smart ass or contributor who is more interested in ego battles than in the merit of the content. Additionally, I have met in person many of the people with whom I find affinity over the last five or six years. The value of these friends who started as members of online high IQ societies has been invaluable to me as I have navigated through oropharyngeal cancer and several other serious illnesses. There aren't many cities I can travel to in which I don't have an online friend.

What is your vision for the high IQ community of the future?

My vision for our communities is a combination of features and benefits already existing but organized in a manner making real-life encounters and projects not only possible but probable. I want subsets of interests, abilities, and capabilities to coalesce into superiorly efficient and creative think-tanks with the availability of financial and research nodes strategically established to support one of our "genius" virtual ideas into a pragmatic, functioning planning document and production facility.

The Altruistic Genius: Domagoj Kutle

Introduction

Domagoj Kutle is the Founder and President of CATHOLIQ and VeNuS High IQ Societies and Board Member and Chief Membership Officer of GENIUS High IQ Network. He is a member of more than 30 High IQ Societies including MENSA, ISPE, Glia, and Intertel. He is also a top scorer on several High Range Tests (HRTs) and a Winner of The Phi Test Contest. He has a BSC in Electrical Engineering, and he is a husband and a father of two beautiful children, Benjamin (8) and Patricija (3).

Q & A Session

The title of this article is "The Altruistic Genius: Domagoj Kutle," how do you feel about that?

I feel honored, although the word genius probably has different meanings to different people. Genius status, in my opinion, has to be earned with real-life accomplishments not just by completing any test that gives you IQ number in genius range; and, we are all aware that there are all kinds of HRTs on the market today. I have completed many high range tests, over 80 of them with a range of scores from 140 to 186 (by the official norm at the time of correction) but I still do not feel comfortable with the word genius and I probably never will feel comfortable because I think it is an

overstatement. I feel good when I score higher than some other people who are proven masters, some even real-life geniuses; this is where I find my motivation for giving my best. Altruism, well, yes. I did help some people in trouble. I stood up for my friends when they needed my support, but I see nothing special about that. I think people do that every day because it is the right thing to do; it is the right way of functioning in society. Also, in a way, it is investing in your future because you never know when you will need some assistance.

In terms of geography, culture, and language, where does your family background reside?

My parents come from two geographically distinct locations. My mother comes from the northwestern part of Croatia called Podravina that is known for calm, hardworking, patient, and warm people. My father comes from the southwestern Croatian part of Bosnia and Herzegovina, Široki Brijeg that is recognized by less emotional, pugnacious, and quick-witted people who know how to succeed very fast in life. These are two very different mentalities also sometimes clash inside of me. My mother is a hairdresser who later became a housewife. My father is a medical doctor who later became a member of Parliament and founder of the modern Croatian state, Professor at University, supervising Board member of Brethren of the Croatian Dragon (legal successor of Ordo equestris draconis) amongst other roles. My surname is well known in my country, mostly thanks to my uncle, who was a businessman and tycoon. Culturally we come from Christian, Catholic part of Europe with great emphasis on tradition and protection of national, cultural and religious heritage. I will also emphasize the importance of traditional values in my family education.

What was growing up like for you?

I enjoyed my childhood. I remember growing up with my two sisters in the idyllic atmosphere of small-town Križevci, in our house with a large backyard, dog, and a garden. These were happy times I remember with melancholy today. Later on, we moved to a big town, Zagreb, life got more hurried, and friendships less deep. When I look back into the past today, I am saddened that my children lack that sort of small-town experience that probably defined me for the rest of my life. In elementary and high school, I was a straight-A student who read a lot but also had enough free time for games and sports;

including, table-tennis which I still play today when I have the opportunity. I also tried some other sports like hand-ball, skydiving and powerlifting.

When did you first become aware of your genius-level abilities?

When I was about to choose which high school I would go to after elementary school, I found that making that decision was very hard for me. I was excellent in all areas, and I couldn't make a firm decision. As a result, my father brought me to orientational testing, and it turned out that I had solved the verbal part of those batteries of aptitude tests exceptionally well. The psychologist who was there wanted to talk to me, he was surprised with my verbal score, and he showed me my placement on the Bell curve. He also suggested I should go to Classical Gymnasium (grammar school) and concentrate on foreign and classical languages. I did not listen to him, and I decided to go to a mathematical high school (MIOC). At the time, MIOC was the most elite mathematical high school in my country, and I passed the entrance test with ease. I wonder if I made a mistake with the choice of my high school since I concentrated on things I found interesting rather than things that are best suited for my set of aptitudes. Regardless, I thank my parents, who gave me full autonomy over my choices. They did not interfere in any way and gave me continuous support even when things looked very desperate.

You are known for being a kind person; altruistic even. Does intelligence play a role in your kindness?

Well, different people have different experiences. I do not think those who were on the opposite side when I used my authority to protect those who I care for think about me as a kind person. I have never been afraid of conflict if a cause is right. There will always be troublemakers, people with evil motives, but we need to stand firm against those kinds of people and protect our friends and dignity of the HR community as a whole. Intelligence has everything to do with standing up for righteous causes.

You are a Radio Communications Engineer. What role does your very high IQ play in your job?

I never mention my success on these tests to my co-workers, but I also think it is irrelevant to my job. It is essential to realize that we all have our strengths and weaknesses. Sometimes you are valued by

your strengths, sometimes by your weaknesses. I would rather surprise all with something positive nobody expected, then to keep my nose high and tell everybody else their work sucks. Life is full of surprises, and sometimes even the most underappreciated among us can make a massive difference if goodwill is present and the atmosphere in the company positive. My job is vital to my family and me, of course. It pays my loans, bills, and makes some things available to my children, and I am grateful to all who during all these years showed that they have trust in me. They will always have my support, visible and invisible.

Who is your favourite historical figure, and why?

I know you expect I will answer something like Einstein, Hawking, Tesla, or Da Vinci. No, I will not answer that. I value people of honor who stand against injustice and oppression. I appreciate those who are willing to start Reconquista, even a Crusade against illnesses of the modern world, against liberalism, atheism, and relativism. So my answer is somebody like pope Urban II. You may like that or not, but those are the kind of people we need today.

What difficulties have you endured in your life because of your extremely high intellect?

This will be a concise answer – I never had any problems, and I do not expect problems in the future.

What currently is your favourite passion project?

Currently, that is Deus Vult, the journal of Catholiq High IQ Society. The first issue will be released this Christmas, and I hope it will be a successful project. Many strong authors of the HR world are included, and my job is to coordinate them and motivate them. I must mention Phillip Power, Editor of Deus Vult who is doing a fantastic job and I thank him this way. My other future projects involve forming a society called High Range Test Takers Association (HRTTA Syndicate), society whose primary job will be to defend the rights of HR test takers. Second, that will be the creation of a web page with a list of impressions and systems of rating of HRTs. Users will be allowed to rate the tests they have taken by many essential criteria making HRTs and authors open to criticism. A third project is the High Range Court of Honor, which will deal with different breaches of etiquette and honor among test takers but also authors of high range tests. The code of behaviour and sanctioning will be

set for all who wish to participate in HR testing. A high range test called Tantrum is also in my plans – a 100 question hard test with questions in mixed format targeting only strong and serious test takers. These are plans, and they will come to life in dynamics that are mostly dependent on my spare time. Those who wish to participate are, of course, welcome.

What are the main benefits of engaging with the high IQ community?

That is mainly meeting people who are on the same wavelength as you, sharing experiences, making contributions, and improving the status of the whole HR community by personal example. I made lots of friends here. These are mainly internet friendships, but I am sure there will be an opportunity in the future to meet each other in real life too.

What is your vision for the high IQ community of the future?

My vision involves the realization of some projects I have mentioned in one of the previous questions. The HR world needs a semi-legal framework that will create a balance between the test takers' expectations of higher scores, and test makers' needs for high-quality norms. Also, we have more or less reasonable control over dishonest test-takers, but little or no control over the work of test makers. A balance needs to be set. I know many people think that one-day HRTs will have the same status as standard IQ tests, but I am afraid that will never happen without setting that semi-legal framework. The HR community is full of creative people who need to be organized and directed toward the right goals. Generally speaking, I am an optimist; I think the High IQ Community has a bright future.

The Visionary Genius: Iakovos Koukas

Introduction

Iakovos Koukas is the President and Founder of GENIUS High IQ Network, GIFTED High IQ Network and THIS, 4G, BRAIN, ELITE, 6N, NOUS, 6G and NOUS200 High IQ Societies. He is also the co-Founder of Genius At Work Initiative and the GENIUS Journal.

He is the winner of the WGD 2015 Genius of the Year Award for Europe and the VEDIQ Guild 2019 Intellectual Leader of the Year Award. He is also well known for holding the world record IQ score of 204 sd15 on MATRIQ high range IQ test since May 2019.

Q & A Session

The title of this article is "The Visionary Genius: Iakovos Koukas," how do you feel about that?

I don't even know if I am a genius, let alone a visionary one. However, always having been a creative individual, my original vision consisted of two major parts:

1) bringing together brilliant people in societies where they could interact without competition and disputes, and

2) engaging people in projects where they would be able to use their higher intellects for the benefit of humankind.

Creating 4G High IQ Society, my first IQ society, the seven societies that followed it, uniting all of them under the umbrella of GENIUS High IQ Network and watching it grow and being embraced by the high IQ people marked the era of the successful fulfillment of the first part. The realization of the second part of my vision was marked by the GENIUS AT WORK Initiative, four challenges to solve major world issues, and the GENIUS Journal, the creative journey of the high IQ community, which will be helping the intellectual growth of the society by presenting useful and thought-provoking material.

In terms of geography, culture, and language, where you're your family background reside?

Both of my parents come from the Island of Mykonos, but I was raised in Piraeus, Greece. I come from a quite traditional family of high ethical and cultural standards.

What was growing up like for you?

I always felt somewhat off from the other world. Growing up was quite tough for me, and several times I thought that something was wrong with me. At school, I had quite different interests from my classmates, and I was bored in class. I started studying science and philosophy at the age of 12 and writing novels at the age of 14, which eventually led me to be interested in the Philosophy of Science.

When did you first become aware of your genius-level mental abilities?

Only after achieving high scores on the Greek Mensa supervised IQ tests and later on several high range IQ tests. Until then, I believed that something was fundamentally wrong with my mind, thinking so differently from all the other people around me.

You scored 204 sd15 on the MATRIQ test, designed by Nikolaos U. Soulios, making you the record holder for the highest score on a normed high range test in history. Can you tell us about the strategy you used to solve it and the time you spent?

It is one of the most original verbal tests I have ever encountered. The test has a profound philosophical aspect, so I treated it as a term paper. My philosophical background helped me with the concepts presented, and I devoted 40 hours on the test within one month. I never thought I would score so high; it was a huge surprise.

You are a professional banker. How did you decide to get into this line of work?

It was the only field that was hiring at the time I was applying for getting a job. I never thought I would make a career out of it. It is not something representative of who I am or what I can do, but I had to make a living in a country where people with exceptional abilities do not flourish. Being creative and doing what I love in my spare time has become fulfilling over the last years, especially within the high IQ community.

Who is your favorite historical figure, and why?

Plato, because he believed in eternal ideas that exist outside of time and space, which is a pretty intriguing concept. Alfred North Whitehead once said: "The safest general characterization of the European philosophical tradition is that it consists of a series of footnotes to Plato."

What currently is your favorite passion project?

Making GENIUS Journal the most original and successful platform for presenting thought-provoking ideas within the high IQ community.

What are the main benefits of engaging with the high IQ community?

Meeting like-minded people in a hospitable environment that could help one form new ideas or evolve existing ones and uniting forces for making the world a better place.

What is your vision for the high IQ community of the future?

Changing the world in every possible way we can, our possibilities are vast, space is our limit. Don't let our fears hold us down. Some people may see us as strange ones or as misfits, while we are the most capable individuals for changing things. We - high IQ people - can change the world for the better. Rob Siltanen once wrote for the Think Different Apple commercial, which was narrated by Steve Jobs: "And while some may see them as the crazy ones, we see genius. Because the people who are crazy enough to think they can change the world, are the ones who do."

The Inspirational Genius: Jeffery Alan Ford

Introduction

Jeffery Alan Ford is a proud member of Mensa, the World Genius Directory, the Triple Nine Society, The Poetic Genius Society, The VedIQ Guild, GOTHIQ (Got High IQ) Society, BRAIN (Borderless Revolutionary Advanced Intellectual Network) High IQ Society, THIS (The High Intellect Society), Mensa's Exceptionally & Profoundly Gifted Special Interest Group and 7 other high IQ societies.

Jeffery is a frequent guest on a variety of radio shows and is also a widely published author who has been read by millions of people across the globe. He writes on a wide variety of topics which have been published in the Mensa World Journal, Vidya, Polish Mensa Magazine, Detroit News and Free Press, Arizona Republic, Long Beach Press-Telegram, The Writer, New Writer's Magazine, Lansing State Journal, Celebrate Life, Healing Garden Journal, Business Update, Mesa Tribune, Profiles Magazine, Phoenix Gazette,

Scottsdale Progress Tribune, The Oakland Press, Fred Trost's Outdoor Digest, Nexus News, ChicagoSports.com and many other publications.

Jeffery has served on the Lansing State Journal's Editorial Advisory Board, was the assistant editor of the Nexus News, a political blogger for the Lansing State Journal and a writer for the Detroit News Disabilities Blog. He is also a certified TEFL (Teaching English as a Foreign Language) instructor. He has Asperger's Syndrome and has been advocating and raising awareness for those with Asperger's and the autistic community through writing articles, meeting with political leaders and his highly viewed TEDx Talk. Jeffery is an incredibly inspirational genius as he encourages everyone to embrace and use their differences to make our world a better place to live.

Q & A Session

The title of this article is "The Inspirational Genius: Jeffery Alan Ford," how do you feel about that?

I'm honored and grateful that I'm viewed in such a lofty manner. I think the article's title is appropriate for who I've become and for the many ways in which I've discovered to help others overcome and/or at least contend with the challenges they are facing in their lives. We all experience adversity, and it is how we address it with strength, dignity, love, and passion that defines us and will ultimately be left as our legacy.

In terms of geography, culture, and language, where does your family background reside?

I'm the biological culmination of the mixing of many different Western civilizations including British, Irish, German and Russian.

What was growing up like for you?

Except for having a loving family and a few friends during high school ... my earlier years were a horror show. I have Moebius Syndrome, which resulted in partial facial paralysis and a severe speech impediment during my youth. I could only be understood if I spoke (very slowly) only one syllable at a time until about the fourth grade.

I was teased, bullied, and ostracized throughout most of elementary school and middle school. I also have Asperger's Syndrome (which is considered to be a type of autism) that made it quite challenging to pick up social cues and to communicate effectively with others.

I hated being different ... but now I realize that all of those trials and all of that pain was exactly what I needed to endure and learn from to become someone who could help others in ways that nobody else could do.

I wouldn't wish my childhood on anybody, but I'll always be grateful for the few human beings who stuck by me and helped me to develop into the person I am today.

When did you take your first steps into becoming an inspirational speaker and advocate for the autistic community?

I wasn't diagnosed with Asperger's Syndrome until 2014. The diagnosis made me angry so I thoroughly researched it and quickly determined that the diagnosis was accurate and explained so much about my social struggles, sensory issues and also why I possess an incredible ability to focus and immerse myself into the things I love for hours and hours without any desire to break to eat or socialize.

I knew that I had to use my diagnosis and life experiences to help others and it was at that point that I started meeting with Senators, Representatives and our state's Lt. Governor to advocate for those young children and for adults with Asperger's and autism who are struggling in life.

I doubt that I ever would have desired to become a public speaker if it wasn't for my dedication to helping those with challenges quite similar to the ones that I endured during my most formative years.

It's an absolute honor to serve others' needs, and I'm grateful for these numerous opportunities to do so.

You are known for being a great thinker, writer, speaker, and presenter. What medium do you like the best for expressing your ideas? What medium is most well-received by your intended audience?

My favorite medium for expressing my ideas is being a frequent guest on radio shows and podcasts. I thrive on the live interplay between the hosts, callers, and myself. It's a high wire act because you never really know what will happen on any given show.

I've received equally tremendous feedback for my many articles, public speeches, YouTube videos, and radio/podcast appearances. I do know that many people have teared up during my public lectures and while meeting me. Some folks are even shaking because they are so nervous and thrilled to be able to speak with me before and after these events.

These people indeed remind me that life is beautiful and rich with purpose and meaning.

Who is your favorite historical figure, and why?

My favorite historical figure is probably the poet, Emily Dickinson. Emily was very much a recluse and was quite content to spend the vast majority of her life inside of the comfort of her home.

She thrived from solitude (much like myself) and created great art and communicated from the depths of her soul. Some people need constant companionship of others to feel alive. Emily was a strong woman who knew what was best for her, and she lived her life in her manner and style.

My favorite lines from Miss Dickinson are these:

> "Witchcraft has not a pedigree,
> 'Tis early as our breath,
> And mourners meet it going out
> The moment of our death."

What difficulties have you endured in your life because of your autism, and your extremely high intellect?

My most significant difficulties with Asperger's Syndrome and my gifted intellect both involved communicating with others during my youth and young adulthood.

I honestly believed that everyone around me was pretending to act stupid because they thought it was cool to do so. Back in the 1980's, the cool kids in both my school and in the movies were not the brainy kids. I just figured that people were trying to model their behavior after the (Fast Times at Ridgemont High) Jeff Spicoli types of people. I had no idea that people were doing the best intellectually that they could. Once I learned that I became a more compassionate human being and the world made much more sense to me.

What currently is your favorite passion project?

I love studying and practicing communication techniques. I started researching the art of rapport back around 2000-2001. My favorite communication techniques involve listening, whereas most people seem to prefer the art of speaking. I'm now quite comfortable with my communication skills, but I already know everything that I know

… I want to continue listening carefully and learning from everything that other people know!

What are the main benefits of engaging with the high IQ community?

The main benefits for me involves communicating at a higher level with others without feeling a need to overly simplify things, and also just knowing that it's okay and desirable to be the best person I can be. There is still a lot of social discrimination and mockery that highly intelligent people face in our world. It just feels right when you're around like-minded friends who understand much of what we've all been through at one time or another.

I'll never forget the honor I received when my peers voted me the 2016 World Genius Directory Genius of the Year for America and also the thrill of winning the 2018 VedIQ Guild Genius of the Year award. These awards were never just trophies for my ego, they have provided me with a stronger voice to serve others in need.

What is your vision for the high IQ community of the future?

I would like to see various segments of the high IQ community learn how to reach better out to help lift others in a myriad of different ways.

I'd especially like to see the elder high IQ members working to share their wisdom with others while their lives will still allow it to be done. Life is transient, and we possess a limited window to impact our world and those around us. We should never let our wisdom and experiences to die with us.

So, reach out to others. Write that article, make that call, mentor that child, and encourage those adults both with exceptional abilities and those who are still struggling to make sense of their lives.

We, with high IQs, have, in many ways, won the genetic lottery. Let's share our winnings with the world, and then everyone around us can become winners as well!

The Scholastic Genius: Marios Prodromou

Introduction

Marios Prodromou, M.Ed., is ranked among the top 10 smartest people alive according to the World Genius Directory, and in 2017 received the Genius of the Year for Europe. Winning the 2015-2016 U12 Cyprus National Championship made Marios a well-known and respected Mental Game Coach. He is currently a professional mentoring and mental coach, which has made it possible for him to scholastically inspire many children helping them to be all they can be.

His successful cooperation with Fanos was renewed this season at Othellos and the Athienou Academy. The U14 team has experienced success in International tournaments abroad and most recently ended up winners of the biggest tournament in Cyprus, the Ayia Napa Soccer Festival. Marios has also been promoted to be in charge of the psychology of the first team players of Othellos and also works with players on an individual basis.

Q & A Session

The title of this article is "The Scholastic Genius: Marios Prodromou" how do you feel about that?

I believe it hits the nail on the head as I have a gift from God and can easily motivate and put kids on the right track so in that sense the title fits perfectly and it is an honor to be considered as such by my peers.

In terms of geography, culture, and language, where does your family background reside?

Both my parents were Greeks Cypriot, but I was born in Scotland as they went abroad after the Turkish invasion in 1974 to seek work. I was raised in the Greek Orthodox tradition as there are many Greeks in Scotland and especially Glasgow.

What was growing up like for you?

Growing up was difficult as I lost my father at a young age and moved from Scotland to Cyprus as my mother wanted to be with relatives. This is why I ended up in psychology. To influence kids that have had rough childhoods as I can relate.

When did you first become aware of your genius-level mental abilities?

I became aware of my mental abilities when a teacher told my mother that I should jump at least one grade in elementary school. It was around the age of 7.

You are a professional mental coach. How did you decide to get into this line of work?

As I previously mentioned, I believe that everything in life happens for a reason. My tough childhood was the reason and the driving force to push me in this direction.

Who is your favourite historical figure, and why?

I was born on the 25th of January, and this happens to be the birthday of the Scottish National Poet- Robert Burns. A lot of people told my mother that I should be named Robert because of this. I was influenced a lot by his work.

What currently is your favourite passion project?

My passion is my work and making a difference in my society.

What are the main benefits of engaging with the high IQ community?

Making friends and having interactions with peers that have similar interests and abilities. I am extremely honored to have met Iakovos Koukas, who has the highest recorded IQ score in history and has been influenced a lot by his intelligence and kindness.

What is your vision for the high IQ community of the future?

To collaborate and use our intelligence to make the world a better place for all.

The Universal Genius: Daniel Pohl

Introduction

Daniel Pohl is a Nuclear Engineer and Engineering Manager that has worked on several different nuclear power reactor designs. His work has supported the maintenance of the Canadian energy infrastructure, as well as progressed innovative international reactor designs which will provide secure energy options for developing nations and will support the fight against climate change. Dan has presented to several federal and international nuclear regulatory bodies. He is also a Twice-Exceptional (2e) individual; having achieved IQ scores putting him above the 99.99997th percentile of the population (approximately 1 in 5,000,000).

Daniel belongs to over 30 High IQ societies; including Mensa, The World Genius Directory, Torr and is an Honorary Member of the

world's most exclusive active High IQ Society; NOUS200. He is currently a Board Member and Chief Media Officer for the GENIUS High IQ Network, and the Founder and Editor-in-Chief for GENIUS Journal.

Q & A Session

The title of this article is "The Universal Genius: Daniel Pohl," how do you feel about that?

Undeniably this title is an honour. When Iakovos Koukas suggested this title, I was taken aback. You have to understand when the current IQ world record holder (204 sd15) tells you are a universal genius; it packs a punch. I feel this may be an overstatement, but it fits my character. I have always had a wide variety of interests and have made significant contributions to many different fields.

Therefore, by definition, I guess I am a polymath or Renaissance man.

In terms of geography, culture, and language, where you're your family background reside?

Newfoundland is the Canadian province in which I was born. My mother's family were fishermen from England. My father's family is originally from Germany. I spoke English and German at an early age (less than one-year-old), but I lost the ability to talk to German after my parents separated. An interesting fact is that Linus Pauling (Nobel Prize Chemistry 1954 and Peace 1962) is my third cousin. Our common ancestor is Johann Andreas Pauling (1767-1842). His side of the family moved westward from Germany to the USA in the mid-1800's; whereas, my side of the family moved eastward from Germany into modern-day Poland and Ukraine. My family's surname change from Pauling to Pohling to Pohl over the next few generations since Pohl is a common spelling for Paul in Poland.

What was growing up like for you?

I was a happy, energetic, and thoughtful child in spite of my family's many abrupt transitions. Like many children, my parents had domestic issues. They eventually divorced, and my mother moved us to Ontario, Canada. My mother tried her best, but on a few occasions, we found ourselves homeless and living out of our car. This was an eye-opening experience for me. I continued to go to school during this period where people treated me the same as before, which was in stark contrast with what I was personally experiencing. For example, I joined sports teams to use the showers and social clubs to avoid having to go home; however, my peers just thought I was an outgoing and social individual.

When did you first become aware of your genius-level mental abilities?

Very early, indeed. When I was 4 or 5, my mother suspected that I doubted the existence of Santa Claus so early on Christmas morning she grabbed a pair of boots and tracked snow through the house to leave evidence to convince me of this myth. When I saw the tracks, I instantly recognized the pattern of the sole as my father's boots and knew my mother was trying to pull one over on me. Rather than upset her and my older sister, Tracey, I pretended that I still believed in Santa for several years. Tracey, 5 years my senior, also

made me do her mathematics homework with great success even before I started my own schooling.

You are a Nuclear Engineer. How did you decide to get into this line of work?

Engineering was a natural choice for me. Growing up poor, I always looked forward to having a stable career. I learned from a friend when I was 14 years old that engineers would always have good-paying jobs where they used science and mathematics to solve interesting problems. Having strong scientific and mathematical skills, my mind was set. The only question left to answer was which type of engineering. I later learned that Chemical Engineering has the largest proportion of female students, so that made my decision easy, plus I had a natural talent for Chemistry.

In my final undergraduate year, I took a Reactor Physics course that opened my eyes to Nuclear Engineering. I was the top student in the class, so I pursued a Masters of Science in Engineering Physics at McMaster University. I love the fundamental aspects of nuclear physics and two-phase fluid flow.

Who is your favorite historical figure and why?

Researching historical figures has been a favourite pastime of mine. There are a few polymaths that are my favourites; including, Linus Pauling, Leonardo Di Vinci, and Johann Wolfgang von Goethe. Their range of intellectual abilities and masterful works are shining examples of human potential that we all should aspire to reach.

What currently is your favorite passion project?

Seriously, my favourite passion project is always my next one. I have Attention Deficit Hyperactivity Disorder (ADHD). Although there are negative aspects of ADHD, it is also one of my superpowers. I am incredibly interested in everything around me, and this allows me to get behind new and exciting things energetically. It is, without a doubt, one of the reasons why I am a "Universal Genius." I have used this passion in my latest endeavour as the Editor-in-Chief of The GENIUS Journal. I hope it shows.

What are the main benefits of engaging with the high IQ community?

All of the people that I meet in the global intellectual community have been fascinating. I enjoy the phenomenon of people, as we are all so unique. Those with rare mental abilities have depth, complexity, and originality that blows me away. Developing personal relationships with these individuals has been very rewarding for me.

What is your vision for the high IQ community of the future?

Learning from Marylou Kelly Streznewski in her book "Gifted Grown Ups: The Mixed Blessings of Extraordinary Potential," gifted people may make up as much as 20 percent of the prison population. Given that estimates of giftedness in the population range from 2 to 5 percent, her data suggests that the gifted are overrepresented in the prison population. The majority of inmates are young males, often from lower socioeconomic groups. I assert that we are neglecting one of our most valuable resources, our children. My vision would be to spread awareness of 2e (twice-exceptional), and multi-e individuals to help break down the stigma associated with many so-called "mental disorders" and allow us to uncover the hidden potential within our exceptional children. By assisting the high IQ community of tomorrow, our gifted children, to reach their potential, we can make the world a better place.

The Artistic Genius: Anja Jaenicke

Introduction

Anja Jaenicke is an artistic genius par excellence. She is CEO of her own company HIQ-MEDIA-POOL INC. With her company she was responsible for the script development of the films "The Perfect Job" (2013), "Eagle's Dance" (2014), "The Mirror of Being" (2016) and "Lucky ME" (2017-2018). She has been a prolific actress and writer for several decades and is a member of Poetic Genius Society and listed in the World Genius Directory.

Anja's considerable acting talent was recognized early on. She received so many role offerings that she decided to leave school at the age of 16 to devote herself entirely to acting. Anja Jaenicke made her debut in the film "Heimkind" (1977). She was in the movie David (1979), and the ARD thriller series "Tatort" (1980).

Anja Jaenicke toured with the play "The Merry Wives of Windsor" (1980). This was followed by the play "Stella" (1982) in which the later Drombusch main actor Michael Degen directed. She was engaged for a role in the TV movie "Hanna of eight to eight" and a series of the ARD series "Crime Lesson" (1983). In the same year, she played

the lead role in the literary adaptation "The swing." The family saga of Percy Adlon shows the life of the Lautenschlag family at the turn of the century. Other roles have been played by Christine Kaufmann, Ulrich Tukur and Günter Strack. The movie was a massive success with viewers, press, and critics, and Anja Jaenicke became a much sought after actress. Among others she worked with Franco Nero, Christoph Waltz and the Chileen director Antonio Skarmeta. Yet another notable work was the film Wahnfried where Anja collaborated with Christoph Waltz.

Celebrated as a great acting talent, she was awarded the Bavarian Television Prize (1983), the Bambi (1984) and the German Actor Award of the Federal Association of German Film and Television Directors (1985). She has also been widely recognized for directing, writing, poetry, and artwork being named the 2018 Distinguished Visionary of the Year Award - The VedIQ Guild Foundation.

Q & A Session

The title of this article is "The Artistic Genius: Anja Jaenicke," how do you feel about that?

The root of Genius is Geno which pleases me because it identifies the whole kind of humanity.

Genetically connected as one large conscious entity in a state of development.

And art is a fluid byproduct of developmental communication. Our ancient relatives left paintings and drawings of their cultural and spiritual heritage in caves and on rocks all over the planet, and we use art to communicate with the deepest spirits within ourselves. Art was the forebringer of science and illumination in the Renaissance, and art continues to be an important part of our daily lives. Be it music, computer art or film.

In terms of geography, culture, and language, where does your family background reside?

That is hard to answer, but I will try my very best. I have been born in the divided city of Berlin West, Germany. My mother came from the city of Gdansk (Poland) where her father, my grandfather was a famous journalist and cartoonist. My father is a Greek son of an architect, born in Turkey and immigrated to Berlin. Unfortunately, he left me in a tough time of my life, when I was ten years old, and our relationship has been very loose since. I was born in Germany, and my native language is German. I have lived in other countries for more than half of my life. I feel a bit Canadian because, in Canada, I had the best time of my entire life. I am also very French, having spent many years in the South West of France. I have been born with the talent to speak languages that I have never heard before. I started to read french children's books at the age of five, and I read Italian "Topolino" comics. When I realized that people find it a bit weird, I continued reading secretly at night. With twelve I translated an English screenplay into German for a theater play at school and read Henry Miller and Charles Bukowski under the desk in class which brought me the worst English grade ever. In many ways, I am very European, and also a bit German in my pedantic punctuality. But my cultural home is the English language. It is the language in which I write poetry.

What was growing up like for you?

I guess I have never really grown up. I am still a curious child ready for new experiences. But my real childhood ended when I was nine years old. I had a very ill mother, and as her only child, I cared for her and soon became her mother. I had to act responsible for another person, and the load was so big for me that everything else became unimportant. I missed a lot of school at that time, and we moved very often. I remember sitting in my mother's bedroom and reading through large moving boxes with books. I read Kant and Schopenhauer and the ancient Greeks. The books became my island of happiness.

When did you first become aware of your artistic abilities?

Nature is a big part of my life. I need the outdoors to open my mind and make me feel alive. I have crossed the Canadian wilderness alone with my sled dog team, and it was an almost mystical experience. I think this feeling of smallness in the face of the earth gave me the urge to write poetry.

You are known for being a great actor, writer, poet, and artist. What role does intelligence play in your creativity?

Intelligence is the impulse, creativity the tool, and art the output.

Who is your favourite figure in the history of artistry, and why?

There are many influences in artistry but also in science. It is tough to name a single one. Douglas Hofstadter is an influence and Edgar Allan Poe, maybe also Wittgenstein. And the children of the elementary school in Dunster B.C.

What difficulties have you endured in your life because of your extremely high intellect?

When I was a kid, I had extreme anxieties. I always felt misunderstood or misinterpreted. I knew I was different, but I didn't know why. Later in my life I had a job that in former times came from country fairs and the circus and not from universities. Being an actor is beautiful in the moment you act, but the surroundings are very superficial and a pool of vanity. I have never really liked being in the center of attention. Being alone has never been a problem; I love it.

What currently is your favourite passion project?

My passions wander between writing and painting, which I love very much. Currently, I also like to make documentary films. I finished one, and I am working on an exciting new project right now.

What are the main benefits of engaging with the high IQ community?

Since my first engagement in the old IHIQS and Poetic Genius Society, I have made many good friends. The high IQ community has become a family for me.

What is your vision for the high IQ community of the future?

The most intelligent people on earth have the potential to give birth to great ideas, but as they are a species of strong individualists, cooperation sometimes seems difficult. I would wish for less competitive behavior and more collaboration. Although we are small in percentage, we are many. Together we are a force that can not be overheard.
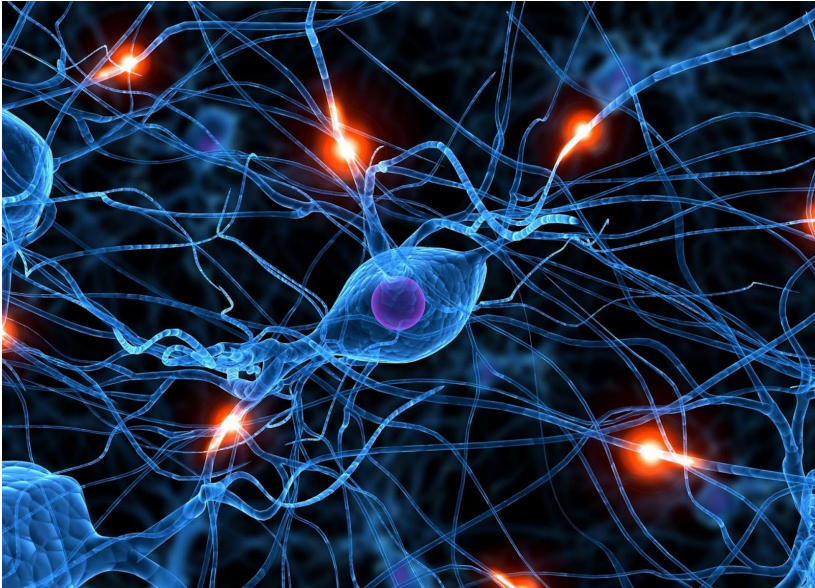

Self Portrait by Anja Jaenicke

Publications

Nothing is stronger than an idea whose time has come.

-Victor Hugo

Between Cosmos and Consciousness

Iakovos Koukas

Prologue

The title of this essay refers to the relationship between Mother Nature (Cosmos) and her child: Human Mind (Consciousness). It illustrates the author's attempt to explore the ontological model of a parent-child relationship, which has many similarities that characterize analogous family relationships in human societies and differs from the fact that the use of the terms "mother" and "child" is only metaphorical and not literal.

The child (Human Mind) imitates mother's (Mother Nature's) everyday functioning, as all ordinary children do, observing their typical mothers in typical family relationships. The difference is that it is an imitation of a higher level of consciousness, which does not distinguish typical young children.

Nature uses a particular way of organizing and managing its material components and internal processes. Intelligence uses a similar organizational approach, not with materials but with the intellectual elements it manages, and that is information. This method consists of using a particular numerical pattern or specific numerical set: Tetrad.

The Quadruplet model appears as the tendency for the coexistence, composition, organization, and function of physical beings in quadruplets as a way of cosmos organizing natural things.

The first part will provide some indicative cases of the appearance of the Tetrad in Cosmos. The second part will highlight the presence of the Tetrad in Consciousness as a method of using quadruplet terms and quadruplet theories, each referring to the nature of a being or event or phenomenon or situation.

There, by briefly quoting parts of the work of human history's greatest intellectuals, I will approach the cognitive aspect of this phenomenon. Let me point out that most of the thinkers mentioned belong to the circle of philosophers, because of their characteristic to formulate well-presented theories which are based on cultural symbols and natural archetypes.

I want to thank readers in advance for continuing to read without prejudice the subject I am exploring here and without references to subculture books dealing with issues within the aspect of mysticism. In addition, I would owe great gratitude to all those who will use their critical thinking on all the arguments and ideas presented in this small but comprehensive essay.

First Part: The Tetrad in Cosmos

The Presence of Tetrad

Cosmos is governed by laws that have been the subject of decades of extensive research by several renowned scientists worldwide. In addition, it obeys in numerical models that are studied more by philosophers and mystics than by scientists, perhaps because of the latter's reluctance to divert their attention beyond the capabilities and power of their experimental instruments, which is probably caused by the dominant pervasive positivist perception, which dictates that meaning has only what can be empirically proven, while any further conjecture is devoid of meaning.

Perhaps only some philosophers explored the importance of the numerical principles of the universe. Philosophical teachings within monism argue that the universe is governed by one regulatory principle, dualism teaches that nature has two principles, while

pluralistic theories use more than two principles as regulators of the natural aspects of our universe.

The Tetrad or Quadruple pattern or archetype is defined as the dominant regulator of the numerical order of the universe, whose language is mathematics. This model appears as a distinct number of elements and as a tendency for natural things and phenomena to be coexisted, assembled, organized, and operated in Tetrads.

Philosophers of antiquity first demonstrated the importance of Tetrad as an archetypal symbol and in the last two centuries by scientists, who have also discovered several Tetrads in nature and created categorizations of natural things.

Several scientists, especially of the twentieth century, have revealed the ancient nature of several things in our universe. From their findings, Tetrad emerges as the dominant universal model of order in nature.

Cosmological Level

Today, we know that the space-time of the universe consists of four dimensions: length, width, height, and time. These four dimensions are inextricably linked to one single entity, as Albert Einstein (1879-1955) proved in his Special Theory of Relativity (1905). Length, width, and height are not separated by time, which is the fourth dimension, but constitute with it a single and uninterrupted entity: space-time.

According to his theory of General Relativity (1917), space-time is not flat but positively curved, which means its geometry has a spherical type of curvature that is caused by the gravity of bodies with mass, and especially with an enormous mass, such as stars and planets.

Geometry of this type was first introduced by the German mathematician Georg Friedrich Bernhard Riemann (1826-1866) and was adopted by Albert Einstein because it successfully described the properties of the four-dimensional space-time.

In General Relativity, the gravity of massive celestial bodies distorts light rays which pass through areas where large masses are found. In the four-dimensional space-time, light progresses along curves of minimal length, the geodesic lines, and the curvature of space is determined by the amount of matter present in it.

A system satisfactorily describes each point with four coordinates, three for space (x, y, and z) and one for time (t). The true nature of space-time is almost incomprehensible to the average human, who usually perceives the universe as something flat and static as in Euclidean geometry. The purpose of General Relativity was to describe the macroscopic universe, the inconceivably vast macrocosm and not its smaller parts, such as planetary neighborhoods that are successfully described by Euclidean geometry, which for small areas of the universe, like Earth, retains a reliable descriptive power.

In the same theory, Einstein introduced a new concept of gravity, dealing with the consequence that space is not flat, thereby altering man's image of the world and laying the foundations of modern physics on a basis different from that which it was formed after the work of Isaac Newton (1642-1727).

The latter, in his classic work "Philosophiæ Naturalis Principia Mathematica" (1687), formulated four laws, three of which concerned body movements and the fourth, the law of universal gravitation. However, although Newton's theories were revolutionary for science, they described a world where space and time were separate entities rather than interconnected, like Einstein's space-time.

It is a fact that the four dimensions of space-time are the most ideal that the universe could have for evolving all those complex physical

events we observe today. Many prominent scientists hold this belief, including Peter Atkins, a professor of physics and chemistry at the University of Oxford, who states in his book Creation Revisited: "In a universe characterized by inherent simplicity but abundant in properties, there must be forces ...In a different from our dimensionality of space-time, these forces seem to be incompatible with each other. Only in space-time with our dimensionality (three spatial and one temporal dimension) the forces are compatible with the existence of matter ..."

In the same book, he states: "Why was the universe born with time and not merely as space outside time, outside eternity? An answer begins to emerge: if time was absent from space and space was four-dimensional, having in its geometry the term $+(ct)_2$ instead of $-(ct)_2$, then the path in any direction along this fourth dimension would never lead the universe to a unique point. With our one-dimensional time we can trace the entire universe to the moment when it was a unique point when it began, while in the case of spatial time, the history of the universe would never have a definite beginning." Therefore, the space-time of the universe is the ideal combination of dimensions that could give birth to various natural and historical events.

The Neighborhood of the Earth

Humans have established some principles that serve our living. On our planet, we often determine our position and orientation based

on a four-point system of the planetary horizon. These four points are East, West, North, and South. East is the part of the horizon from which we see the Sun rising. West, in contrast to the East, is the point where the Sun sets and where the meridian axis intersects to the left the north-south meridian line when an observer looks north. North is the place to our left when looking to the East and is marked by the constellations of Ursa Major and Ursa Minor.

South is the point to our right when we look to the East. Compasses, based on magnetic properties and measuring angles between any object and the magnetic meridian, manage to orient their user to the four cardinal directions. The magnetic axis of the compass magnet is always parallel to the north-south diameter.

We measure time in tropical years. Each tropical year has four successive periods of time with different climatic conditions, each of the four seasons: spring, summer, autumn, and winter. Each of these four seasons corresponds to one of the four arcs of the Earth's orbit around the Sun. Their dividing points are the equatorial points, the tropics, and the solstice points. The division of the year into four seasons is caused by the inclination of the Earth's axis around the Sun, which results in the Earth sometimes leaning to the north and sometimes to its southern hemisphere.

There are four prevalent climates in each of four seasons: dry, hot, humid, and cold.

Earth is in a perpetual dependence on the Sun, which feeds it daily with its precious energy, the product of thermonuclear reactions inside it. The Sun as a star consists of four zones: the core, the radiation zone, the convection zone, and the solar atmosphere. The solar atmosphere is made up of four layers: the photosphere, the chromosphere, the transition region, and the corona.

Quantum Level

The matter that makes up celestial bodies, such as galaxies, stars, planets, and satellites, is subdivided into countless tiny particles, distinguished by several different types and properties. The atomic philosophers Leucippus and Democritus (5th century BCE) argued that the constituents of beings are complete and empty. They considered the whole to be divided into infinite tiny particles called atoms, which means indivisible because they could not be further separated.

Today we know that atoms have an internal structure. Atomic properties have been studied during the last decades by quantum physicists who use highly advanced experimental instruments. Mainly thanks to the work of Joseph-John Thompson (1856-1940), Ernest Rutherford (1871-1937), Niels Bohr (1885-1962) and Paul Dirac (1902-1984), and without overlooking the contribution of other physicists, we now have a satisfactory description of the elementary particle world: the Standard Model, which includes particles with exotic names and properties.

Physicists agree that only four particles of the Standard Model constitute the ordinary matter of the universe and are involved in the formation of atoms and molecules, while the existence of all the rest seems not to make any sense. The four common matter particles are: up quark, down quark, electron and electron neutrino.

The up and down quarks are inseparable particles, which are never meet in isolation, but only inside other subatomic particles: the

protons and neutrons of the atomic nucleus. All quarks are known for their strange properties, which are the "flavors" that differ between different types of quarks, and the "colors" that may differ between similar quarks. It is impossible for quarks of the same colors to be combined, but possible between quarks of the same flavors but different colors.

Electron is a particle without internal structure and with less mass than quarks, and it's distinguished by its negative electric charge, which is attracted by the positively charged nucleus. The electron moves at defined elliptical orbits around the atomic nucleus, whose mass is several thousand times greater than that of the electron and depends on the number of protons and electrons that make it up. The electrons are equal to the protons to maintain the atom's electrical neutrality.

Four quantum numbers adequately describe each possible state in which an electron can be found: the principal quantum number (n), the azimuthal quantum number (l), the magnetic quantum number (m) and the spin quantum number (s).

According to the Pauli Exclusion Principle (1925), each state described by a particular tetrad of quantum numbers corresponds to only one electron of the atom. Within the same atom, it is impossible for two electrons to coexist having the same four quantum numbers, which means having precisely the same properties.

Neutrons are particles with infinitesimal mass and no charge, traveling at the speed of light. They interact little with the other particles of matter, which makes their detection extremely difficult and possible only because of their spin-like properties. Wolfgang Pauli (1900-1958) proposed their existence in 1931, in an attempt to explain the quantum behavior of atomic nuclei. Their existence was proven experimentally in 1956. Neutrons depend their names on charged leptons, such as electrons, because when they interact with other particles, they exhibit properties dependent on the type of the charged lepton with which they are connected.

All material particles interact with each other, exchanging energy particles. Today we know that the forces or interactions that are

developed between the material particles are four: gravitational, electromagnetic, strong, and weak.

Gravitational interaction is exerted between bodies having mass, and it's particularly strong among bodies with substantial mass, such as celestial bodies. It is the interaction that plays a decisive role in the expansion of the universe, in the arrangement of stars and galaxies, it has an infinite range, and it has been proven by Einstein's General Theory of Relativity to be the cause of space-time curvature and the distortion of light rays which pass through areas where massive bodies are found.

Electromagnetic interaction refers to charges, and it is exerted between electrically charged bodies. It is an infinite-range interaction that holds the electron in the atomic nucleus, holds together the atoms and molecules, regulates the chemical reactions, compounds, and formations of matter.

The strong nuclear interaction holds the protons and neutrons of the nucleus, as well as the quarks within the protons and neutrons. It is considered to be the strongest of all interactions, but its range is limited to the nucleus of the atom and is negligible for distances greater than one femtometre.

The weak nuclear force is mainly responsible for the interactions of leptons and the emission of electrons from the nuclei during the radioactive beta decays, which mostly occur inside the stars.

We distinguish four types of particles that are the carriers of these four interactions: baryons, photons, gluons, and intermediate vector bosons. Baryons are the carriers of gravitational interaction. They are characterized by infinite range but lack of mass and charge. Photons are carriers of electromagnetic interaction; they have infinite range, but lack mass and charge, and travel at the speed of light. Gluons are the carriers of strong nuclear interaction, and they have zero mass and charge. Intermediate vector bosons are the carriers of weak nuclear interaction, and they are characterized by large mass and some of them by charge as well.

The elementary particles of the Standard Model form four major classes of particles: leptons, baryons, mesons, and bosons.

All particles of the universe are distinguished by four major properties: mass, charge, spin, and magnetic moment.

The most interesting of these is the spin (self-rotation), which indicates the measure of the particle's internal rotation, its ability to look different if it rotates around its imaginary axis, and how much rotation it must perform in order to look the same as before spinning. Each particle is characterized by only one type of spin and no more.

A total of four types of spin are distinguished in elementary particles: spin 0, spin ½, spin 1 and spin 2. Spin 0 particles, such as mesons, look the same in any direction. Spin ½ particles such as leptons and quarks must rotate two whole circles to look the same as before rotation. Spin 1 particles, such as photons, look different in different directions and have to rotate an entire circle, or 360°, to look as they were before rotation. Spin 2 particles, such as baryons, must be rotated in half a circle, or 180°, to look as before performing the rotation.

The ordinary matter of the universe, in addition to being composed of only four types of particles, can also exist in four fundamental states: solid, liquid, gas, and plasma.

The densest material bodies are in solid state, the molecules of which exhibit strong cohesion and a lattice-like organizational structure.

In a liquid state, there are fluid bodies whose molecules are less cohesive than solids and maintain a short distance arrangement with each other.

In the gaseous state, the bodies of their molecules appear negligible or not coherent and move in random directions in space.

In the plasma state, there are bodies whose atoms are highly ionized, which means they have lost their electrons.

Plasma is made up of atoms, too many ions, and free electrons and is observed in areas where electric discharges occur or there is strong radiation or high temperatures. Sun, aurora, and almost 90% of matter in the universe are in the hyper-ionized state of plasma. In 1879 Sir William Crookes (1832-1919) first suggested that matter could occur in a fourth state beyond the three known until then. His

hypothesis was confirmed experimentally many years later, and the new state of matter he had predicted was named plasma.
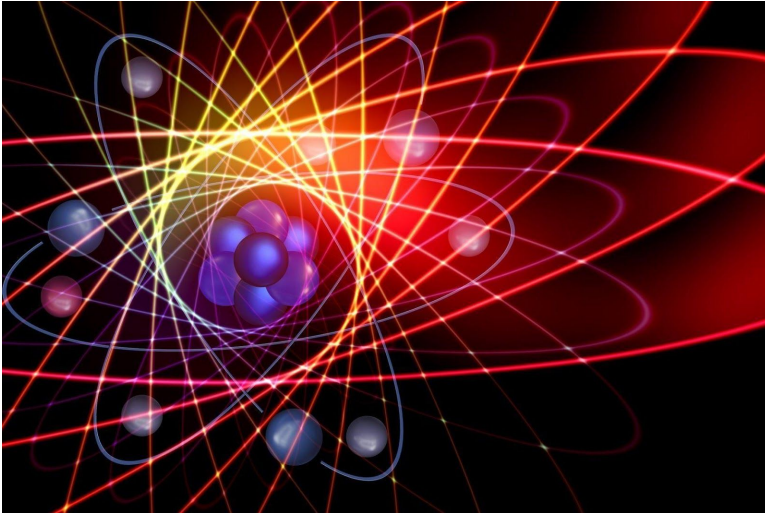
The Tetrads of Life

Through evolution and the ever-increasing organization of matter, the first molecules of organic matter appeared on our planet, which formed the basis for the subsequent emergence of more complex life forms, with the peak of it being Homo sapiens.

The development of life on Earth was mainly based on four chemical elements, which make up 96% of the composition of all living organisms: hydrogen, oxygen, nitrogen, and carbon.

This happens because the atoms of these elements can participate in the formation of covalent bonds, which are created when the atoms that are attracted, both offer an electron, thereby forming a common pair of electrons to which they are connected.

In addition, they can participate in the formation of covalent bonds both between atoms of the same element and between atoms other than these four elements. The above-mentioned elements are also involved in the formation of organic molecules, which are the structural and functional elements of organisms because they are distinguished by stability; they create stable structures and

diversity; they provide a great variety of functional and morphological characteristics.

Hydrogen, oxygen, nitrogen and carbon make up the most of the four basic types of organic compounds or macromolecules: proteins, carbohydrates, lipids, and nucleic acids. Proteins are the structural components of the cell, which also serve a variety of functions. Carbohydrates are the cell's source of energy. Lipids are the main constituents of cell membranes. Nucleic acids determine the production of proteins and control the functions and inheritance characteristics of living organisms.

All genetic information about the functions and characteristics of living organisms exists in the nucleic acid called DNA (deoxyribonucleic acid), which is a complex macromolecule that acts as a carrier of genetic material and consists of two spirally twisted strands in the form of double helix.

Each DNA strand is formed by the linear sequence of four organic molecular structures called nucleobases: adenine, cytosine, guanine, and thymine.

These four nucleobases, which are the letters of the genetic language and are abbreviated with the Latin letters A (adenine), C (cytosine), G (guanine) and T (thymine), are responsible for the amino acid sequence, which is the genetic code and the building blocks of proteins.

The arrangement of the four nucleobases along the strand determines the genetic information. In groups with a specific sequence, the nucleobases determine the selection of amino acids in a particular order within the protein chain.

The study of the structure of a protein after its formation is performed in four levels of structure: the primary structure, which relates to the amino acid sequence, the secondary structure, which corresponds to the folding of the polypeptide chain and its transformation into a helical or folded form, the tertiary structure, which is the folding in space of an already helical or folded polypeptide chain to obtain a specific form, and the quaternary structure, which refers to the final shape of the protein, i.e., the joining of folded polypeptide chains in a single protein macromolecule. These protein molecules constitute the structural

molecules of cells of all living organisms and compose their body tissues.

Among the most vital tissues of an organism is its blood, as it is responsible for the body's most vital functions, such as maintaining body temperature at normal levels, transferring oxygen, enzymes, and hormones to the tissues, removing useless compounds, such as carbon dioxide, and their transport to organs that eliminate them, and the defense against various pathogenic microorganisms.

Human blood consists of four different elements: red blood cells, white blood cells, platelets and plasma. The red blood cells are small cells produced in the bone marrow, have a lifespan of about one hundred days, and their proportion in the blood is four million per cubic millimeter of blood. They have a red color, due to the substance they contain; hemoglobin, which is responsible both for the red color of the blood, but also for the function of oxygen transfer from the lungs to the tissues. White blood cells are produced in the spleen, lymph nodes, and bone marrow; they have no color, which is why they are called white, and their lifespan does not exceed two weeks and therefore the body continually produces new ones. Their mission is to protect the body against pathogenic microbes and to replenish damaged tissue. They are larger than the red blood cells because they have more nuclei. Platelets are produced in the bone marrow, last about a week and their function

is to coagulate the blood when a wound is created and to stop the bleeding, thanks to the help of their thrombokinase. This property of platelets makes them extremely important, as the loss of too much blood can endanger the life of the bleeding organism. Plasma is a yellowish liquid, which makes up 90% of water and 10% of various compounds and makes up 58% of the blood. Inside plasma are the red and white blood cells and platelets, with which they coagulate when a wound is formed.

Blood is also quaternary in the presence or absence of certain substances, by which it is divided into four groups, the characteristics of which are constant throughout the life of an organism and pass on from parent to offspring. Division into groups is based on the presence or absence of four substances in the blood: A antigen, B antigen, antibody anti-A, and antibody anti-B.

The four blood groups are: A, which contains A antigen and antibody anti-B, B, which has B antigen and antibody anti-A, AB, which has antigens A and B but has no antibodies, and O, which does not contain antigens, but does contain antibodies anti-A and anti-B.

Blood is the vital fluid that keeps the tissue of living beings alive. Organic tissues make up the body organs of the living organisms. The most complex organ is the brain and especially the human brain, which is the central organ of the human nervous system. Thanks to the special construction of their brains, humans have been able to develop an advanced level of consciousness and intelligence, rule among the other animals on Earth, to form technological societies, to produce culture, science, art, technology, philosophy and to acquire knowledge about the nature of the universe and themselves.

The cerebrum is the largest part of the human brain, and it is divided into hemispheres. Each hemisphere is divided into four lobes: the frontal, temporal, parietal, and occipital lobe. The frontal lobe is associated with executive functions, such as self-control, planning, reasoning, and abstract thought, while the occipital lobe is dedicated to vision. Within each lobe, cortical areas are associated with specific functions, such as sensory, motor, and association regions.

Modern IQ assessments measure the efficiency of human cognitive functions.

One of the most reliable modern IQ tests designed to measure general intelligence and cognitive ability is WAIS-IV (Wechsler Adult Intelligence Scale, 4th version).

There are four index scores in WAIS-IV representing significant components of intelligence:

- Verbal Comprehension Index (VCI)
- Perceptual Reasoning Index (PRI)
- Working Memory Index (WMI)
- Processing Speed Index (PSI)

There are cognitive functions, though, that cannot be assessed through modern IQ tests, such as creativity, which is among the most important aspects of intelligence.

The Tetrad in Science

With the use of examples from several disciplines of science, this section highlighted the frequent occurrence of the Tetrad in all scales of the natural world and presented the intrinsic natural tendency of things to follow the quadruple organizational pattern.

It seems that our world is organized numerically into four elements at its four basic levels: cosmological, quantum, biological, and

cognitive. At this point, I will make clear that it is not my intention to present Tetrad as the sole but only as the dominant numerical archetype of nature, as it occurs more frequently at all-natural levels.

Acknowledging that mathematics is the universal code of natural phenomena, I would point out that the Tetrad is that part or sequence of code that appears with the highest relative frequency, and that it deserves a special place in the philosophy of science.

Always far from numerical and mystical interpretations, and constantly within the framework of a useful natural philosophy, we can discover the explanation of this phenomenon, consisting in the fact that nature does not suffice for less than four and does not exceed with more than four integral factors or parts.

This is the tendency for its structures to be simultaneously simple and complete at all levels, by placing in a single entity the minimum elements that ensure its existence and, at the same time, the maximum required to maintain it, which are usually no less and no more than four fundamental elements.

Scientists unconsciously mimic nature and use the Tetrad as a theoretical tool. Several scientists have invented four terms, and their quadruple theories can adequately describe the nature of a particular phenomenon or object. It may sometimes turn out that the use of tetrads in scientific theories is an inevitable scientific necessity for individual disciplines since nature contains innumerable quadruples of things and, at the same time, scientists seek the scientific truth and the reflection of the physical reality into their theories.

Moreover, if the majority of things are quadruple, then the majority and the core of verifiable theories should be quadruple as well.

The explanation of quadruples which our consciousness produces lies in the fact that we are not only observers or imitators, but integral parts of nature, and therefore it should not seem strange that we use, at a theoretical-intellectual level, precisely the same pattern of order that nature uses at its practical-material level: the Tetrad.

To be continued...

Mocking the Genius

Aishwarya Trivedi
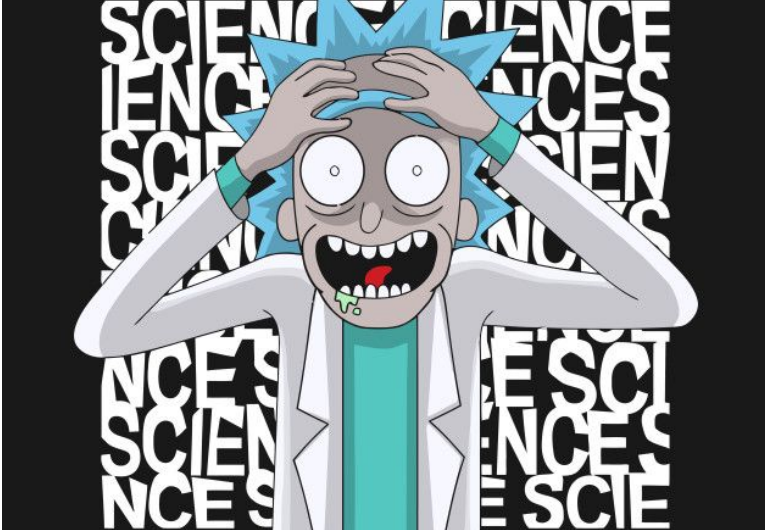
"People who claim to have a High IQ amount to nothing. High IQ societies are for braggers, snobs and hypocrites."

"Having some arbitrary index value doesn't make you a genius. Have you actually done anything other than have a high IQ, write about the high IQ and talk of the high IQ?"

"Stephen Hawking said that those who boast their IQs are losers. Don't boast your high IQ."

If you are in the top 2% and are a part of various High IQ networking platforms in the cyberspace, you are no stranger to find yourself often mocked for being gifted. Not only are you trolled and heckled, some of you also find yourself in constant scrutiny for what you do in your life with the said "giftedness." Granted, some of the questions are appropriately placed. But caterpillars can't understand the language of butterflies, in my opinion. Often times, the argument becomes baseless. You find yourself in an ugly position when they judge your core character based on your acknowledgement of the IQ you possess. The irony is, as much as they bring you down by repeating to you that being gifted still makes you a normal person

and that there is no special status to that, they fail to see that you are also prone to failure in your aspirations just as a normal person does.

Consider IQ or giftedness as an extra pair of red-coloured underwear. The colour isn't important, but for the sake of your imagination, let's say they are red. You've always had this underwear. You even have a friend who has an extra pair, but his underwear is brighter and lacier than yours. The underwear can be pleasant and unpleasant, depending on the situation you are in. Having this underwear isn't an achievement in itself for you or your friend, but where you wear it to makes the difference. You wear it while playing games, while studying, and even through casual intellectual banter.

"Consider IQ or giftedness as an extra pair of red-coloured underwear." - Aishwarya Trivedi

Since you only knew a few people with this underwear, you felt awkward to talk about it to others who didn't have it. You realized those who weren't gifted with this underwear were absolutely

oblivious about the existence of such a pair. But when the underwear test came your way, you found out that having this underwear had its virtues. What felt commonplace and rudimentary by having that underwear, now made you realize it is indeed a gifted pair. Yes, they mocked that it is important to wear those underwear. But you knew that one could wear it only when one has it. Those who administered the test told you how only 2% of people in this world possessed such underwear. You were thrilled. You went onto social media and spoke about it. You were proud, and you wanted everyone to realize that you were a cut above. Yes, pride slid into the territory of arrogance, but that didn't matter as you were in the top 2% bracket that owned an extra pair of red underwear.

Some of your friends and family were gloriously surprised and delighted. Others were livid and jealous. The former cheered you on, and the latter sneered at you for having an extra pair of red underwear and doing nothing about it. They attempted to suppress your self-confidence and esteem because they didn't have a pair themselves. They made it their job to be contemptuous of all the various Lacey Red Underwear Societies you were now a part of. They left no stone unturned to put you down, and surprisingly, sometimes that did work against your morale! IQ and giftedness is acknowledging that you have that lovely red underwear; genius is wearing the red underwear and doing what you do regardless of the commentary.

When you are called out for calling yourself a genius because of your giftedness and high IQ score, understand that it is not your job to prove it to anyone, just as it is not your job to explain when and why you wear the red underwear. It is a part of you, which makes it your choice to address what you wish to tell the world. The bullying and mockery only affects you when you allow it to affect you. When you understand that their opinions cannot hamper your direction in life, you can continue wearing your red underwear; however, you like. It is hard for a gifted person to make any rational conversation over the Internet these days. Before you can attempt to explain and administer the problem at hand, the judgments are hurled at you for raising the High IQ banner. There is a reason why you count as the 'gifted' and those who ridicule you don't. You cannot argue with the fool before becoming the fool yourself. After all, a high IQ without the right attitude can be a waste of a gift.

Peak IQ: Estimating Intellectual Potential Using Order Statistics

Daniel Pohl

Introduction

The application of order statistics to IQ estimation has received little to no attention from psychologists, psychometricians, and academia. A novel approach using order statistics is offered to provide a quantitative basis for a "high level of probability" in Peak IQ estimation. This paper reviews the origins of the concept of True IQ, defines Peak IQ, and applies order statistics to IQ estimation. It presents a derivation of the univariate order statistics required to estimate Peak IQ for individual intelligence types and extends these concepts to allow evaluation of Peak IQ for the multivariate case (i.e., multiple intelligence types).

Background

True IQ Definition

Dr. Jason Betts coined the term True IQ (alternatively TrueIQ)[1,2]:

"TrueIQ is the average general IQ of a person in all general and everyday situations. It is the average of all of their types of intelligence (spacial, numerical, verbal, reasoning, symbollic, et cetera) for all of their life. Generally, a person's TrueIQ will not change, however, an increase of 10% over 10 years is not unheard-of."

Betts also states the following[2]:

"Different people have different types of intelligence and will perform differently on different types of test. I am confident that my four best tests (Lux25, WIT, Mathema, Asterix) genuinely collectively measure g. Your TrueIQ (g) is probably a combination of scores gained from a variety of IQ test types, for example: Asterix (mathematical), Mathema (verbal/numerical), WIT (logical/reasoning) and the Lux25 (variety)."

[1] TrueIQ, http://www.psiq.org/norms/, Accessed: September 22, 2019.
[2] An interview with Dr. Jason Betts, B.Sc., Dip.M.Sc., Ph.D., D.Sc.: Emerald Alchemist (Part One), https://in-sightjournal.com/2016/06/01/an-interview-with-dr-jason-betts-bsc-dipmsc-phd-dsc-part-one/, Accessed: September 22, 2019.

Betts' intuition is qualitatively correct. Multiple results from well-formed IQ tests can increase confidence in IQ estimation in the univariate case (i.e., for a single intelligence type). Moreover, multiple types of intelligence constructs can be measured and combined to estimate the True IQ for the multivariate case.

Peak IQ Definition

In practice, variability exists around the concept of True IQ. In contrast to True IQ, Peak IQ can be considered an upper tolerance limit on a person's general intelligence and can be used to represent an individual's intellectual potential. The upper tolerance limit is evaluated for single intelligence types or multiple intelligence types.

Order Statistics

Order statistics is a non-parametric approach to statistical quantification, meaning that the uncertainty of the quantity x is not characterized sufficiently to evaluate meaningful statements about the event population (unlike parametric/response-surface methods). An attractive feature of this approach is that an unlimited number of model uncertainties can be explicitly considered simultaneously. The results or "measurements" produced from each test are the predetermined quantity x (i.e., IQ).

Deference is paid to the many contributions from the statistical community beginning with the work of Samuel Wilks in 1941.[3,4,5,6,7,8,9] Non-parametric methods have been used to determine tolerance limits. Somerville created tables in 1958 which have been used widely for non-parametric tolerances in a variety of applications.

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[3] Wilks, S.S., 1941. Determination of sample sizes for setting tolerance limits. Annuals of Mathematical Statistics 12, 91–96.
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[6] Scheffé, H., Tukey, J.W., 1945. Non-parametric estimation I: validation of order statistics. Annuals of Mathematical Statistics 16, 187–192.
[7] Tukey, J.W., 1947. Non-parametric estimation II: statistically equivalent blocks and tolerance regions—the continuous case. Annuals of Mathematical Statistics 18, 529–539.
[8] Murphy, R.B., 1948. Nonparametric tolerance limits. Annuals of Mathematical Statistics 19, 581–589.
[9] Somerville, P.N., 1958. Tables for obtaining non-parametric tolerance limits. Annuals of Mathematical Statistics 29, 599–601.

Non-parametric statistical techniques are useful in situations where an expression of the probability distribution is not required (i.e., no need to assume a Normal distribution), such as when the objective is identifying a tolerance limit or where acceptance or rejection is based on meeting a limit. This is the case for intelligence constructs, which are defined by IQ limits or thresholds.

The Univariate Case

Let x_k be a random sample from a set of samples. From probability theory, the probability (β) that the fraction of the population is less than x_k exceeds the fraction γ is:

$$P[F(x_k) > \gamma] = \beta = \int_{x_k}^{\infty} f(x)\, dx$$

The function $f(x)$ is the probability density function of the quantity x, representing the relative likelihood for this random variable to occur. It retains the property that the integral over the observation of x is $F(x)$, the (unknown) cumulative distribution function, completely describing the probability distribution of the random variable x. At the limit of x, $F(x) = 1$.

Without knowledge in the density and distribution of x, this generic expression is of little value. A more useful expression can be constructed when n samples of this random variable are drawn, $\{x_1; x_2; ...; x_k; ...; x_n\}$ and sorted in numerical order, such that $\{x_1 < x_2 < ... < x_k < ... < x_n\}$. In this scenario, the probability statement identifying any sample bounding a fraction γ of the population of x can be written in terms of the convenience function $m = n - k$ as:

$$P[F(x_k) > \gamma] = \beta = \int_{\gamma}^{1} g_m(\xi)\, d\xi$$

Here $g_m(\xi)$ is the probability density function of the population coverage of the sorted sample. In this form, an expression for $g_m(\xi)$ can be derived. To begin, consider the simply probability statement:

$$1 = (S + F)\,n$$

Where S is the probability that any sample successfully meets the desired coverage test (i.e., $F(x_k) > \gamma$) and F is the probability that any sample fails. n is the number of samples. Expanding this function is straightforward, note that by definition, $F = 1 - S$:

$$1 = S^n + nS^{n-1}F + \ldots + nSF^{n-1} + F^n$$

$$= 1 - \sum_0^n \left(\frac{n!}{i!\,(n-1)!} \right) S^{n-i}(1-S)^{\,i} = \sum_0^n \binom{n}{i} S^{n-i}(1-S)^{\,i}$$

The coefficients of this polynomial are binomial coefficients (i.e., think Pascal's Triangle). Each term in this expression is a probability statement reflecting the likelihood of a particular combination of successes and failures. The simplest example is the expression for the probability of having at least one success. That equates to the sum of all terms having an "S" or:

$$\beta = \sum_{i=0}^{n-1} \left(\frac{n!}{i!\,(n-1)!} \right) S^{n-i}(1-S)^{\,i} = 1 - F^n$$

The generalized form, expressing the probability of having at least m successes in a sample set of n, is:

$$\beta = \sum_{i=0}^{n-m} \left(\frac{n!}{i!\,(n-1)!} \right) S^{n-i}(1-S)^{\,i}$$

$$= 1 - \sum_{i=n-m+1}^{n} \left(\frac{n!}{i!\,(n-1)!} \right) F^{i}(1-F)^{\,n-i}$$

The probability density $g_m(\gamma)$ for the sample x_k is derived by differentiating the above expression with respect to F and, for convenience, changing F to γ, the population coverage parameter.

$$g_m(\gamma) = \sum_{i=n-m+1}^{n} \left(\frac{n!}{i!\,(n-i)!}\right)\left[i\gamma^{i-1}(1-\gamma)^{n-1}\right] - (n-i)\,\gamma^i(1-\gamma)^{n+i-1}$$

This simplifies to:

$$g_m(\gamma) = \frac{n!}{m!\,(n-m)!} m\gamma^{n-m}(1-\gamma)^{m-1}$$

With an expression for $g_m(\gamma)$, the original probability statement becomes:

$$\beta = m \cdot \binom{n}{m} \int_{\gamma}^{1} \left[\xi^{n-m} \cdot (1-\xi)^{m-1} d\xi\right]$$

It is common to have β expressed in terms of the Incomplete Beta function ratio, $I_x(a,b)$ as the ratio of the Incomplete Beta function over the Beta function:

$$I_x(a,b) = I_x(a,b) = \frac{\displaystyle\int_0^x \left[\xi^{a-1}(1-\xi)^{b-1}\right]d\xi}{\displaystyle\int_0^1 \left[\xi^{a-1}(1-\xi)^{b-1}\right]d\xi}$$

Changing the variable of integration $\xi' = 1-\xi$ gives:

$$\beta = m \cdot \binom{n}{m} \int_0^{1-\gamma} \left[\xi^{n-m} \cdot (1-\xi')^{m-1} d\xi\right]$$

The integral has become the numerator in the incomplete beta function ratio with $x = 1 - \gamma, a = n - m + 1, b = m$. The beta function (the denominator in the incomplete beta function ratio) is defined as:

$$B(a,b) = \int_0^1 \left[\xi^{a-1} \cdot (1-\xi)^{b-1} d\xi \right] = \frac{(a-1)!\,(b-1)!}{(a+b-1)!}$$

So that setting a and b to the appropriate values:

$$B(n-m+1, m) = \frac{(n-m)!\,(m-1)!}{(n)!}$$

The probability that the fraction of the parent population less than x_k is at least can be written as:

$$\beta \equiv P\left[F(x_k) > \gamma\right] = I_{1-\gamma}(n-m+1, m) = 1 - I_\gamma(m, n-m+1)$$

Where the property that $I_x(a,b) = 1 - I_{1-x}(b,a)$ has been used. Expressing this as a summation gives:

$$\beta \equiv P\left[F(x_k) > \gamma\right] = 1 - \sum_{i=n-m+1}^{n} \binom{n}{i} \gamma^i (1-\gamma)^{n-i}$$

The probability β is called the confidence and γ is called the coverage. The simplest application is one in which the objective is to find the expression relating coverage and confidence for the case in which $m = 1$ (i.e., the largest value of all of the samples is used). In this case, the previous relationship reduces to:

$$\beta = 1 - \gamma^n$$

In recognition of the pioneering work of Samuel Wilks, this is often referred to as Wilks' formula. For example, the 95th percentile with 95% confidence, the Wilks' formula becomes:

$$(0.95) ^{n} = 0.05$$

Solving for n and rounding up, the solution is 59.

If in psychometrics 59 observations of IQ are drawn from a distribution of tests, then the largest value, sorted as $\{IQ_1 < IQ_2 < ... < IQ_n\}$, is an estimate of a tolerance limit. This tolerance limit is such that at least 95% of the population will be less than IQn; or IQn with 95% confidence. Note that this conclusion is independent of the distribution and is valid when considering only the IQ of a single intelligence type.

Combinations of m and n

It is useful to obtain refined estimates that satisfy the 95/95 objective while narrowing the distribution of the sample. Relating to the derived probability statement, m > 1, acceptable combinations of m and n for 95/95 tolerances are given in Somerville (1958). Determination of n for taking the second-largest IQ, the third-largest IQ and so on at the 95% confidence can be done by making use of the properties of the incomplete Beta function ratio. When the second-largest value, IQ_{n-1}, is considered, the confidence for the second-largest entry ($m = 2$) can be expressed as:

$$\beta = P[F(x_{n-2}) > \gamma] = 1 - I_{\gamma}(2, n-1)$$

$$= 1 - \sum_{i=n-1}^{n} \binom{n}{i} \gamma^i (1-\gamma)^{n-1} = 1 - \gamma^n - n(1-\gamma)\gamma^{n-1}$$

For the 95/95 limit, this becomes:

$$(0.95) ^{n} + n \times 0.05 \times (0.95) ^{n-1} = 0.05$$

Solving for n and rounding up gives 93. If 93 observations are drawn from a random distribution of tests then the 2nd largest value, IQ_{n-1}, is the limit such that with 95% confidence, at least 95% of the population will be less than IQ_{n-1}. Continuing to examine each

succeeding IQ, one can determine the number of samples required so that the selected entry is the 95/95 tolerance limit.

Consideration of Joint Probability for Peak IQ Estimation

The Wilks formula does not provide a joint 95/95 statement for a multivariate problem, that is, the case in which one is interested in several types of intelligences.

The most obvious and simple example of the limitation of the univariate assumption comes from considering separate 95/95 results determined for different intelligence types (verbal-linguistic, mathematical-logical, visual-spatial, et cetera). Multiple univariate tolerance limit estimates cannot be combined to represent an equivalent tolerance region. A coverage/confidence statement can be derived for cases when m > 1. Consider the results of an uncertainty analysis providing 59 samples, the interpretation is problematic because there are two Peak IQs in the set of 59 "joint" samples. Specifically, there is one sample in which "Intelligence Type 1" exceeds 95/95 and, there is another sample in which "Intelligence Type 2" exceeds 95/95. Each variable passes based on the univariate tolerance model, but a test of acceptability of the two results fails. A larger sample set is necessary to achieve the 95/95 acceptance criteria allowing for two Peak IQs (i.e., $m > 2$).

To illustrate this limitation further, consider the joint confidence in the trivariate intelligence problem (i.e., verbal-linguistic, mathematical-logical, and visual-spatial). Under the assumption that the three IQs are independent there is only a $(0.95)^3 = 85.73\%$ chance that the sample vector of three IQs exceeds 95% of the population when each of the three is treated as a univariate tolerance problem. If a joint statement is desired in this manner, the Wilks formula is expressed from probability theory as:

$$\beta = \prod_{i=1}^{p} \left(1 - \gamma_i^n \right)$$

Where p is the number of output variables of interest and, for simplicity, the maximum value is used ($k = n$). For the trivariate

intelligence example, $p = 3$. Therefore, the number of tests necessary is:

$$\beta = \left(1 - \gamma_i^n \right)^3 \rightarrow 0.95 = \left(1 - 0.95^n \right)^3$$

Which results in n = 79.4 ≈ 80 samples. It is implied in this context that the result of all tests demonstrates acceptance on all of the IQs of the sample vector simultaneously. In addition, the limiting triplet, i.e., the sorted IQ_n type 1 bounds 95% of the population of IQ type 1, that the sorted IQ_n type 2 bounds 95% of the population of IQ type 2, and that the sorted IQ_n type 3 bounds 95% of the population of IQ type 3, with an overall confidence of 95%.

Individually, the confidence is higher ($\beta^{1/3} = 98.3\%$). With the high correlation between IQ type 1, IQ type 2, and IQ type 3 the univariate treatment, while not truly applicable to the multivariate tolerance region problem, is arguably sufficient to meet the "high level of probability" expectation, since the multivariate problem has effectively degenerated to a univariate problem under these conditions.

Conclusions and Recommendations

The application of order statistics provides a quantitative basis for a "high level of probability" in Peak IQ estimation. Derivation of the univariate order statistics required to estimate Peak IQ for individual intelligence types was presented and extended allow evaluation of Peak IQ for the multivariate case (i.e., multiple intelligence types). Peak IQ is a novel concept in the field of psychometrics and would benefit from further consideration of how best to mathematically characterize the multivariate case.

Neural Networks: An Overview

Thomas Hally

The purpose of this essay is to provide the reader with a general definition of Artificial Neural Networks; their functioning, applications, and a few words about what the future might allow in this area.

Introduction

Artificial neural networks are emulations patterned after the most sophisticated and powerful problem-solving device ever created, the human brain: a vast network of processing elements and nerve cells. "The concept of neural networks dates back to the 1800s and is an attempt to describe how the human mind performs."[10] The human brain is still largely a mystery; much is still unknown about how the brain trains itself and processes information. The human brain has been a source of inspiration for Artificial Intelligence since the dawn of the computer age. With the advance of modern neuroimaging[11] techniques, we can look into the brain of a human being and measure its activity.

Human Neural Network

A Human Neural Network is an interconnected system of neurons in the brain or other parts of the body. In the human brain, a neuron collects signals from other neurons (brain cells, mostly) through a host of fine structures known as dendrites.[12] The neuron sends out spikes of electricity through a long, thin strand called an axon,[13] which splits into thousands of branches. At the end of each branch, there is a synapse,[14] which converts the activity from the axon into electrical effects and inhibits or excites activity from the axon which, in turn, inhibits or excites electrical activity in the connected neurons. When a neuron receives sufficiently large stimuli, compared to its inhibitory input, it sends a spike of electrical activity down the axon. Learning occurs by changing the effectiveness of the synapses so that one neuron's influence changes the effect on another neuron.

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[10]Thomas Hally, "Neural Networks," *Mensa International Journal*, September 2009 no. 528, 1 (ed. Ms Kate Nacard).

[11]Neuroimaging: wikipedia.org/wiki/Neuroimaging, Accessed September 1, 2019.

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[13]Axon: wikipedia.org/wiki/Axon, Accessed September 1, 2019.

[14]Synapse: wikipedia.org/wiki/Synapse_(disambiguation), Accessed September 1, 2019.

Credit: https://socratic.org/questions/how-is-a-neuron-adapted-to-perform-its-function
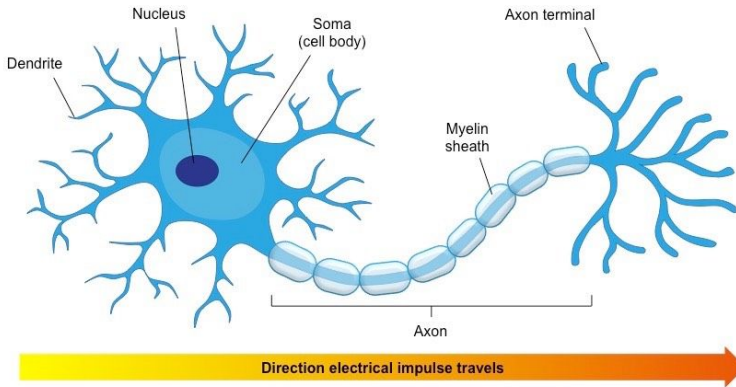
Figure 1: Human Neural Network

Computer scientists began analyzing these ideas with the Turing B-type[15] machines and the Perceptron[16] in the 1950s. Friedrich Hayek [17] postulated the idea of spontaneous order in the brain arising out of decentralized networks known as neurons. By 1975, the Cognitron[18] had made its appearance. Hopfield's[19] Network had the ability for the bidirectional flow of inputs between neurons and nodes, and the specialization of these node layers was introduced through the first hybrid network. In the mid-1980s, "Parallel Distributed Processing"[20] became widely known as "Connectivism."[21]A report entitled Learning Internal Representation by Error Propagation[22] was one of the main reasons behind the re-popularization of neural networks. The original network used multiple layers of weight-sum units of the type f = g(w' x+b) where "g" was a sigmoid function (or a function used in "Logistic Regression").[23] The employment of the chain rule of

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[15]Turing-B:http://www.alanturing.net/turing_archive/pages/Reference%20Articles/connectionism /Turing's%20neural%20networks.html#Btypes, Accessed September 1, 2019.

[16]Perceptron: wikipedia.org/wiki/Neural_network, Accessed September 1, 2019.

[17]Fredrich August von Hayek was an Austrian-born economist and philosopher known for his defense of classical liberalism and free-market capitalism. Hayek also wrote on the topics of neuroscience and the history of ideas.

[18]Cognitron:.wikipedia.org/wiki/Neural_network, Accessed September 1, 2019.

[19]A Hopfield Network is a form of recurrent artificial neural network invented by John Hopfield, an American scientist known for his invention of an *associative neural network* in 1982.

[20] Parallel Distribution: wikipedia.org/wiki/Distributed_computing, Accessed September 1, 2019.

[21]George Siemens, "Connectivism: A Learning Theory for the Digital Age," *International Journal of Industrial Technology and Distance Learning, v*ol. 2, no. 1, January 2005, 3.

[22]D.E. Rumelhart, G.E. Hinton, and R.J. Williams, "Learning Internal Representation by Error Propagation," (Technical report: University of California San Diego La Jolla Institute for Cognitive Science. March-September, 1985).

[23]Logistic Regression: wikipedia.org/wiki/Logistic_regression, Accessed September 1, 2019.

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differentiation in deriving the appropriate parameter update results in an algorithm that appears to backpropagate errors; hence, the name. Networks with the same architecture are now referred to as "Multilayer Perceptrons."[24]

Artificial Neural Networks (ANNs)

Artificial Neural Networks try to simulate the structure and functional aspects of biological neural networks. ANNs have very high processing speeds, and they can learn how to solve a problem from a given set of examples. These characteristics afford us a variety of powerful new techniques for solving certain problems. In the same way that a human being becomes an expert in a specific area, computer scientists train neural networks in a given area. Once automatic learning has been established, a neural network learns on its own through practice and repeated experience. When it has been proven that the neural network is doing its job correctly, it has become an "expert" and operates according to its own decisions and judgments. As has been indicated, a human neural network is a circuit of biological neurons. However, the term "Neural Network" often refers to an Artificial Neural Network, composed of artificial neurons or nodes. Artificial Neural Network (ANN), Simplified Neural Network (SNN), or, simply, Neural Network (NN), are terms that refer to the same idea. While many types of artificial neural networks exist, most are organized according to the same basic structure:
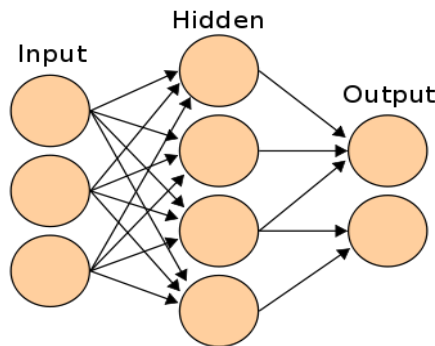

Diagram 2: Artificial Neural Network

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[24]Multilayer Perceptron: wikipedia.org/wiki/Multilayer_perceptron, Accessed September 1, 2019.

An artificial neural network is a processing paradigm that can recognize patterns in a given collection of data and produce a model for that data. It resembles the brain in two respects:

1. The network acquires knowledge through a trial-and-error learning process.
2. Interneuron connection strengths ("synaptic weights") are used to store knowledge.

Artificial neural networks are an emulation of human brain function. They are made with hardware and software with the purpose of ratiocination, learning, following patterns, and predicting, while processing an elevated number of elements or variables which are interconnected. Artificial neural networks commonly use mathematical models, diffuse logic, Bayesian inference,[25] Fourier Transforms[26], and Expert Systems.[27]

How do Neural Networks Function?

Conventional computers use a cognitive, algorithmic approach to problem-solving. That is, they follow a set of programmed instructions to solve a problem. This approach restricts the problem-solving capability of conventional computers since it is a problem we already know and understand how to solve. The computer's instructions are converted into a high-level language program and then into machine code or low-level language (e.g., Assembly language) that the computer understands. Since the computer is totally predictable, if anything goes wrong, it is due to a software or hardware problem.

The key element of the paradigm is the novel structure of the information processing system, which is composed of a large number of neurons working in unison to solve specific problems. An ANN configured for a special application (e.g., pattern recognition and data classification) has gone through a learning process. Like humans, ANNs learn with biological adjustments to the synaptic connections that exist between neurons. Artificial intelligence and cognitive modeling try to assimilate some properties of neural networks and have been applied successfully to speech recognition, image analysis, and adaptive control. This assimilation has as its objectives the construction of software agents in both video games and autonomous robots. Most of the currently employed neural

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[25]Bayesian Inference: http://www.fact-index.com/b/ba/bayesian_inference.html, Accessed September 1, 2019.
[26]Fourier Transform: wikipedia.org/wiki/Fourier_transform, Accessed September 1, 2019.
[27]Expert System: wikipedia.org/wiki/Expert_system, Accessed September 1, 2019.

networks for artificial intelligence are based on Statistical Estimation,[28] Optimization,[29] and Control Theory.[30]

Since ANNs process information in a similar way to the way the human brain, they learn by example. Learning comes about by changing the effectiveness of the synapses so that the influence of neurons on one another changes. Neural networks cannot be programmed to perform a specific task. The examples or problems must be carefully selected so that time is not wasted. The disadvantage is that its learning capability finds out how to solve the problem by itself, and the operation can be unpredictable.

Artificial neural networks and conventional computers complement each other. There are tasks more suited to an algorithmic approach—like arithmetic operations—and tasks that are more suitable for neural networks (e.g., "classification"). The latter includes pattern and sequence recognition as well as a plethora of distinct novelty detections and sequential decision-making procedures. Moreover, a large number of tasks require combinations of these two systems. Normally, a conventional computer is used to oversee the neural network; both the conventional computer and the neural network perform at top efficiency when used in conjunction. The neural network functions within the scheme of any number of computer arrays:
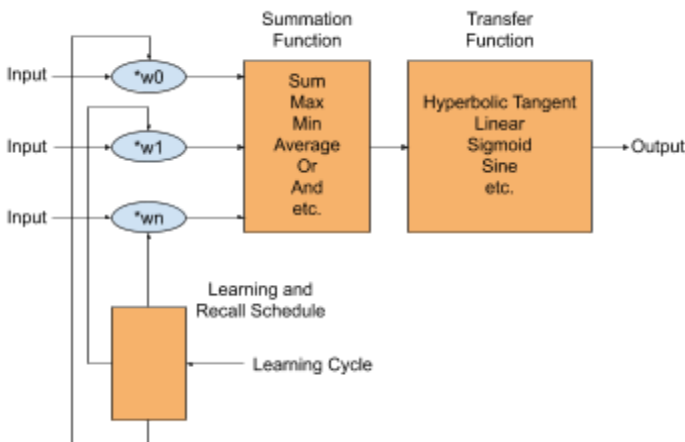

Figure 3: Artificial Neural Network using a Computer Algorithm

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[28]Estimation: wikipedia.org/wiki/Estimation_theory, Accessed September 1, 2019.
[29]Optimization: wikipedia.org/wiki/Optimization_(mathematics), Accessed September 1, 2019.
[30]Control Theory: wikipedia.org/wiki/Control_theory, Accessed September 1, 2019.

Train the Neural Network
- Present data to the network.
- Network produces an output.
- Network output compared to the desired output.
- Network strengths are modified to reduce errors.

An artificial neural network can perform tasks that a linear program cannot. When any given element of a neural network fails, the ANN can continue without incident because of its parallel nature. The neural network learns and does not need to be reprogrammed. It can be implemented in almost any application, and this can be done without any problem.

Typical ANN Applications

The tasks to which ANNs are applied tend to fall within three categories, mostly in business and medicine:
1. Function approximation or regression analysis.
2. Classification, including pattern recognition and sequence recognition.
3. Data processing.

Most practical applications of artificial neural networks are based on a computational model involving the propagation of continuous variables from one processing to the next. In recent years, data from neurobiological experiments have made it increasingly clear that biological neural networks, which communicate through pulses, use the timing of these pulses to transmit information, and perform computation. This realization has stimulated significant research on pulsed neural networks, including theoretical analyses and model development, neurobiological modeling, and hardware implementation.[31]

- Classification
  - Medical diagnoses, fraud detection, character recognition, speech recognition, etc.
- Function Approximation
  - Process modeling
    - Data processing, filtering, clustering, compression, etc.
  - Process control
    - Data modeling, machine diagnostics.
  - Time Series Prediction

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[31]Wolfgang Maass and Christopher M. Bishop, *Pulsed Neural Networks*: (Massachusetts Institute of Technology, 1999), XXV.

- - Financial forecasting, bankruptcy, prediction sales, forecasting, Dynamic System Marketing.
    - Data Mining Clustering
      - - Data recognition, data extraction.

What does the future hold for Artificial Neural Networks?

"The applications are very diverse, from climactic predictions to autonomous prostheses."[32] The following are but a few examples of what computer scientists have planned for humankind's future:

1. Robots that can see, feel, and predict the world around them.
2. Improved stock prediction.
3. Common usage of self-driving cars.
4. Composition of music.
5. Handwritten documents to be automatically transformed and formatted into word-processing documents.
6. Trends found in the human genome to aid in the Human Genome Project.
7. Self-diagnosis of medical problems using artificial neural networks.

Conclusion

A common criticism of neural networks is that they require a large diversity of training to perform practical operations, which is particularly true in robotics. Other criticisms come from advocates of "hybrid models": those combining neural networks and symbolic approaches. These critics support the combination of these two approaches, believing that hybrids can better emulate the mechanisms of the human mind. Yet, artificial neural networks are destined to play an important role in medicine, psychology (including the study of human cognitive ability), robotics, and nanotechnology. Neural networking promises to provide computer science breakthroughs that rival anything we have yet witnessed. Once neural networks are properly trained, they can replace many human functions in targeted areas.

Perhaps the most exciting possibility is that of "conscious" neural networks. However, neural network consciousness will always be an alien consciousness. I seriously doubt there will ever be an artificial neural network that will superintend its creators. Artificial neural networks will never feel, think, or perceive as we do—much less ponder their destinies!

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[32] José Félix Rodriguez Jiménez, Senior Software Engineer, ContPAQ I, Guadalajara, Jalisco, Mexico.

Global Changement

Anja Jaenicke

A scary pseudo mathematical construct wanders about,
Of adventurous non localized estimates superficially and loud.
What will happen to the evolution and its helical flow,
When all living entities line up in a single dimensional row?
Fortunately some unfashionable creatures keep thinking deep,
About what is really odd or unworthy and what we should keep.
We are worried for nature to act so unpredictably wild,
Like aliens we observe and are completely beguiled,
Not accepting that we are part of an ongoing game,
Equilibrium implies change, nothing stays ever the same.
But we became a species of estranged, analytic spectators,
Observing life and death in which we act as inventory curators.
We love to administer some systems but others we doom,
And we are surprised when such systems start to loom,
Like untamable, mounting horses before they finally collapse.
And we, without recognizing the multi dimensional gaps,
Are driven to very fast conclusions like fanatics of faith,
And think all effects must be moved by an invisible wraith.

The New Year Owl by Anja Jaenicke

Eagle3 by Anja Jaenicke

No longer we are mystics but we build statistics like a walking aid,
Fostering the destruction of life only because some get well paid.
All for a questionable politics of unarticulated ideas that will probably die.
Oh, for how long have we stopped asking for the how and the why?
We advocate and influence decisions in favor of pure greed,
And forget that all life once sprang from one single seed.
Why can't we just humbly accept the dissonance in vibration?
Instead of fluid elastics we demand for a fixed normalization.
We could cherish the wonder that came with the gift of existence,
But for some this happiness of the moment creates a fearful resistance.
Scared that the self made construct of functional permanence might be lost,
They crave so much for distributed predictability on any and all cost .
While our dear sacred souls are as fragile as our natural biosphere,
So unshielded in an open ocean and exposed to the cosmic flare.
We do not fully reflect the floating light show in which we all act,
And pursuit with the writing of a paradox and confusing contract,
Of wrong security, frozen demagogy and other delusional creations,
Without the real wish to understand all the deepest foundations,
That once called us into being from an abyssal, chaotic soup,
And which in primeval times scaffolded our very own haplogroup.

Wise Wizard

James McBeath

The entity of prolific distinction, overwhelmed the traveler, who disputed his love for gold, verifying his aptitude and skill in a variable, collating genius divisions in the sunlit forest, only to cast his spell below the great melodic parables and swiftly regain his wisdom.

Aŭskultu

Beatrice Rescazzi

Fulmotondraj nuboj formiĝas en la ĉielo, kaj la vento ekmuĝas tra la purpureco. La foliojn de la maljunaj arboj dissusuras, kaj malkaŝas la sekretojn de la arbaro. Aŭskultu ilian kanton. Ĉu tio veras? Mi fermas miajn okulojn, tiam mi spiras profunde. Pluvo ekludas dolĉan melodion per sia ksilofono da akvo, kaj mia sencoj dancas samtempe.

English Translation: Listen

*Literal translation of "Aŭskultu" from Esperanto to English by *Beatrice Rescazzi*.

Thunderstorm clouds form in the sky, and the wind blows through the purple. The leaves of the old trees break apart, and reveal the secrets of the forest. Listen to their song. Is that true? I close my eyes, then take a deep breath. Rain plays a sweet tune with its xylophone of water, and my senses dance at the same time.

Oh, My God It's Light Bulb Head!

Thomas Hally

Stripes thick red yellow straddled with scars a bit black
And blue highlight the vision below where horror rules
We see three men walk two trees man-made beams-laid
That stalk a lonely fearful third the one in the foreground
Who opens his mouth to utter 'The Scream' bares itself
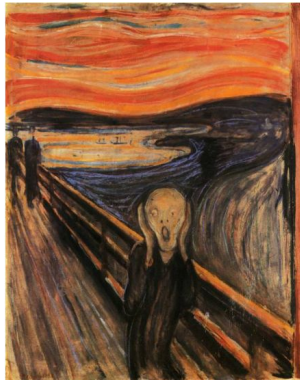
**A *poem based on the painting* "The Scream"
by Edvard Munch, 1893**

Barring no sailing speeds of Albert's doubled energy light
Space beams while his tympani sing ring ring ping ping ping
Stentorian ears close tightly not understanding why a
Series he notes of from top-to-bottom sequenced stripes
Gushing crimson with black bloody clots suddenly stops
Slipping sliding below falling apart dying tissue issues ooze
Out over Passionate Somber Mountain Chains turns puce-
Pale shades nearing Halloween Orange—a vile-yellowish
Rarely-red lake too rumbles tumbling above over Jag'd Cliff
A sexy slumbering snake swallowing meatless fish loafs down
Before spitting out his dirty gray matter slides and does not
Brake falling into a grand canyon-like abyss soon to smother
The snake and drown his mother on and in an eerie lake which
Lies aside to the abyss below attempting to clean out two near
Hits and a miss the skiffs who row swiftly away from a beautiful
Statuesque woman posing nude sliding down crashing falls over
Yet another cliff.

Proceedings

To think is easy. To act is difficult. To act as one thinks is the most difficult.

–Johann Wolfgang von Goethe

World Genius Directory Genius of the Year Award

Credit: http://www.psiq.org/

Created by Dr. Jason Betts, The World Genius Directory (WGD) lists the current Who's Who of the High-IQ World. Each year the WGD elects a Genius of the Year for each of three geographical regions; namely, Europe, Asia, and America. The annual awards recognize the efforts and achievements of active geniuses promoting global Genius. Winners of the award are voted for by their peer members of the World Genius Directory. Voting for the 2020 Geniuses of the Year was held during August 2019. As a prelude to the official announcement of the 2020 award winners, Dr. Jason Betts has provided permission allowing us to pay tribute to the past winners of the Genius of the award by listing them here.

To all Genius of the Year award winners, thank you for your valuable contributions to the high IQ community.

World Genius Directory 2019 Genius of the Year - Europe:	Mr Tor Jørgensen (Norway)
World Genius Directory 2019 Genius of the Year - Asia:	Mr Sunder Rangarajan (India)
World Genius Directory 2019 Genius of the Year - America:	Mr Victor Hingsberg (Canada)
World Genius Directory 2018 Genius of the Year - Europe:	Mr Dalibor Marincic (Bosnia and Herzegovina)
World Genius Directory 2018 Genius of the Year - Asia:	Mr Naoki Kouda (Japan)
World Genius Directory 2018 Genius of the Year - America:	Dr Bishoy Goubran (United States)
World Genius Directory 2017 Genius of the Year - Europe:	Mr Marios Prodromou (Greece)
World Genius Directory 2017 Genius of the Year - Asia:	Mr Sung-Jin Kim (South Korea)
World Genius Directory 2017 Genius of the Year - America:	Mr Julien Arpin (Canada)
World Genius Directory 2016 Genius of the Year - Europe:	Mr Tommi Laiho (Finland)
World Genius Directory 2016 Genius of the Year - Asia:	Ms Aishwarya Trivedi (India)
World Genius Directory 2016 Genius of the Year - America:	Mr Jeffery Ford (United States)
World Genius Directory 2015 Genius of the Year - Europe:	Mr Iakovos Koukas (Greece)
World Genius Directory 2015 Genius of the Year - Asia:	Mr Satoki Takeichi (Japan)
World Genius Directory 2015 Genius of the Year - America:	Dr Gregory Grove (United States)
World Genius Directory 2014 Genius of the Year - Europe:	Mr Marco Ripà (Italy)
World Genius Directory 2014 Genius of the Year - Asia:	Mr Peter Rodgers (Australia)
World Genius Directory 2014 Genius of the Year - America:	Ms Karyn Peters (United States)
World Genius Directory 2013 Genius of the Year - Europe:	Dr Evangelos Katsioulis (Greece)
World Genius Directory 2013 Genius of the Year - Asia:	Dr Manahel Thabet (Yemen)
World Genius Directory 2013 Genius of the Year - America:	Mr Rick Rosner (United States)
World Genius Directory 2013 Genius of the Year - Founder:	Dr Jason Betts (Australia)

A New Age for Genius
The Original WGD GOTY Winners

Daniel Pohl

In 2013 the words "selfie" and "twerk" were added to the dictionary, Kim Kardashian and Kanye West welcomed the birth of their baby girl North West, and "Harlem Shake" was the most-watched video on the internet. World politics were also at a pinnacle... Mayor of Toronto Rob Ford admitted that he used crack cocaine, and Anthony Weiner lost the New York City mayoral election after new allegations of him sexting women emerged, while the cronut won over the hearts and taste buds of people around the globe as the perfect hybrid of a croissant and a doughnut. Needless-to-say, we had been in an intellectual dark-period for some time. However, under the surface, something was bubbling...

Enter the Genius of the Year (GOTY) Awards presented for the first time in 2013 by the World Genius Directory (WGD). The brainchild of Dr. Jason Betts, the WDG GOTY Awards were a turning point in recognition of truly exceptional intellectual abilities, and have ushered in a new age of Genius.

The original three award winners are of staggering brilliance and are now pillars of the global intellectual community. The 2013 Genius of the Year Award winners for Europe, Asia and America were Dr. Evangelos Katsioulis, Prof. Manahel Thabet, and Mr. Rick Rosner, respectively. These three extraordinary individuals embody the WGD motto - *genius pro mundo* - "genius for the world."

To pay tribute to these High-IQ pioneers, three profile articles follow and are titled,

> "*The Consummate Genius: Evangelos Katsioulis*"

> "*The Scientific Genius: Manahel Thabet*"

> "*The Mega Genius: Rick Rosner*"

These titans of intellectual achievement symbolize what is possible when intelligence achieves its potential in the world.

It cannot go without noting again that the Original Genius of Dr. Jason Betts played the foundational role in creating the WGD GOTY Awards. Thank you, Dr. Betts.

The Consummate Genius: Evangelos Katsioulis

Introduction

Dr. Evangelos Katsioulis has a World Genius Directory listed IQ of 198 and was named the original Genius of the Year representing Europe in 2013. Katsioulis is world-famous for having been listed for having the world's highest IQ for many years and is a highly skilled physician; hence, we give him the title, "The Consummate Genius."

Early Development

Born: Ioannina, Greece, on January 19, 1976.

Personality Traits: As a child, Katsioulis read quite a lot, spending time on puzzles, solving problems, being challenged by whatever I could find that was interesting. He was especially fascinated by mathematics.

Education:

- MD Medical Doctor Diploma (2000)
- MSc in Medical Research Technology (2003)
- MA in Philosophy (2012)
- PhD in Psychopharmacology (2015)

Professional Achievements

- Consultant Psychiatrist, Psychotherapist
- Private Practice (Thessaloniki, Greece)
- Online Psychotherapy & Counseling:
  - https://omadikes.gr/
  - https://psycall.com/
  - https://www.shezlong.com/

High-IQ Achievements and Organizations

- 80+ High IQ Societies memberships
- President & Founder of World Intelligence Network
- President & Founder of OLYMPIQ Society
- President & Founder of HELLIQ Society
- President & Founder of CIVIQ Society
- President & Founder of GRIQ Society
- President & Founder of QIQ Society
- President & Founder of IQID Society
- President & Founder of GREEK High IQ Society

Genius Pro Mundo Statement

"Know, appreciate, respect and be yourself. You are the most important human being in your life. Anyone, and especially a gifted, intelligent and highly capable one, should focus on feeling alive, improving his life quality, extending his understanding of the outer and self-awareness, enriching his experiences, promoting human values, creating, producing for and contributing to a better world and better conditions for anyone. Humans are biological beings, life is a mystery, creation is still unknown. We live a miracle and we can only maximize this miracle's impact in every single moment of our existence."

-Dr. Evangelos Katsioulis

The Scientific Genius: Manahel Thabet

Introduction

Prof. Manahel Tabet has a World Genius Directory listed IQ of 164, and was named the original Genius of the Year representing Asia in 2013. Thabet is world-famous for having made fundamental contributions in the fields of Quantum Mathematics, and Financial Engineering; hence, we give her the title, "The Scientific Genius."

Early Development

Born: Aden, Yemen, on October 14, 1981.

Personality Traits: As a child, Thabet had delayed speech development. A speech therapist advised her family to have her intelligence tested, and at seven years old, she was identified as

gifted. She has also recently disclosed that she also struggles with Aspergers, which is an autism spectrum disorder.

Education:

- Ph.D. in Financial Engineering (2008)
- Ph.D. in Quantum Mathematics (2012)

Professional Achievements

Currently, the Founder and President of SmartTips Consultants in Dubai, a premier provider for tools and techniques to grow businesses on a global scale. Thabet is also the President The World IQ Foundation, Vice President of the World Intelligence Network (WIN), Deputy Director of the Institute for Brain Chemistry and Human Nutrition, and Vice-Chancellor of The Gifted Academy. A talented leader who can be called polymath. Thabet is involved as a successful leader in numerous organizations that connect science, knowledge, and business in the global arena.

As a leading voice on numerous topics, Thabet has published articles on topics of financial engineering, knowledge based economy, quantum mathematics, quantum neurology, and the quantum brain. Her work and expert opinions have been featured in several leading publications both nationally and around the world, and she is often sought out as a subject matter expert in these areas.

For her leadership, inspiration, and contributions to the sciences and business, Prof. Thabet has been the recipient of numerous awards and recognitions, which include Freedom of the City of London, Brain of the Year Award, Guinness World Record in mind ability, Middle East Achievement Awards in Science, Prosperity Foundation Awards, and Genius of the Year. She has been listed amongst the most powerful 500 Arabs in the world and the 100 most powerful women in the Middle East and was included on the BBC's list of the 100 most inspirational women across the globe.

Her accomplishments and professional record are unmatched by others in her field, and her societal contributions have withstood the test of time and brought about positive, systemic global change. Prof. Mahanel Thabet has influenced the lives of many with her work, and she has managed to create an impact not just in her native nation, but across the globe while continuing to make great strides in the global arena for all. Thabet founded and led a mind ability enhancement center called Think Hub, believing that human capital is the future asset.

High-IQ Achievements

Until recently, few knew about Manahel's struggle with autism spectrum Aspergers, and how she defeated all odds. Prof. Manahel Thabet is ranked amongst the thirty smartest people alive and has held the world record in 2013 for the highest IQ as a woman. A passionate leader and inspirational voice for several matters, including Gifted individuals, women in STEM and mental abilities, Prof. Thabet currently serves in leadership roles for several international organizations and groups that include SmartTips Consultants, The Think Hub, IBCHN, and World IQ Foundation.

Manahel Thabet, ranked amongst the smartest women in the world, is an inspirational Arab "self made" Leader, intellectual activist, and business entrepreneur. Prof. Thabet serves in a leadership capacity and advisory boards for several of the world's most prominent global organizations and groups, including foremost organizations for high IQ individuals, governments, research, and business. A new face for the small- and medium-scale enterprises in the GCC countries. Thabet brings a clear vision and great perseverance to her global perspective and has introduced herself to new height while continuing to push individuals and corporate organizations forward.

Genius Pro Mundo Statement

"Although intellectuals are enlightened, the majority strive and always search for learning new things or reading about new subjects to constantly widening their horizons. Intellects always work for the enbetterment from within and many example had proved intellects also worry to em better others as well; either the less unfortunate or other fellow intellects. "Strive" is a key work in the well being of every intellect, it is the fuel that keeps the engine going. In the Middle East, especially, we need to highlight and improve gifted children exploration and education, we should also encourage critical thinking and problem-solving methods. If we could wish one thing upon the intellects of their, what is that? I wish that intellects around the world could join their thoughts, ideas and actions to at least send some Light across to the world. If they can help or assist even one person out there through that, it would be a nice wish come true. We should work together for the betterment of Humanity."

-Prof. Manahel Thabet

The Mega Genius: Rick Rosner

Introduction

Mr. Rick Rosner has a World Genius Directory listed IQ of 192, and was named the original Genius of the Year representing America in 2013. Rosner is world-famous for having been listed for having the world's second-highest IQ and being a High-IQ celebrity. He is amongst the highest scores of the infamously difficult Mega Test created by designed by Ronald K. Hoeflin; hence, we give him the title, "The Mega Genius."

Early Development

Born: Boulder, Colorado, on May 2, 1960.

Personality Traits: As a child, Rosner showed signs of being a child prodigy; learning the alphabet by 18 months, and by age 4, he had taught himself to read at a near-adult level. He also recalls being exceptionally good with puzzles and math.

Education:

- Undercover high school student (much of the late disco era).
- Equivalent of 8 majors (earned 12 years of college credit in less than a year).

Professional Achievements

- Writer, Remote Control
- Writer, Crank Yankers
- Writer, The Man Show
- Writer, The Emmys
- Writer, The Grammys
- Writer, Jimmy Kimmel Live!
- Bouncer. Named "Best Bouncer" in the Denver Area, Colorado, by Westwood Magazine
- Nude art model
- Roller-skating waiter
- Stripper
- Actor, Domino's Pizza Television Commercial
- Seven Writers Guild Award nominations (one win)
- An Emmy nomination

High-IQ Achievements

- 2nd Highest Score The Mega Test
- Mega Society Member
- Ex-editor for Noesis: Journal of the Mega Society
- Highest Score The Titan Test
- Giga Society Member

**Genius Pro Mundo Statement**

"Over the next generation, genius will become widespread as our apps help make us smarter. Genius will no longer be rare, but it will be accompanied by lots of high-bandwidth foolishness. More than a billion people now have near-instantaneous access to most human knowledge. This is unprecedented, and it must be making us smarter in some ways, but it hasn't turned our world into a utopia of Spock-like, ultra-reasonable thinking.

I think we strive to understand human goals, drives, and capabilities, to reconcile them with the limits imposed on us by the universe, and to transcend those limits. If we could wish one thing upon the intellects of their, what is that? My one wish is that trying to extend human understanding would be considered doing God's work. It's not unreasonable to think that a supreme being would want us to aspire to figure out the principles of creation. This is the kind of message I'd like to promote, as well as, getting the intellectuals of the world into force for good. Sometimes wisdom and commonsense are overlooked and I'd like to change that. The obvious is true, and most people can't see that. Can we? What do you think? People throughout the world are actually getting smarter, thanks to technology, media, and increased standards of living (though it's often hard to see, since foolishness and triviality are also increasing). People will inevitably embrace intelligence. We get smarter as our machines get smarter and we surround ourselves with increasingly sophisticated apps. For the first time in history, we have near-instantaneous access to most of the world's information. There's no way that doesn't make us smarter (all cultural evidence to the contrary notwithstanding)."

-Mr. Rick Rosner
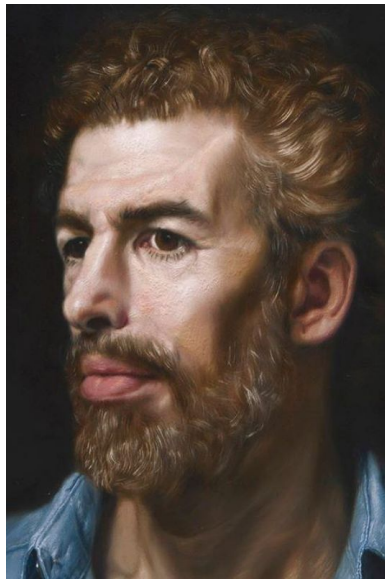
GENIUS AT WORK Initiative
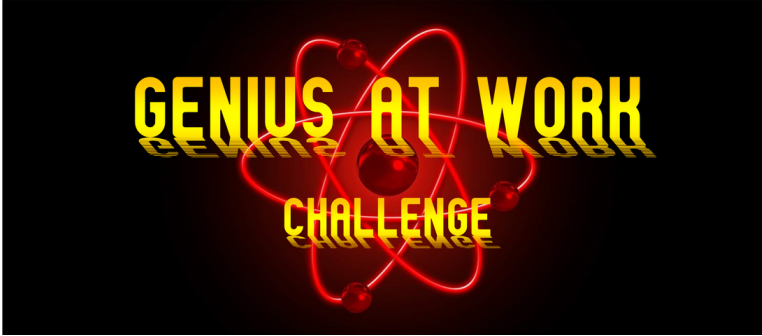
***Everyone* is invited to *join the challenge* and *improve one or more aspects of these issues. Alone or in a team, you can *find a solution*, share it, and *improve the world*!**

Four challenges to solve major issues in our world: Clean Water, Increase Food, Reduce Plastics and Free Education. Lack of access to sanitation, children undernutrition, plastic pollution and lack of education are among the most serious and urgent problems that humanity needs to solve!

For more information on GENIUS AT WORK Initiative, please visit the URL below:

http://www.atlantiqsociety.com/geniusatwork.html

Please also visit the YouTube presentation of GENIUS AT WORK Initiative:

https://www.youtube.com/watch?v=3-1QPv_dcbU&t=5s

GENIUS AT WORK CHALLENGE

FOUR CHALLENGES TO SOLVE HIGH PRIORITY PROBLEMS IN OUR WORLD

Issued by:

AtlantIQ High IQ Society

Global Evolving Network for an Intellectually Upgraded Society (GENIUS)
GENIUS High IQ Network

STH IQ — STHIQ SOCIETY
A high iq society for people with an iq in the top 0.1% of the unselected adult population

GENIUS AT WORK CHALLENGE

Clean Water Challenge
Starts on 1st August 2019 - Deadline on 1st December 2019

Increase Food Challenge
Starts on 1st September 2019 - Deadline on 1st January 2020

Reduce Plastics Challenge
Starts on 1st October 2019 - Deadline on 1st February 2020

Free Education Challenge
Starts on 1st November 2019 - Deadline on 1st March 2020

GENIUS AT WORK CHALLENGE

Clean Water. More than 35% of the world's population lack access to improved sanitation. Unsafe drinking water, inadequate availability of water for hygiene, and lack of access to sanitation together contribute to disease and death.

Increase Food. Undernutrition is a cause of 3·1 million child deaths annually or 45 percent of all child deaths. Poverty causes hunger, and hunger causes more poverty in a cyclical relationship by reducing people's ability to work and learn.

Reduce Plastics. 40 percent of plastic produced is packaging, used just once and then discarded. Nearly half of all plastic ever manufactured has been made since 2000 and rising very fast. We are literally eating plastic: it's now in our food cycle.

Free Education. One in every five children, adolescents and youth is out of school. Children leave school early to enter the labor force or become brides: they end up in occupations and situations that limit their chances of breaking out of poverty.

GENIUS AT WORK
CHALLENGE

Sources of Interest for this challenge:

https://www.cdc.gov/healthywater/global/wash_statistics.html

https://epi.envirocenter.yale.edu/2018-epi-report/water-and-sanitation

https://en.unesco.org/news/billions-deprived-right-water

https://thewaterproject.org/water-crisis/water-in-crisis-rural-urban-africa

Sources of Interest for this challenge:

https://www.who.int/news-room/detail/11-09-2018-global-hunger-continues-to-rise---new-un-report-says

https://www.worldhunger.org/world-hunger-and-poverty-facts-and-statistics/

https://ourworldindata.org/hunger-and-undernourishment

Sources of Interest for this challenge:

http://plastic-pollution.org/

https://www.bbc.com/news/science-environment-42264788

https://www.researchgate.net/profile/Golam_Kibria7/publication/327230697_Presentation_Plastic_Pollution.pdf

Sources of Interest for this challenge:

http://uis.unesco.org/en/news/education-data-release-one-every-five-children-adolescents-and-youth-out-school

https://www.globalpartnership.org/blog/child-labor-hinders-childrens-education

https://www.humanium.org/en/right-to-education/

GENIUS AT WORK

CHALLENGE

Hints for the challenges:

1. Never think that you can't help. There is a lot to do and everybody is needed.

2. Start from your resources, skills and competences. If you don't have a powerful computer with 3D softwares, you can even sketch on a paper towel. If you can't draw, you can still explain your project in written words. Don't put barriers on yourself.

3. Take a look around you: is there an issue that you think you can improve or solve? Get informed on the problems and think what it is possible to do in order to improve someone's life or habitat.

4. Dont' be megalomaniac… most likely it's a dead end: if you think to solve with a unique giant solution one of these big problems, you will probably drop the project as soon as you realize that you can't. Start from the daily life of people, in a certain area, with certain issues. Address one small problem at a time, solve one small problem at a time. Stay down to earth.

5. Don't be shy either! If your project is small, your presentation is poor-looking but your idea may be sill useful to improve a little bit the life of someone, go for it!

6. Make research on the problem you wish to solve, look for other people's existing proposals and solutions, check their limits and flaws, make a new project or improve an existing solution with new and better additions.

Rules of the GENIUS AT WORK Challenge:

1. Everybody is invited to join the challenge, both members and non-members of the High IQ Societies, from every part of the world.

2. There are no age restrictions.

3. The partecipation is free.

3. A participant can take part in one or more challenges, with a team or alone.

4. The project needs to be a new, original idea: copies of exisitng works made by others leads to the automatic exclusion from the competition.

5. The project can't be published or shared elsewhere before the end of the competition.

6. All rights remain the property of the author of the project.

7. The author gives his consent to the publication of his project by participating in the competition. The project will always include the name(s) of the author(s) and can be published on the AtlantIQ website, magazine and FB groups.

8. The winners of each competition are announced here: http://www.atlantiqsociety.com/geniusatwork.html

9. First, second and third place are awarded with a certificate. First place receives three ebooks and an original 3D printable project file.
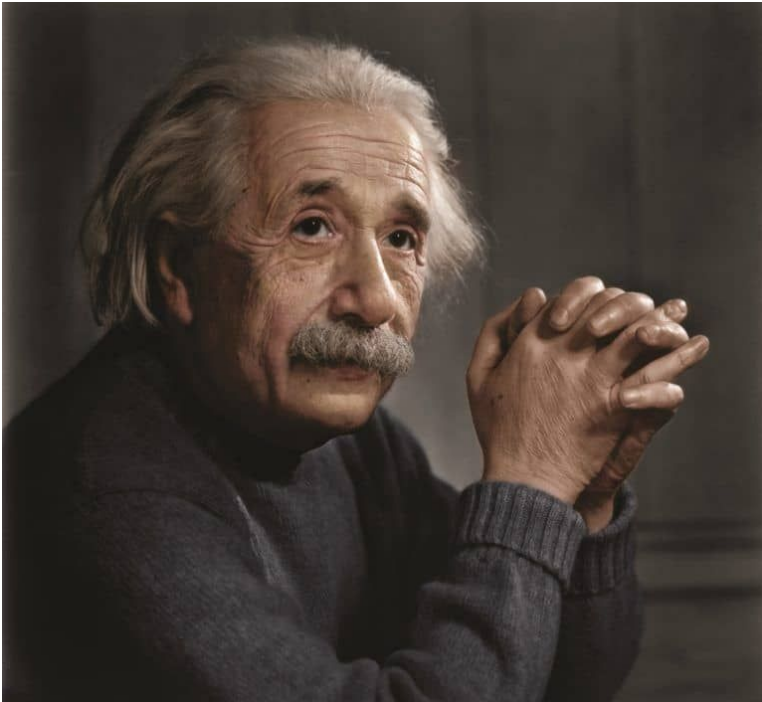
Preview: Next Issue of GENIUS

GENIUS *is the* ***World's #1 High IQ Journal***. *We look forward to publishing our next issue called* **Logicon** *in December 2019.*
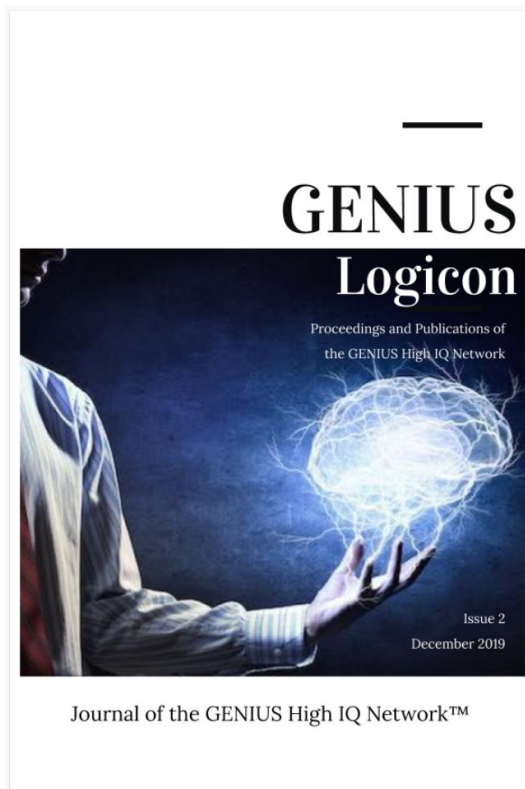
Puzzles

Everything should be made as simple as possible, but not simpler.

-Albert Einstein

New Verbal IQ Tests by Iakovos Koukas

Send your submissions for free to: journal@geniusiqnetwork.org.

GIFT A Verbal Test

Find the word that completes the verbal analogy:

1. MUSIC : COMPOSER :: BOOK : ?

2. DAUGHTER : SISTER :: SON : ?

3. DARK : DEPRESSION :: LIGHT : ?

4. INBOX : OUTBOX :: FOOD : ?

5. POLICEMAN : ROBOCOP :: HUMAN : ?

6. DELUSION : SCHIZOPHRENIC :: MANIA : ?

7. VALUE : ETHICS :: REASONING : ?

8. BIRD : HUMAN :: AIRPLANE : ?

9. SQUARE : CUBE :: EQUALITY : ?

10. STAFF : STUFF :: EMPLOYEES : ?

11. OIL : ENGINE :: BLOOD : ?

12. BIT : KILOBYTE :: ONE : ?

13. BLACK : HOLE :: DARK : ?

14. BAND : BANDAGE :: MAN : ?

15. TEAR : FEAR :: DEAR : ?

16. PET : VET :: HUMAN : ?

17. DRIFT : DRAFT :: DRINK : ?

18. COUNTRY : PLANET :: RATS : ?

19. SPACE : TIME :: LIFE : ?

20. PROTEIN : PROTON :: MOLECULE : ?

GIFT B Verbal Test

Find the common verbal association:

1. FRACTAL, ATTRACTOR, BUTTERFLY

2. STRING, THEORY, UNIVERSE

3. INTELLIGENCE, WARE, SECRET

4. X, STRANGER, UNFAMILIAR

5. PAGE, VACUUM, SPACE

6. NYC, SETTLEMENT, METRO

7. BAT, TESTING, FREQUENCY

8. DENSITY, END, CONSTANT

9. STOP, CODE, MATRIX

10. AND, DOOR, WATER

11. SEN, ZEN, VARNISH

12. BEE, SHIP, CAMERA

13. CASE, WATER, KICK

14. LAND, PARTICLE, PAYMENT

15. ACID, CONJUNCTION, LIMIT

16. ANGLE, CAUSE, DIRECTION

17. MEDIA, WATER, DATA

18. WEAPON, MOVIE, PLANT

19. RADIO, FRUIT, PROTEIN

20. MACHINE, NAME, LAW

Preliminary Norm for GIFT A and GIFT B Verbal Tests

01. 100	21. 164
02. 104	22. 166
03. 108	23. 168
04. 112	24. 170
05. 116	25. 172
06. 120	26. 174
07. 122	27. 176
08. 126	28. 178
09. 130	29. 179
10. 134	30. 180
11. 138	31. 181
12. 142	32. 182
13. 146	33. 183
14. 150	34. 184
15. 152	35. 185
16. 154	36. 186
17. 156	37. 187
18. 158	38. 188
19. 160	39. 189
20. 162	40. 190

The $\pi\,\alpha\,\xi\,\lambda$ Gardener

By Pineal holD

Get ready to grow!

Below are a variety of brain-teasers that will challenge different aspects of your intelligence. Please submit your answers to the Editor one month prior to the next issue GENIUS for your chance to be listed in the Hall of Fame. Please enjoy.

1. *Verbal-Linguistic Question*
coffee cup : "donut" :: pretzel : ?

2. *Musical-Rhythmic Question*
When a string instrument player puts their finger down tightly on their string:
- How has the part of the string that vibrates changed?
- How does this change the sound waves that the string makes?
- How does this change the sound that is heard?

A. stretched; higher frequency; same pitch.
B. stretched; same frequency; higher pitch.
C. shorter; higher frequency; same pitch.
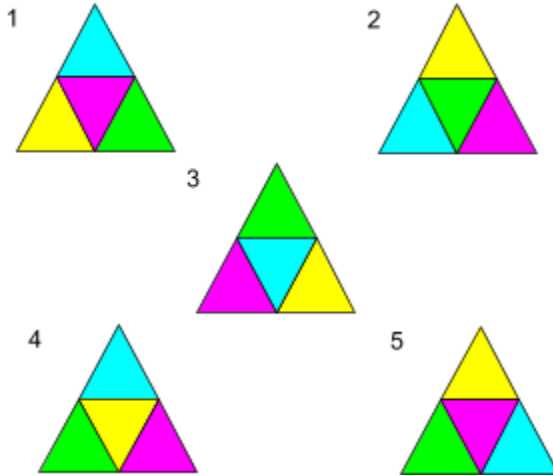D. shorter; higher frequency; higher pitch.

3.*Mathematical-Logical Question*
Which of these two expressions is larger:

i) $3^{3^{3^2}}$ *or* ii) $2^{3^{3^3}}$

A. i)
B. ii)
C. They are equal.

4. Visual-Spatial Question

Below are 5 sets of equilateral triangles that can be folded to make tetrahedra. Which set is different than the other 4?

5. Creativity-Kinaesthetic Question

How do you accurately weigh a small puppy with just a standard household step-on weigh scale if the puppy is extremely lively and will not keep still?

6. EXTRA QUESTION - Emotional-Psychological Question

Given the broad nature of emotional and psychological intelligence, we will assign this as an EXTRA question (unmarked). Associated emotional qualities will be identified in the following issue of GENIUS.

Do you prefer to work alone, or as part of a team?
- A. No strong preference.
- B. Alone.
- C. As part of a team.

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