Noesis

The Journal of the Mega Society

Issue #212, November 2023

About the Mega Society

The Mega Society was founded by Dr. Ronald K. Hoeflin in 1982. The 606 Society (6 in 10^6), founded by Christopher Harding, was incorporated into the new society and those with IQ scores on the Langdon Adult Intelligence Test (LAIT) of 173 or higher were also invited to join. (The LAIT qualifying score was subsequently raised to 175; official scoring of the LAIT terminated at the end of 1993, after the test was compromised.) A number of different tests were accepted by 606 and during the first few years of the Mega Society's existence. Later, the LAIT and Dr. Hoeflin's Mega Test became the sole official entrance tests, by majority vote of the membership. Then, Dr. Hoeflin's Titan Test was added. (The Mega Test and Titan Test were also compromised, so Mega Test scores after 1994 and Titan Test scores after August 31st, 2020 are currently not accepted; the Mega and Titan cutoff is 43 - but either the LAIT cutoff or the cutoff on Dr. Ronald K. Hoeflin's tests will need to be changed, as they are not equivalent.) The Mega Society now accepts qualifying scores on The Hoeflin Power Test and on The Ultra Test. Both tests are still being scored. The Mega Society publishes this irregularly-timed journal.

The Hoeflin Power Test and The Ultra Test are currently scored by Dr. Hernan Chang, who may be contacted at the following email address: hrc8@hotmail.com

The society also has a (low-traffic) members-only email list. Mega members, please contact one of the Mega Society officers to be added to the list.

For more background on Mega, please refer to Darryl Miyaguchi's "A Short (and Bloody) History of the High-IQ Societies" —

http://miyaguchi.4sigma.org/BloodyHistory/history.html

—and the official (designed) Mega Society page,

http://www.megasociety.org/

Noesis is the journal of the Mega Society, an organization whose members are selected by means of high-range intelligence tests.

Brian Wiksell (P.O. Box 366, Solana Beach, CA 92075) is the Administrator of the Mega Society. Inquiries regarding membership should be directed to Brian Wiksell at the aforementioned P.O.

Box or the following email address: bwiksell@megasociety.org

Opinions expressed in these pages are those of individuals, not of *Noesis* or the Mega Society.

Noesis #212, November 2023

Editorial

Richard May, Ken Shea

The current issue of *Noesis* covers high-range I.Q. testing and related communities, science in the modern world, animal rights, alternative education, and the possibility of extraterrestrials.

Luca Fiorani returns for a third interview installment with Scott Douglas Jacobsen, in which the mechanics of a sound high-range I.Q. test (with examples), astronomical I.Q. scores, human flourishing, and personal development are discussed.

Johannes Mathijs Koenraadt, then, gauges whether, in a sense, scientific 'truth' is invented or discovered in a contribution titled, "A Grammar of Physical Phenomena".

Peter Singer also returns for a second helping of chats with Scott Douglas Jacobsen, in which animal rights, meat substitutes, vegetarianism, and 'sentientism' are pondered.

After that, Cory Efram Doctorow, a blogger and science fiction writer, considers alternatives to traditional education and political philosophy in a two-part Scott Douglas Jacobsen interview.

Intelligence testing is further probed in "Sigma Test Extended" by Hindemburg Melão Jr., who describes himself as 'a Brazilian philosopher, investor, epistemologist, theologian, author, retired chess player, amateur astrophotographer, and science popularizer.'

https://www.sigmasociety.net/eng-sigma-test-extended

N.B., There is a difference between a ratio I.Q. score and a deviation I.Q. score. Stanford-Binet Intelligence Scale (Form L-M) might use the ratio method for deriving scores.

https://www.sciencedirect.com/topics/mathematics/intelligence-quotient

https://www.hoagiesgifted.org/current_use.htm

https://www.hoagiesgifted.org/dont_throw.htm

Then, Ken Shea explores the implications of knowledge by acquaintance and reviews a three-step process for gathering 'valid' data in "Real Empiricism and The Problem of Proof".

Finally, May-Tzu asks, "Where Was Fermi?", an assessment of possible wonders in the sky and other topics some might class under the rubric of conspiracy theory.

Original contributions are welcomed. The next issue of *Noesis* will be published in May of 2024.

Contents

Luca Fiorani Interview (Part 3)

Luca Fiorani & Scott Douglas Jacobsen

Abstract

Luca Fiorani is a member of Ultima IQ society (cut-off: 170 σ15; founder: Ivan Ivec). Academically, he has a philosophical background. At the same time he sees himself as an independent autodidact. His main interests are: literature, arts, tennis and communication. Fiorani discusses: the Ultima Society; rethinking membership; membership or entrance; requirements in high-I.Q. societies; strict and legitimate entrance requirements; P. Cooijmans' societies; newer thoughts on high-range testing; reconsideration of high-range testing; a member; tests of Paul's; T. Prousalis' tests and X. Jouve's tests; astronomical I.Q. scores; HRTs; the 2% estimate a qualitative estimate; participation in Sidis Society; CatholIQ; common threads in personality or tests between Dorsey, Cooijmans, Prousalis, Jouve, and Kutle; the qualifying test and score for the Mega Society; a relatively non-arbitrary ceiling of 180 S.D. 15; wisdom;

measuring the general factor or a generalized factor of intelligence with mainstream intelligence tests and HRTs; the different things measured; one's intelligence; the single hardest test ever; a high level of problem-solving ability; Megalomania; the hardest things to realize about the high I.Q. communities; positive developments; leaving Real IQ society; SLSE-II; IVIQ 16 Test; HRT test-makers; flourishing in a comprehensive way; intellectual and creative output of individuals in the high-I.Q. communities; type of test; a generalized intelligence up to and including I.Q. 180 S.D. 15; highly intelligent people waste their talents; the newer generation and the older generation of high I.Q.; speed of thought; wash out the "basely egocentric behaviors"; the essential stats; the sociocultural and philosophical front; studies; the romantic life; newest intellectual project; protection of others; "The communities"; a reasonable skepticism; good uses of diverse problem solving abilities; diversity, equity, and inclusion; the generic positives and negatives; interest in media and the entertainment industry; the content of the production on Wittgenstein; a sign of a healthy culture; controversial and often polarized discussion; newer media; increasing assholery; should people put on the breaks on their mouths; silence as an indication of restraint; diversity; equity; inclusion; a minority group; the Flynn Effect; vastly positive reception from the high-I.Q. communities; a space for clarity of mind; find the time to get their outlet, their space, their place of calm; the reversal of the Flynn Effect; "Tätigkeit" and "Therapie"; a long-term romance; the problem-solving abilities for renewable technologies; the compliments; what he say to himself 6 years ago; describing this past person; the world simply doesn't always come in neat packages; a form of therapy; official comeback; Keith Raniere; eudaimonia; hypersensitivity; the flaws; Jouve; the self-discoveries over the last several years to bring about self-therapy; the Wittgenstein paper; this "valuable opportunity"; the idea behind True IQ; the methodology of Ivec; other people in the high-I.Q. communities; increase the number of test-takers to make the sample sizes larger for more valid tests; "The Real *g* Test"; the best article on high-I.Q. psychology ever written; Wittgenstein; magnum opus; the components of wisdom; more variance between males and females; a centralized platform for test creators; good standards; a philosophical stance; paideia; a great level of expertise; the criminals and cults; Kevin Langdon; Master Chef Craig Shelton; people interested in joining high-I.Q. communities; and goals now.

Scott Douglas Jacobsen: Lots of new stuff has happened. You have left one high I.Q. society. You are a member of the Ultima Society. As well, you have some new thoughts on high-range testing. Let's start from the top, naturally, what else has been new in life for you, since the last interview?

Luca Fiorani: First of all, I'd like to thank you, Scott, for the valuable opportunity. My life is better than before. It wasn't bad the last time we talked but now I feel that I'm finally flourishing – in a comprehensive way.

Jacobsen: What prompted rethinking membership in the high-I.Q. society?

Fiorani: I've left Real IQ society (founder: I. Ivec) because my global score, my estimated True IQ, was not realistic, not even remotely. I've realized that the adjectives 'real' and 'true' were

misused. They didn't fit. Generally speaking, I'm now against too inflated and too lavish IQ scores. The method approved by Ivec is simply too generous and also not all my scores came from credible and reliable high range IQ tests. Instead, I'm still a member of Ultima IQ society – cut-off 170 σ15 – because I had entered when the requirements were robust and because "170" is not utterly craziness.

Jacobsen: What happens when membership or entrance requirements in high-I.Q. societies become too lax, even too strict?

Fiorani: When the criteria become too lax, the scores are less serious, less rigorous and people are more inclined to several delusions – unfortunately, megalomania included. They cajole themselves that the resulting scores are legit, trustworthy, stable but very rarely that is actually the case. Currently, within the high IQ community, it does not happen that the criteria are too strict. At least as far as I know.

Jacobsen: What high-I.Q. societies seem to have strict and legitimate entrance requirements at the moment? I do not mean necessarily higher I.Q.s, simply the boundaries are set reasonably tight, and the testing is more valid than not.

Fiorani: Probably this happens with P. Cooijmans' societies. (Note: I don't know the high IQ community in its entirety, there could be other well-founded examples.)

Jacobsen: Why those high-I.Q. societies in particular?

Fiorani: Because all in all the test-author mentioned above has remained true to his principles, even when rigid. His work is consistent and self-cohesive. Prousalis' tests and X. Jouve's tests are arguably better, superior, and when I say so I'm expressly referring to the methodology and the stats; they always give relevance to standardized tests: but right now societies based mainly or exclusively on scores earned on these tests – I mean, the ones designed by Prousalis and Jouve – do not exist.

Jacobsen: Your newer thoughts on high-range testing. What are those? Or, more properly, to begin on this line of reasoning, what are the factors behind the newer thoughts?

Fiorani: High range testing is often stimulating and challenging and sometimes has its validity, coherence, plausibility. HRTs can be decent and even good psychometric instruments. In most cases, though, the tests aren't adequately accurate, the subsequent scores should be taken very cautiously, without giving them too much value or importance. My newer thoughts are born when I've become aware of the fact that too many people believe that their huge, astronomical, Brobdingnagian scores are their actual IQs: they are not, in reality. No actual IQ above 180 σ15 exists so when I see this plethora of IQ scores above 190 σ15, I start to think. Many, many, many, many, many – you got the idea?… – scores are not serious, they don't come from enough reputable tests: as simple as that. Usually when I take a look at a random listing, ⅝ of the scores are comical. [Editors' Note: https://www.iqcomparisonsite.com/iqtable.aspx]

Jacobsen: How did those factors come into more full reconsideration of high-range testing at the moment?

Fiorani: I just look at HRTs in a more relaxed way and I feel compassion for those people who really believe that their IQs are above 180, above 185, above 190, above 195, above 200, just because a bunch of weak, iffy, wobbly instruments say so. Less than 2% of HRTs are fully functioning and authoritative.

Jacobsen: Outside of Ultima IQ society, are you a member of any others? If so, why those? If not, why not?

Fiorani: Yes, I am. I'm still a member of Sidis Society (founder: J. Dorsey) and also a few more, e.g. Catholiq (founder. D. Kutle). I appreciate that Dorsey is dedicated and I admire Kutle as a person and I also like the journal Deus Vult. I indeed have a qualifying score for Mega Society (founder: R. Hoeflin) but I've heard that the members can be too harsh sometimes, so I'm not interested in joining.

Jacobsen: What tests of Paul's stand out? Why those?

Fiorani: For his tests, I can tell you that I read thoroughly the statistical reports and I take into account the opinion of a dozen of versatile test-takers. His best test is probably Cooijmans Intelligence Test – Form 3E. I don't have a direct knowledge, though.

Jacobsen: For T. Prousalis' tests and X. Jouve's tests, could those tests still be used? People seemed to like the JCCES of Jouve. I know Santanu Sengupta [174 S.D. 15] from India claims a high score on it.

Fiorani: I think that Prousalis' website isn't defunct; Jouve is back with revised forms of his old tests and other precious stuff. I think that JCCES gives realistic results and I consider it a nice psychometric product.

Jacobsen: What tends to happen when individuals believe astronomical I.Q. scores claimed based on some of the tests?

Fiorani: They lose objectivity and sensibleness. Their self-awareness is inferior. And a bit of wisdom is required for high intelligence, in my humble opinion…

Jacobsen: What would make scores coming from HRTs, in terms of test items in an overall schema and sample size, above 180 σ15 believable to you?

Fiorani: Without talking gibberish, 180 sd15 should be the ceiling of ceilings, in an ideal, optimal, utopian high range IQ test. A test that gives you your exact IQ and the game is over. This, too, is implausible, since you always need a collection of heterogeneous tests. A perfect,

unique, adamantine IQ test that tells your ultimate IQ is not within this plane of existence. Hypothetically – and merely so –, the ceiling of this imaginary test should be 180 sd15. That's my (narrow) perspective.

Jacobsen: Is the 2% estimate a qualitative estimate, or an actual count and review of some tests and then an estimate?

Fiorani: It's more a qualitative estimate than a quantitative precise estimate. It's not an absurd statement, nevertheless. But let me be clear: I don't want to be aggressive towards test-authors and test-takers who genuinely care about HRTs and find them beautiful/wonderful, for instance. I'm saying that it's rare that these products have golden quality under psychometrics' point of view. Regardless, one could find them astonishing for the inherent difficulty of the items, the multiple logical layers and so on. In most cases you have the dimension of cognitive entertainment and leisure-time activity: and that's not a bad thing, not at all. Issues come when you convince yourself that all the HRTs you take pertain to (a fully valid) cognitive assessment.

Jacobsen: What is your level of participation in Sidis Society? What do you get out of it?

Fiorani: My level of participation is the following: my name is listed at the corresponding webpage. I get some sort of prestige, in a way. That I've achieved a non-negligible level of cognitive performance. And I support Dorsey's drive. Plus, I like the name, "Sidis". That's all, I guess.

Jacobsen: For CatholIQ, what have been the benefits so far?

Fiorani: For CatholIQ, or Catholiq – apparently both spellings are correct –, the benefits come from some articles of their journal, *Deus Vult*. You're informed when it comes out and you can also submit an essay of yours, or a poem, etc. That's nice and the ambience overall is healthy.

Jacobsen: Any common threads in personality or tests between Dorsey, Cooijmans, Prousalis, Jouve, and Kutle?

Fiorani: I think that Dorsey and Cooijmans are both devoted to HRTs, they deeply care about them. That's what I perceive and infer. Prousalis and Jouve have designed tests perfectly comparable to professional tests. The stats of their tests are sometimes impressive. Kutle is a clever man and a noble person. The items of his tests are very nice and sometimes elegant. I recommend Arcanum and Road to Damascus, both designed by him. They require time and diligence and a high level of crystallized intelligence. They represent a fascinating and pleasant intellectual experience.

Jacobsen: What test was the qualifying test and score for the Mega Society?

Fiorani: Ron Hoeflin knows.

Jacobsen: The norms and scores on Paul's site list a 76 out of 78 on the Cooijmans Intelligence Test – Form 3E as the highest score. I recall a listing of the three top scores on tests by Paul, out of all tests, in an interview with Paul by me. There was a tie for the top score on all of the tests, at the time, with one of the scores on Cooijmans Intelligence Test – Form 3E. The question, by me, followed by the response, from him:

> **Jacobsen**: What have been the 3 highest legitimate scores on a Cooijmans test by testees to date while using the most up-to-date norms on tests? If I may ask, who were these individuals?
>
> **Cooijmans**: First, I want to say that this is not an easy question. There are many thousands of scores in the database, and they are raw scores. To compare them, they have to be converted to protonorms. This would not be doable by hand in any reasonable amount of time and effort. To our good fortune, over the course of two decades I have painstakingly written programming code and created a protonorm database so as to dynamically link the raw scores to their current norms, and, for instance, put out a list of scores that exceed a certain level, with the name of the test and candidate if desired. This is the largest and most complex informatics project I have undertaken, and I think it is also the most difficult thing I have ever done, intellectually. Of course, any good programmer should be able to do this. Still, I must say I never see test statistics by others that even remotely have the quality of my reports, so it seems that not many combine their programming skill with statistics. I set the controls such that only the top three scores remained, and they are 76 raw on the Cooijmans Intelligence Test – Form 3E, and 27 and 28 raw on the Cooijmans Intelligence Test 5. The I.Q.'s are 190, 186, and 190, respectively. I can not give the names as that would violate the privacy of the candidates. Of course, the norms in that range are still uncertain, and there may be a number of scores right under these that, after renorming, turn out to be equal to or higher than these. (Jacobsen, 2022a) My inference: The highest scorer on the Cooijmans Intelligence Test – Form 3E is personal friend and writing colleague, Rick Rosner, who is a comedy writer. This matches, not the scores but, the achievements on other well-regarded tests, e.g., Mega Test (44/48 first attempt and 47/48 second attempt) and Titan Test (48/48). This would track with the test selection by you. Rick is of the same opinion as you, about Paul's tests. How can setting a relatively non-arbitrary ceiling of 180 S.D. 15 help with lots of test constructors without the massive comparative resources of mainstream academia? It has an aesthetic appeal of a clearcut boundary.

Fiorani: Rick Rosner, yes. I know him too. I think he is one of the smartest persons I've known within the high IQ community. Not only for his monumental scores on highly reputable tests but also for other commendable and remarkable traits. He's a great guy, very smart, very witty. As a test-taker, he's certainly better than me. I tend to believe that his mind is the mind of a genius.

Rick is uncommon, unconventional, multifaceted. The ceiling of 180 σ15 has its beauty and its rationality, yes. The WAIS-IV stops at 160 (theoretical rarity: 1/31,560). HRTs could have a boundary, at 180 (theoretical rarity: 1/20,696,863). We know that the theoretical rarity isn't exactly and strictly the actual rarity – the actual rarity being inferior. But there's no need to go much higher. To examine at or above 190 σ15, 195 or 200, for instance. I don't see the underlying logic nor I find the basis, the grounds. Twenty points above the ceiling of the WAIS-IV are enough, especially because twenty points for the upper, upper end have a bigger weight. If a test is normed well, scores above 166-170 are already exceptional. Of course, scoring 160+, or 170+, or even 180+ on a very imperfect test becomes easier. That's why a single peak performance of 180+, σ15, does not impress me. Also, peak performances at 190+ are not as rare as the score per se suggests. You always need to understand the construct validity vel similia. You always have to relativize… Otherwise you might start to believe that the rarity of your intellect is really one in a billion: can we all agree that this sounds bizarre, extravagant, exaggerated, laughable, immensely pretentious?

Jacobsen: Can wisdom be measured in any standardized manner? Or is this more something qualitative or experienced in interaction with someone?

Fiorani: Luckily and rightfully, the second thing you've said.

Jacobsen: The idea is measuring the general factor or a generalized factor of intelligence with mainstream intelligence tests and HRTs. This leads to the question. With further reflection for you, how much do HRTs and mainstream tests measure the same things?

Fiorani: Very nice question. The connection between the two approaches is not weak, there is in fact a strong correlation. The more traditional way (standardized tests, timed, supervised conditions) and the alternative-inventive way (untimed conditions, items way more difficult/elaborate, etc.). Mainstream tests and HRTs don't measure the exact same thing. In my opinion, the main difference is given by the fact that reducing the impact of the sheer speed of thinking, you can go deeper and you can reach higher levels of reasoning and complexity. A deep thinker reaches his/her full potential with HRTs, usually. Someone who scores high or very high on WAIS-IV can do pretty well on HRTs, if he/she is motivated enough. It is not said that he/she will score higher than a topscorer of tough and well-constructed HRTs.

Jacobsen: If there are different things measured to acquire scores, what are the different things measured? I do not mean the obvious in different test items and a schema for the test items to fit. I mean the human qualities or mental traits measured in acquisition of a high score.

Fiorani: In untimed conditions, patience, stamina, perseverance are rewarded qualities. Important mental traits rewarded are: the abstraction, the conceptualization and, in a way, the cogitation. In timed conditions a more basic pattern recognition is rewarded and, always, a fast thinking – and related aspects.

Jacobsen: What are other qualities, other than I.Q. and wisdom, going into one's intelligence?

Fiorani: Creativity (or profound divergent thinking), comprehension of contexts of different nature, knowledge (or culture), artistry (or mastery of talent). All these facets of intelligence are interconnected and they intersect. The more they are intertwined, the better – *id est*, you are more intelligent.

Jacobsen: Of those avid test-takers known to you, and for yourself, what do they consider the single hardest test ever taken by them, or seen by them? Why?

Fiorani: Taken thirty years ago, without WWW, the Titan Test was hard. I think that Rick Rosner would agree. People who take Cooijmans' tests say that some of them are very hard – Heinrich Siemens and also my friend Erik Hæreid would agree, all things considered. The two spatial tests by (pseudonym) Robert Lato are very hard. LDA-SWaN by my compatriot Gianluigi Lombardi is surely hard. The single hardest test seen by me is IVIQ 16 Test (test-author: Dawid Skrzos). The single hardest test taken by me is SLSE-II (test-author: Jonathan Wai).

Jacobsen: How has knowledge of a high level of problem-solving ability helped your personal and professional pursuits?

Fiorani: Life itself consists of problems and solutions, new problems and new solutions, and so on. This is evidently an answer and I'm smiling right now.

Jacobsen: Megalomania has been noted by others and you. Something not the norm in the communities, but just enough to be an annoyance. How should people deal with it?

Fiorani: To avoid irritation and also troubles, some obnoxious individuals should be avoided. It's sad but sometimes things just work like this.

Jacobsen: What have been the hardest things to realize about the high-I.Q. communities?

Fiorani: For sure the high IQ community has good and praiseworthy qualities but too often it's a venue for basely egocentric behaviors.

Jacobsen: What seem like positive developments?

Fiorani: Reduce the excessive variety of tests' norms and make them more uniform. The listings, the rankings, etc., could become realistic.

Jacobsen: How did Ivan react, if at all, to leaving Real IQ society?

Fiorani: He accepted my decision.

Jacobsen: What made SLSE-II by Jonathan Wai so hard? Is it still valid, or is it compromised?

Fiorani: Some of the items require extreme attention to details and some others are slightly and acutely obscure. There's a certain ambiguity rate. It's still graded by Wai, I believe. The items were discussed and some IQ groups declared the test invalid for admission.

Jacobsen: What makes IVIQ 16 Test look so difficult?

Fiorani: Every item is like a labyrinthine encryption. The author, Dawid S., was incredibly good with numerical sequences and I think he solved all the items of the Numerus series by Ivec. Perhaps he naively thought that a common test-taker had his outstanding skills for numbers and pattern recognition, hahaha!

Jacobsen: What have HRT test-makers simply not figured out? What are some directions to solve these issues?

Fiorani: I would give too vague answers, I don't know. As a maxim: less generous norms and more detailed stats.

Jacobsen: How is your life flourishing in a comprehensive way?

Fiorani: My studies ended, my romantic relationship continues happily, my professional life has started, I cultivate my interests, I'm less anxious, I'm less bored.

Jacobsen: What about intellectual and creative output of individuals in the high-I.Q. communities? Are there any people who stand out as truly matching their claimed or measured intelligence with their productions and/or productivity?

Fiorani: Yes, there are.

Jacobsen: What type of test would measure, in a single test item schema or a single question type, or might tap most into a generalized intelligence up to and including I.Q. 180 S.D. 15?

Fiorani: A long test with various items – verbal analogies, verbal associations, numerical sequences, figure matrix reasoning questions, mixed in mixed problems – might work.

Jacobsen: Side question, how do highly intelligent people waste their talents?

Fiorani: When they are emotionally unstable – and there are a myriad of possible factors causing this… But what happens next is just a consequence.

Jacobsen: What differentiates the newer generation and the older generation of high-I.Q. types?

Fiorani: The newer generation is less prudent.

Jacobsen: When does speed of thought become less of a differentiating factor for seeing differences between a smart person and a smarter person? What seems like the I.Q. threshold?

Fiorani: The IQ threshold, assuming a rather even cognitive profile, is (approximately) 145 σ15.

Jacobsen: Is there a way to wash out the “basely egocentric behaviors” in the community?

Fiorani: Nope, there isn’t. Sorry for the frankness and the jaundice.

Jacobsen: What are the essential stats to start including in some of the tests moving into the future to make the tests analysis of scores more in-depth?

Fiorani: The following essential stats should be non-hidden: A histogram that shows how the scores on a test are distributed. A table regarding the items’ difficulty and robustness. Cronbach’s α presented & Spearman-Brown prediction formula presented. Correlation with standard supervised psychometric batteries. Correlation with other significant HRTs. Presentation of theoretical IQ per raw score points. The last one is the most obvious but sometimes being didactic is not a sin.

Jacobsen: What’s new in the sociocultural and philosophical front for you?

Fiorani: The topic of diversity, equity and inclusion – in the media and entertainment industry.

Jacobsen: For your studies, what was the final result?

Fiorani: «Eccellenza».

Jacobsen: How is the romantic life now?

Fiorani: Fulfilling.

Jacobsen: What is your newest intellectual project?

Fiorani: An essay on Ludwig Wittgenstein that might see the light in August.

Jacobsen: On the individuals who claim inflated scores, there is also the factor that they don’t want to believe it themselves as much as they want the public to believe it to keep a modicum of cachet. There is the solution of leaving them alone. So, less about compassion for them and more about protection of others. In other words, what about others who may be less experienced, potentially more intelligent but naïve, on some of these aspects of the communities?

Fiorani: Nice question, again. If a neophyte looks at the scoreboards and the listings, he/she should probably reflect as follows: this is a collection of peak cognitive performances on disparate HRTs, not every score is that phantasmagorical; and the accuracy of the scores is more important than the scores themselves. In other words, which of the displayed scores are obtained on accurate psychometric products? A 160 σ15 can be (literally) more significant – or: with meaning – than a >185 σ15, it depends on the test(s). I'd say to the neophyte: within the community, search for quality and accuracy, ignore the stratospherical, esospherical, sidereal scores, especially if the solidity of the test(s) is unknown, unclear or low.

Jacobsen: "The communities", as I type it, I am making an assumption. I had some correspondence with someone about this, in the high-I.Q. communities, recently. The idea is the community as a homogenous, and humongous, blob or a subcultural bloc. To me, "the community" seems more like communities and variegated rather than singular, but modest in size somewhere in the middle 1000s in membership, excluding Mensa International. Does this match experience for you? What else can be subtracted, added to a proper perception of the idea of high-I.Q. communities to describe them?

Fiorani: Well, yes, I agree, this matches my experience. I use the singular – a subcultural bloc – for simplicity but I become simplistic, it's true. A proper perception of the various souls and cores of the community isn't easily obtainable. Reading your interviews is helpful. Here and there, you can see different characters and sense different mental settings. There are diverse kinds of "members".

Jacobsen: Most members of the high-I.Q. communities seem to have a reasonable skepticism, while some cases simply do not, about claimed scores or achievements on some of these harder HRTs. A more substantiated norm was published by Redvaldsen entitled "Do the Mega and Titan Tests Yield Accurate Results? An Investigation into Two Experimental Intelligence Tests". The scores can be reduced to the aforementioned range, by you, on the Titan Test and Mega Test to 166-170 for the highest scorers on the tests by Hoeflin, e.g., Cole, Langan, May, Raniere, Rosner, Savant, Sununu, etc. This brings things down to Earth and says something legitimating about the constructs of the HRT communities when the effort is significant enough. What are the lessons from the Mega Test and the Titan Test, and the Hoeflin ensemble of societies?

[Editors' Note: https://www.mdpi.com/2624-8611/2/2/10]

Fiorani: Reasonable skepticism is healthy and I knew this paper. I think that Hoeflin has counter-replied but I don't want to wander from my own answer. The point is that these experimental intelligence tests aren't bad. Perhaps they're just too ambitious, sometimes. I believe that a possible lesson learnt from the Hoeflinian galaxy is the following: the ceiling of a prestigious untimed IQ test isn't necessarily above 180 σ16, or 176 σ15.

[Editors' Note: The David Redvaldsen 'investigation' and Ron Hoeflin's response to said investigation were published in *Noesis* #206: https://megasociety.org/noesis/206.pdf]

Jacobsen: Another side note, my other inference: The other highest scorer on Paul's tests, who tied with Rick, Heinrich Siemens. Anyway, I have experimented with making use of both the intelligence and the expertise of the high-I.Q. communities. One of which is a series of educational interview sets on the relevant expertise of people. One example is the aforementioned Erik Haereid. He's so well-versed in statistics and actuarial sciences as an actuary. It is in-depth. Certainly, not everyone's cup of tea, but, also, not something everyone thinks about much, especially how much it pervades their lives. What might be some other good uses of diverse problem solving abilities? There are lots of highly involved people, who, likely, have great ideas to create things helpful to others.

Fiorani: Rosner, Siemens, Hæreid: these guys are very, very clever. Other good uses of diverse problem solving abilities? Projects related to renewable technology.

Jacobsen: Diversity, equity, and inclusion, these have been highly contentious hallmarks coming from academe. What are the first thoughts on the chosen concepts to you?

Fiorani: First thoughts are about the fact that these concepts cause disagreement, they're divisive. A philosophical question might sound like this: why is controversial and often polarized discussion so trendy and so paradigmatic nowadays? Do the newer media interfere?

Jacobsen: What are the generic positives and negatives for you?

Fiorani: The generic positive is that people talk; the generic negative is that people talk too much.

Jacobsen: How is this of interest in media and the entertainment industry to you?

Fiorani: I try to use philosophical lenses to interpret the phenomena that permeate my life as an individual of a highly complex society. Media and entertainment industry are crucial for understanding our current sociocultural macro-context and also its microvariations.

Jacobsen: What is the content of the production on Wittgenstein?

Fiorani: It's about the notion of philosophy as "Tätigkeit" and "Therapie".

Jacobsen: Disagreement can be a sign of a healthy culture. A culture of higher feedback mechanisms within individuals and between people. It can be toxic too. What are the forms of this disagreement and divisiveness?

Fiorani: Yes, disagreement can be a sign of intellectual vitality, it's true. Though we need to understand if the disagreement facilitates a proper dialogic instance or not. In multiple cases, you see a non-dialogic approach. Divisiveness concerns the representation of the (so called)

minority groups. Joe Feagin, a well-known sociologist, has described the fundamental characteristics of a minority group. The topic is too ample, I don't want to be or seem trivial.

Jacobsen: "Very nice question" … "Why is controversial and often polarized discussion so trendy and so paradigmatic nowadays?

Fiorani: Hahahah, these questions require a dissertation – and I'm not joking. I must limit myself for a criterion of practicality and convenience. Polarized reflections require less effort, you spend less time and less mental energy. We go too fast, we don't valorize profoundness. Instagram reels or TikTok shorts, etc. etc., represent the immediacy and impulsiveness of consuming, the commodification and barbarization of thoughts, of concepts, of the concept. We don't reflect enough, we don't take our time – literally. Choosing a side, and doing so intensely, vibrantly, rapidly, is a shortcut. We like shortcuts.

Jacobsen: "Do the newer media interfere?"

Fiorani: Without a doubt. There no longer is a life completely outside them. Consider my previous answer, too.

Jacobsen: Kirk Kirkpatrick calls a phenomenon the "American Disease" and Rosner calls it "Superempowered" (Jacobsen, 2018; Jacobsen & Rosner, 2017). Is the degree of divisiveness a reflection of increasing assholery?

Fiorani: You are right, yes.

Jacobsen: When should people put on the breaks on their mouths? What's the speed limit here?

Fiorani: Let me quote the French preacher Joseph Dinouart and his *L'art de se taire* (1771), first part, first chapter: «1. On ne doit cesser de se taire, que quand on a quelque chose à dire qui vaut mieux que le silence. […] 6. Jamais l'homme ne se possède plus que dans le silence: hors de là, il semble se répanfre, pour ainsi dire, hors de lui-même, et se dissiper par le discours, de sarte qu'il est moins à soi, qu'aux autres. 7. Quand on a une chose importante à dire, on doit y faire una attention particulière: il faut se la dire à soi-même, et après cette précaution, se la redire […]. […] 10. Le silence tient quequefois lieu de sagesse à un home borne, et de capacité à un ignorant. On est naturellement porté à croire qu'un homme qui parle très peu, n'est pas un grand génie, et qu'un autre qui parle très peu, n'est pas un grand génie, et qu'un autre qui parle trop, est un homme étourdi, ou un fou. Il vaut miex passer puor ne point être un génie du premier ordre, en demeurant souvent dans le silence, que pour un fou, en s'abandonnant à la démangeaison de trop parler. […]». [Ed. pp. 5-8.] Didn't you believe that a polemist born 307 years ago would have answered to your question, did you? (Of course, if necessary, I might translate, but I don't know an official English edition of the text.)

[Editors' Note: Google Translate indicates: '1. We should only stop being silent when we have something to say that is better than silence. […] 6. Man never possesses himself more than in silence: outside of there, he seems to expand, so to speak, outside of himself, and dissipate through discourse, sarte as he is less to oneself, than to others. 7. When you have something important to say, you must pay particular attention to it: you must say it to yourself, and after this precaution, say it again […]. […] 10. Silence sometimes takes the place of wisdom for a born man, and of ability for an ignorant person. We are naturally led to believe that a man who speaks very little is not a great genius, and that another who speaks very little is not a great genius, and that another who speaks too much, is a thoughtless man, or a madman. It is better to pass for not being a genius of the first order, by often remaining in silence, than for a madman, by giving in to the itch of talking too much.']

Jacobsen: With silence as an indication of restraint, not necessarily genius, and loquaciousness potentially as an indicator of a madman, silence becomes a better heuristic than not. Why do diversity, equity, and inclusion, lean one into talking too much rather than too little now?

Fiorani: Certain themes are important in principle and as a matter of fact. But they are too repeated and, then, oversimplified. As users of social networks and spectators of TV shows, we see how incessant ideology can be – and also counter-ideology can be insistent. The fact is that a topic like this is no longer perceived as a niche interest, we often feel the desire (or compulsion?) to express our opinions, again and again and again. Aware or not, we are already in a *circulus vitiosus*. We are overstimulated and we feed the exact inner workings of the structure. A possible solution would be creating safe places and safe moments for ourselves, to safeguard the lucidity of our mind, loosening the chains we've contributed to construct.

Jacobsen: What does diversity represent in its practical effects in implementation in media and the entertainment industry?

Fiorani: For example, casting actors of different ethnic groups for playing certain roles/characters – possibly avoiding stereotypes and clichés – is a practical way to represent sociocultural diversity. This implementation helps or could help more people to feel identified, to feel represented, to feel not invisiblized, to feel not marginalized, via common narrative and psychological devices (empathy, projection, etc.). This is a deliberately succinct answer, given summarily.

Jacobsen: How is equity implemented in the media and entertainment industry?

Fiorani: Also in this case, in representation and communication, you will need to avoid pseudo-archetypes and bromides. Then it's up to the public to ponder over the outcome.

Jacobsen: What is an outcome of inclusion as a value acted out with diversity and equity?

Fiorani: It depends. (Cf. the two previous answers.)

Jacobsen: How does Feagin define a minority group? In Canada, for instance, Christianity is undergoing a rapid diminishment. It will, probably, be less than half of the population by self-claimed identification by some time in 2024. Is it merely numbers? If so, then Christians will be a big minority as less than half in Canada. They'd already be a minority in the United Kingdom. However, it must be more nuanced in Feagin's view. How so, if so?

Fiorani: Even if it is not polished, I will quote Wikipedia English (page: Minority group): "Joe Feagin, states that a minority group has five characteristics: (1) suffering discrimination and subordination, (2) physical and/or cultural traits that set them apart, and which are disapproved by the dominant group, (3) a shared sense of collective identity and common burdens, (4) socially shared rules about who belongs and who does not determine minority status, and (5) tendency to marry within the group".

Jacobsen: Do you think the stagnation or reversal of the Flynn Effect is correlated with the massive introduction of these new media?

Fiorani: Reversal more than stagnation, AFAIK. Yes, I think that it is indeed correlated. This could be seen as a bias of mine but we'll see what time – and studies and research – will tell us.

Jacobsen: I've received vastly positive reception from the high-I.Q. communities. Rick Rosner called me more rational than him. Chris Langan called me a stupid little idiot. YoungHoon Kim called me a very balanced intelligence and wiser than him. I appreciate all of the compliments. They speak well of one another in general too. There are some shocking things some say about one another. They tattle, so whatever, but to me, hilariously. Less so now. Anyway, and to the point, my other sense of the communities is regular interpersonal stuff seen in any subculture and set of communities: People living their lives and competing mentally in their off time. That's healthy. When it becomes someone's identity or life, that raises eyebrows to me. That's, probably, a normal reaction. How about you?

Fiorani: The expression used by C. Langan is a compliment? I doubt so, hahaha… I agree with Rick and also with Mister Kim about your balanced intelligence. Yes, it's not healthy at all when it becomes someone's identity. I've seen lots of cases, nevertheless. And, again, I agree: the fact staggers me. Luckily, I'm much wiser now than I was six years ago. There are shadows in my career as a test-taker but approximately an eon has passed. Life goes on and improves.

Jacobsen: What might be a good means by which to create such a space for clarity of mind?

Fiorani: Just take our time, in different situations. Consider one of the Ten Commandments: Remember the sabbath day, to keep it holy. There's no irony nor humor, we can glean a lot more than the literal meaning and we can also omit for a second the religious interpretation(s). Can we deduce the importance of rest, the importance of break, in our (now frenetic and hyper-demanding) lives? We can – that's my modest view.

Jacobsen: If they're like me, they could be working 7 days a week at an elite equestrian facility sunrise to sunset, or some other job requiring it. Down time is hard to find nowadays, for some. Even a regular 5 days and 9 to 5, they might go partying or drinking, or pursuing social activities, which might not necessarily be conducive to the creation of a safe space for thought. What about those people? How can they find the time to get their outlet, their space, their place of calm?

Fiorani: Those people still can find ways. For example, you can deem an interview with a pseudo-intellectual Italian dude as refreshing.

Jacobsen: What other factors seem to be behind the reversal of the Flynn Effect?

Fiorani: One should read papers on the matter. As a perception of mine, I see a depletion of people's vocabulary and scarce comprehension of text. The verbal tasks (subtests) are the most *g*-loaded in the WAIS-IV.

Jacobsen: What are "Tätigkeit" and "Therapie"?

Fiorani: The first term means "activity, occupation" and the essential idea is that philosophy, for Wittgenstein, is more an attitude than a doctrine or a theory. The second term means "therapy", and the idea behind is that philosophy can take care of the chronic disease that the language itself represents. Not everything can be summarized in a cool way.

Jacobsen: Are you married, common-law, a long-term romance, or a newer partnership?

Fiorani: A long-term romance.

Jacobsen: What are some directions for the uses of the problem-solving abilities for renewable technologies?

Fiorani: In application terms? I say to myself: let's try not to stray beyond our scope. So, I don't know, sorry for disillusioning.

Jacobsen: I "appreciate all of the compliments". If it wasn't a compliment, then I don't appreciate it. However, in some sense, it can be considered a compliment. I'll take it! Thank you, Mr. Christopher Michael Langan. Don't spell his name wrong, though, I'm told it "can be interpreted as a passive-aggressive form of sacrilege", by him. Anywho, one of my favorite stories from observing Jouve. I like how a legitimate experimental psychologist, Dr. Xavier Jouve (a.k.a., an almost literal Professor X. of the I.Q. communities), who developed some awesome tests, then transitioned abruptly into photography. That's truly wonderful. I love that kind of stuff. Does anyone know the reason? If anyone knows, I'd love to know it.

Fiorani: No idea. His comeback is official, though.

Cf. the following link: http://www.cogn-iq.org/index.html

Jacobsen: I'm really happy for you, and the transition self-identified by you. What would you say to yourself 6 years ago?

Fiorani: About HRTs and IQ scores? Take them less seriously. About some pernicious individuals of the community? Give them little importance. When this interview will come out, I better prepare myself to face a couple of haters and trolls, their possible lasting hatred, entirely motiveless and – in the present – unwarranted. I'm being brave against some stubborn fanatics. They give abnormal importance to small past events related to high range IQ tests. They can become suffocating… But it doesn't matter, I'm accepting this interview and I'm happy.

Jacobsen: What words describe this person to you?

Fiorani: The 2017 version of myself? I was emotionally immature and, sometimes, (emotionally) unstable. My mistakes were not even close to gravity. They have been flaws, surely preventable, but just minor flaws – if I reconsider them with the cognizance of an adult person not disassociated from reality.

Jacobsen: Maybe, if not everything can be given in a cool way, the world simply doesn't always come in neat packages?

Fiorani: Agreed.

Jacobsen: Could your own philosophical pursuits be considered a form of therapy for yourself?

Fiorani: You are insightful, I confirm. You're right.

Jacobsen: His official comeback will raise the bar for everyone. What has been the discussion within the community about this?

Fiorani: Within the community, I don't know. Personally, I'm happy. He is *ne plus ultra*: professional high-range testing.

Jacobsen: What are your thoughts on his coming back?

Fiorani: It's great!!

Jacobsen: Brave the storm! You get used to them. Perspective: They are 2% or less of the population of the super smart. Criminal Keith Raniere is exceedingly rare. He swindled the Bronfman's out of $150,000,000 (USD). Sara and Clare were in the equestrian world and were known to some of my bosses quite well. He was in the Mega Society alongside Marilyn, Rick,

Chris, other Chris, Kevin, Richard, Ken, and the myriad of others. He is one out of a much larger number of super smart people. You'll do fine. What would you see as the main points of maturation for you?

Fiorani: I didn't know the names you mentioned. And I was feeling better without knowing, hahaha! I think it gives an idea about real criminals and real crimes compared to trifles and minutiae. The main point of my maturation: understanding better each context and having a more pragmatic mindset, at times.

Jacobsen: Your "comprehensive way" of flourishing. Would you consider this *eudaimonia* on a personal level?

Fiorani: Yes. About the topic, more broadly, cf.:

Julia Annas, *The Morality of Happiness* (1995)

Christoph Horn, *Antike Lebenskunst*: Glück und Moral von Sokrates bis zu den Neuplatonikern (1998) [Editors' Note: *Happiness and Morality from Socrates to the Neoplatonists*]

Alexander Nehamas, *The Art of Living: Socratic Reflections from Plato to Foucault* (1998)

Edith Hall, *Aristotle's Way: How Ancient Wisdom Can Change Your Life* (2019)

Jacobsen: What were the moments of emotional instability? Hypersensitivity, emotionally speaking, is common among the highly intelligent. It doesn't seem like a mark of shame or guilt to me, more a signal of a longer maturation process due to the emotions catching up with the mentation.

Fiorani: It's true.

Jacobsen: What were the flaws, minor as such?

Fiorani: Related to HRTs? Well, it has happened that I've discussed some items of a couple of active high-range IQ tests – which is not allowed and unfair. I was severe towards myself after that. Later I have discovered that my behavior was less worse than other behaviors of other test-takers. I have downsized the thing a lot when I've seen what other testees – pretty commonly – do. In those occasions, regardless, I made a mistake. Funny (?) thing is that none of the episodes of soft cheating on HRTs entailed a successful outcome, in terms of IQ score. Because: I didn't submit my answers at all (so, no IQ score); or my submission has been graded but wasn't spectacular (so, below my average). Anyways, I haven't used the earned IQ score for admission purposes in some high IQ groups. This soft cheating hasn't brought me anywhere in multiple senses, then. Now remembering my mistakes is helpful.

Jacobsen: Do you think Jouve would be open to an interview? He wasn't years ago, for benign professional reasons.

Fiorani: I think he is a reserved guy but you might try.

Jacobsen: What would you consider the self-discoveries over the last several years to bring about self-therapy?

Fiorani: Knowing inner emotions more lucidly. Work in progress, though.

Jacobsen: Where might people be able to find the Wittgenstein paper, eventually?

Fiorani: Still to be decided.

Jacobsen: What is the most valuable part of this "valuable opportunity"?

Fiorani: Sharing ideas and also having a conversation about them. It's always nice and it is also an underrated experience.

Jacobsen: What was the idea behind True IQ?

Fiorani: Having a good and articulate confirmation of your broad cognitive abilities.

Jacobsen: What is the methodology of Ivec to make overly generous scores?

Fiorani: He uses an extension of the Ferguson formula. But the scores are initially hyperinflated. So, to me, it doesn't work.

Jacobsen: What other people in the high-I.Q. communities deserve admiration for efforts, character, scores, tests, or healthy community building? The fact of its finiteness makes it capable of cataloging.

Fiorani: Excluding the already mentioned ones, Kirk Raymond Butt deserves admiration. In his case, you have a combination of multiple traits. Wu Meiheng, too. For scores and character, a French guy named Jean-Mathieu Calut – the best test-taker I've ever met. Several guys have huge scores, though. And several people deserve admiration, without a doubt. This list is obviously incomplete, hastily made.

Jacobsen: Maybe, the biggest long-term barrier isn't necessarily the test items to HRTs becoming more robust. It's test-takers and test-taker variety. What might increase the number of test-takers to make the sample sizes larger for more valid tests?

Fiorani: Good question but I haven't found an answer yet, I don't know how more people might find HRTs appealing. In fact, larger sample sizes would be a blessing.

Jacobsen: Have there been any tests based solely on the most *g*-loaded items possible? So, both the most g-loaded test/subtest type and the most *g*-loaded items from those tests or test items or test types comparable in *g*-loading. That plus an online testing platform with a smart and narrow A.I. screening processing of the test items as the test evolves uniquely each time – random but not random – on an encrypted platform might give something like a secure place to get lots of people. Let's call it "The Real *g* Test", for real OGs, holla back!

Fiorani: They tried something (most *g*-loaded items possible) but I don't know if it's just chimeric…

Jacobsen: What is the best article on high-I.Q. psychology ever written or known to you?

Fiorani: Lohman, David F.; Foley Nicpon, Megan (2012). "Chapter 12: Ability Testing & Talent Identification": this one is nice. But there are plenty of good articles.

Jacobsen: By the way, why did you focus on Wittgenstein, as your necro-therapist?

Fiorani: Plato has spoken about μελέτη θανάτου (meletê thanatou) or "care of death" and Heidegger has spoken about Sein-zum-Tode or "being-towards-death". I don't need Wittgenstein if we talk about death. Or you mean that Wittgstein is a cadaver, νεκρός (necros)? Why him as a therapist, then? My greatest masters have died long before I was even born.

Jacobsen: "Ron Hoeflin knows", oh, the secrets he holds. Have you seen some of his magnum opus?

Fiorani: A bit, here and there.

Jacobsen: What are the components of wisdom? How is wisdom practiced and lived, and witnessed, universally in individuals in all cultures? In other words, what are its manifestations, ingredients, and enjoyable outgrowths to see in others?

Fiorani: Good judgment and moderation.

Jacobsen: I have been interviewing women in the high-I.Q. communities. Yet, the ratio is so skewed. There is the fact of more variance between males and females. Yet, I don't think the skew of the degree of variance tracks the degree of variance of membership in the communities. Why? I know Rick admits to joining Mensa to get a girlfriend. He even asked Marilyn vos Savant out while trying to join the Mega Society. She's been super nice to me: She published one or two pieces of mine in her column for me.

Fiorani: Actually I've never understood why women don't join high IQ societies as much as men. Let me know if you figure it out, hahaha!

Jacobsen: Is there a centralized platform for test-creators to have their work listed and linked? If not, I can, probably, make one in an article to advertise them if this helps everyone.

Fiorani: I don't think that a centralized platform for test-authors exist. Do as you wish but I don't think that the creation of such platform would actually help.

Jacobsen: What would be the good standards by which to "make them more uniform" regarding test norms?

Fiorani: We've already talked about the detailed stats and Prousalis and Jouve. You already have an acceptable answer. (smiling)

Jacobsen: I've been highly involved in a number of philosophical movements – secular and religious, slightly transitioning as I see in practice or witness flaws in either philosophical foundations or sociopolitical structural outcroppings from those foundations, e.g., claiming a democratic movement and then booting properly elected executives, or claiming respect for freedom of expression and then coercing removal of articles from publications… I'm much, much less sure at the current moment. What is a philosophical stance for you, now, either in metaphysics or pragmatic living (or both)?

Fiorani: Anekāntavāda.

[Editors' Note: 'Anekantavada, (Sanskrit: "non-one-sidedness" or "many-sidedness") in Jainism, the ontological assumption that any entity is at once enduring but also undergoing change that is both constant and inevitable.'

Source: https://www.britannica.com/topic/anekantavada]

Jacobsen: How can the newer generation become more prudent?

Fiorani: Re-understanding the value of paideia.

Jacobsen: Who else in the communities have a great level of expertise in something niche or interesting? I'd like to email them and get another series going with them.

Fiorani: Perhaps you've already interviewed the most interesting ones but let's be clear: "Was wir wissen ist ein Tropfen, was wir nicht wissen ein Ozean". (smiling)

[Editors' Note: 'What we know is a drop, what we don't know is an ocean.'']

Jacobsen: I should write another comprehensive article on the criminals and cults coming out of Mensa to the most obscure high-I.Q. societies and communities. It's shocking. I have all the data points. It's simply putting it together. Before knowing about Raniere, what were the worst cases known to you?

Fiorani: Silentium est aurum.

[Editors' Note: Roughly, 'Silence is golden.']

Jacobsen: Kevin Langdon in a funny recorded talk to the Triple Nine Society made a great point about the idea of screening for high intelligence for a society or a community of people, and then telling them what to do… that seems counterproductive and doomed to fail. The Mega Society and Mega Foundation split was one such case of individuality of several people exploding. It's public and on the record. What procedures, policies, processes, ethics, norms, should be instantiated in a high-I.Q. group to minimize the increasing individuality of higher I.Q. people, increase group participation and cooperation and mutual respect, and provide a process for booting assholes, e.g., something more than a simple "No Assholes Policy"?

[Editors' Note: https://www.youtube.com/watch?v=Z9vzkREiatE]

Fiorani: A procedure like this is antithetical to the quiddity of such groups.

Jacobsen: Mentoring younger people when I have the opportunity is the most meaningful thing to me. One young man, who wanted to be a chef, when I was working in the restaurant industry was a bright light. After leaving to work with and around horses, he said, "Thank you for everything." It was so moving. I wanted to cry. And I am a little bit thinking of it now. I managed to get Master Chef Craig Shelton, who is a member of the high-I.Q. communities to get me book recommendations for him (he would know better than me). I ordered the books and gave them to the young man. Have you ever mentored younger people?

Fiorani: Happy for you, it must be a gratifying feeling. (smiling) Nope, I've never mentored younger people.

Jacobsen: What are other resources for people interested in joining high-I.Q. communities or learning about giftedness in general?

Fiorani: For people interested in joining high IQ societies:

https://highiqtests.com/join

For people interested in learning about giftedness: Sternberg, Robert J.; Davidson, Janet E., eds. (2005). *Conceptions of Giftedness*.

Jacobsen: What are your goals now?

Fiorani: Keep working on my Self, writing my own story.

A Grammar of Physical Phenomena

Johannes Mathijs Koenraadt

> … if by ‘God’ we mean the set of physical laws that govern the universe, then clearly there is such a God.
>
> —Carl Sagan

Science proposes we are living in a knowable universe, a world governed by unchanging laws, functions, and formulae. If only scientists could only figure out what exactly the rules were, we would be able to generate near-infinite material wealth and pleasure for all mankind.

Science offers a rule-based view of material reality. Knowledge of the universal regulations is believed to bring humanity salvation from labor.

To some, such a rule-based order may feel pleasantly secure. But to others, it is apparent that the desire to know the universe’s rules is nothing but the mental projection of people brought up in rigid, unbudging households. Isn’t the quest for scientific knowledge the same as the desire of grown men and women stuck in their childhoods, still trying to figure out what the rules once were?

Perhaps the rules were never meant to make sense but rather to confuse and oppress. *Divide et impera.* Our universe and its imagined laws, too, may be simply that—mental projection. Our universe’s physical order may be changing with the latest fashion.

If that were indeed the case, we are living in an inherently unknowable universe. The so-called unchanging laws of physics would amount to no more than a changing (and conflicting) grammar of phenomena.

Once, people knew better than to trust their lying eyes. To our distant ancestors, the world was emotional rather than material, experienced rather than measured. In fact, the English word for ‘world’ is an old Germanic word that comes from *weraldi*. It literally means *men (growing up) through the ages*.

Traditionally, the force people called God used to be the collective racial soul of one’s people. This God was the will, the consciousness, and the salvation of His people. But the science movement set out to teach people to believe the governance of their universe lies not within them but in some abstract set of laws that only trained experts can discover.

The doctrine of the knowable universe has put a caste of knowing experts in charge of its direction. Science is the religion of intolerant elitism that denies human beings can (and may) have *a soul*, *a free will*, *a sense of agency*, *or self-determination.* Science has robbed people of the world.

In our globalized world, the former nobility has abandoned its loyalty to its peoples. Instead, the aristocracy now regards its population as a means of production to produce tax incomes. Science happily informs the ruling classes that's what people are for: mere bodies in motion, objects, not persons.

* * *

According to science, unchanging physical laws must govern our universe. But have scientists perhaps mistaken their mental abstractions for laws that, in reality, amount to nothing but a changing, descriptive grammar of physical phenomena?

A mental abstraction may or may not have a basis in observable reality. If I can observe that the universe is expanding, I can infer that, therefore, the universe must also have had an origin, a point in time and space from which everything originated. But I haven't provided any evidence for this abstraction. I have merely imagined so.

Next, I can go looking for observations in support of my imaginary theory. I may find some phenomenon I can convince fellow scientists of accepting as evidence for my belief in an expanding universe. As long as my colleagues remain convinced, I can claim the universe is expanding—until some other phenomenon invalidates my evidence.

That isn't how science is supposed to work, though. The sort of science that wants to remove the human element from its equations in order to create the illusion of objectivity isn't supposed to start with one's beliefs in need of validation, but with observations in need of explanation (through experiments).

Yet, this is how large numbers of scientists go to work each day. They are reasoning from a belief system. They are acolytes, not academics. Human minds, especially the more intelligent ones, are prone to see all sorts of patterns in places where there are none. Since false positives (a tiger is hiding in the tall grass) aren't lethal to a scientist's career, they go unnoticed.

Some of the scientists' imagined patterns may accurately predict random chaos *for some time*, in some cases even for decades or centuries, until the chaos shakes things up and reveals its random nature, then *changes again*. Then, our theories about the observable disorder are instantly invalidated.

Scientists, stubborn as they are, like to call such mass invalidations of their theories a "paradigm shift." They see shifts as big leaps in their progressive understanding of the universe. In reality, the scientific worldview has always been forced to admit defeat in the light of new observations. Science has always succumbed to groundless wishful thinking.

Paradigm shifts aren't leaps forward. They are steps back to ignorance. Never, however, will scientists willingly abandon their religious faith in scientific progress. To them, *everything is always progressing.* But why? Scientists who slave away doing underpaid research in dimly-lit laboratories need to delude themselves.

Charles Darwin, the author of the *Origin of Species* who proposed the theory of evolution, believed all was "produced by laws acting around us." Initially, these laws were his assumptions. Darwin then went looking for observations in support of his beliefs. Though he built a convincing case for his theories, he never explained *what makes these laws so* or *where these laws were recorded*.

Who wrote the rules? Mind you, the laws of evolution aren't recorded in our DNA. These laws are supposed to come from the universe itself. If the laws of evolution, like the laws of physics, are considered to be unchanging, then where in the world were these laws recorded, e.g., chiseled in stone, to ensure their universal, immutable application for all time to come?

What kind of force could make universal laws universal? The answer is that the laws of physics and evolution *only exist in the minds of thinking men*. They are mental abstractions, not physical realities, and they do change. They change each time new observations force old paradigms to shift. Long-held scientific truths can be invalidated overnight.

The problem is not that scientists sometimes change their minds. The problem is that scientists never question their most fundamental assumptions about reality. For example, when paradigms shift, how do scientists know the phenomena underlying their observations haven't changed?

In a mental universe, it is possible that whenever the scientific consensus changes, part or all of our underlying reality has also changed *because our thinking about it has changed*. The truth is scientists don't know, and can't know for sure, whether the phenomena they are observing are being governed by unchanging laws or by their own changing mental projections. All they can do is make assumptions.

Scientists of the universalist and materialist schools have thus assumed the phenomena they can observe must be governed by unchanging laws. And they have set out to create a worldview that proves them right. But what if the laws of physics, as well as the laws of evolution, are *descriptive rather than prescriptive*, like a grammar of language?

Unlike the allegedly unchanging laws of nature, a grammar of a spoken language changes whenever the language at hand is expressed differently. In a sense, a language is a pluriverse. There are many different languages and many different groups of people who speak the same language with a different dialect, with local accents, idioms, localized vocabularies, and individual voices.

In other words, there is no such thing as a universal grammar applicable to all languages. Only a heavily reductionist grammar can describe all of human language (and would be utterly useless).

A ‘universal’ grammar can only describe the most fundamental aspects of human languages by reducing its scope to those familiar aspects of language which rarely change. *That doesn’t mean the fundaments don’t change at all.* They do change, but slow enough for universalist linguists to make a career.

If any attempt to produce a universal grammar of languages must be a reductionist attempt, any effort to create a set of universal laws of physics must also be a reductionist attempt. By focusing on phenomena that change slowly, an older generation of scientists can claim universal truth until a newer generation comes along and shifts the paradigm.

Modern scientists say that the physical laws and constants governing the universe really exist and that they will never change. As if woven into the fabric of reality itself, scientists are confident they will discover what these universal laws are. Then, science will unlock all of the universe’s secrets. Humanity will be able to enjoy infinite material wealth—the fulfillment of Marxism’s utopian promise to liberate humankind from the struggle with nature.

The only thing standing between us and the socialist utopia is evil authoritarians “who are afraid of progress” and “who just want to control people’s bodies.”

Apparently, we are to believe that the events surrounding the Big Bang somehow engraved the immutable laws of physics onto reality’s canvas, just lying around for us to be discovered.

Evidence suggests we aren’t living in such a predictable rule-based universe. For example, once every ten years, a committee of metrologists—people who measure stuff—comes together to determine the value of the Universal Gravitational Constant, or Big G. Strangely, the constant’s value changes every time it is determined!

Likewise, the speed of light isn’t really a constant, either. To solve this problem, an international committee officially had to lock the speed of light in place several decades ago. It was decreed so by a committee of expert knowers of the universalist school.

Laypeople who resist such dogmas are labeled ignorant. In fact, most of the so-called constants found in the physics handbooks are nothing but weighted averages of varying (and changing) results found in laboratories across the globe.

No two scientists have ever measured the exact same speed of light. Perhaps the speed of light isn’t a constant? Rupert Sheldrake noted in his book *Science Set Free*:

“Unlike the constants of mathematics, such as π [pi], the values of the constants of nature cannot be calculated by mathematics alone. … Within their laboratories, metrologists strive for ever-greater precision … they reject unexpected data on the grounds they must be errors.”

A reductionist approach demands scientists to dismiss surprising results (‘errors’) as well as stubbornly unpredictable results (‘noise’ or ‘superstition’). Scientists have invented a whole vocabulary for dealing with phenomena they can neither predict nor understand. To make order out of chaos, they must dismiss the things they cannot describe with laws.

The value π, for example, is a mental construct that only exists in the minds of mathematicians. It is a 'constant' but with infinitely varying precision. Is the value of π 3.14 or 3.14159? The added digits change the value. Each time someone *assumes* π of a certain accuracy, he has *reduced* the value of π, for the actual value is always higher than the assumed value, if rounded down, or lower if rounded up. However, *scientists don't know the real value of π.* The precise value shall forever elude them.

To make a prediction about chaos, one first has to reduce chaos, i.e., by dismissing a chunk on some arbitrary basis. That's not science. That's creative fiction. It is any predictive science's inherent weakness. You can only make predictions about things you have first reduced to their predictable qualities.

It appears scientists have had to compensate for an unpredictable reality by inventing at least some of the physical constants. These constants, like the speed of light and the gravitational constant, were not discovered but instead proclaimed so.

How much of the scientific worldview, then, has more to do with the psychology of the scientist who has a personal stake in proclaiming the laws of physics as being unchanging, knowable, and universally true? Is it because the scientist's knowledge of the self-proclaimed laws puts him, as a trained expert, in a position of power and authority?

Who do CEOs and politicians turn to in order to make the economy more efficient, to gain some technological advantage over competing entities, or to apply technology in new ways to secure military dominance? They turn to scientists.

Scientists have an economic interest in limiting the focus of their research to the seemingly predictable dimensions of reality. They have to disregard what they cannot predict. They have to reduce their work to what they can predict, for only predictable science offers a marketable economic and/or military value.

It is the materialist scientist's job to master and exploit physical phenomena so that power elites may deploy knowledge to A) better provide for their own population's physical needs and B) to gain power over other people.

* * *

In their bid to win society's trust to be put in charge of the world's technological progress, a caste of scientists was forced to commit a series of extraordinary frauds.

First, they convinced the world material reality is the only 'real' reality, for only this part of reality secures humanity its material wealth, and scientists their power.

Second, scientists convinced us that the physical laws they discovered are *prescriptive* rather than *descriptive* as if the laws of physics were always there, i.e., encoded into reality's DNA rather than the product of man-made mental abstractions.

And third, scientists made sure to educate children into accepting these laws as unchanging, universal, ubiquitous, and knowable by expert personnel, teachers, educators, and scientists.

For the purpose of this chapter, I shall concern myself with the second part of the fraud, with scientists substituting *ex-post-facto* abstractions (a changing grammar) for *ex-ante* truths (immutable laws and constants).

When scientists say the laws of physics were fixed in place at the time of our universe's inception, they have produced an assumption. The assumption is that all that goes around in the world can be understood by gaining knowledge of the laws of physics.

Making an analogy with language and grammar, it is like saying prehistoric men first convened at Stonehenge to design a universal grammar of languages, along with an unchanging dictionary of sounds and meanings, *long before* people began speaking the first language. That never happened. Languages didn't evolve from a Universal Grammar.

So, how likely is it that our universe came about with a complete set of fixed laws and constants, put together from nothing, by chance, yet perfectly attuned to making sentient life possible?

Even scientists admit the chance of this happening was close to one in infinity. Scientists solve this problem of improbability by saying the nothingness from which our universe came is continuously and randomly spawning all sorts of universes *ad infinitum*. Possibly only one universe (the only knowable one!) managed to survive—ours.

The argument sounds convincing. Out of an infinite number of random failures to spawn a universe from nothing, the universe we are living in happens to be the one that survived. That's why its laws are so elegant, too, they say. But this belief whips up a stochastic problem. The arrival of our stable universe may have been infinitely unlikely, but for it to *also* have unchanging laws that brought about evolution, life, and progress makes it impossible.

Moreover, *there are other universes imaginable that are more likely to produce the present state than the one proposed by material science.* A mental world thought up by a god could have a 100% success rate coming from nothing, for example. Such a mental universe can adapt and "change its mind" on the go to provide for (perceived) progress.

Out of a billion universes spawned from nothing, the chance a material universe could survive long enough to evolve into ours is still close to nothing. (You would need a near-infinite number of random attempts to produce our universe, once.)

However, almost *every mental universe* spawned from nothing could develop into one like ours, all of the time. A mental universe constitutes an unbreakable, fluid reality that doesn't rely on perfectly attuned fixed constants to keep it afloat in the nothingness.

There are some oft unspoken assumptions here. There is a cyclical one: "A successful universe such as ours must have elegant laws and constants, or it wouldn't be so elegant and successful." An authoritarian one: "A working universe needs to have unchanging laws and

constants for it to work." And here is the mother of all scientific assumptions: "A universe from nothing must have laws and constants."

All of these assumptions remain unproven! Perhaps there lies more truth about the world within our own hearts than scientists may ever discover.

What the scientists don't explain is why they think the unstable nothingness from which universes come should *only* produce *material* rather than *mental* universes. And why should the nothingness from which universes magically appear only produce universes with *fixed* rather than *variable* laws? Are there no universes without unchanging laws?

Can a universe originally born of unchanging laws evolve into one without such laws, or vice versa (phase changes)? Do the laws of physics themselves evolve over time? Why not?

Unlike the laws of physics, a grammar can describe a language, but it cannot produce one. The rules of grammar "are derivative of the practice of actual speech" and not of some fixed laws of linguistics. When speakers of a language change the way they speak it, grammarians will have to follow suit and update their understanding of said language.

A grammar follows the language it describes, not the other way around (even though schools around the world are trying to teach children the 'correct' grammar). A proper understanding of our universe, therefore, begins with a syntax of physical phenomena, for a grammar incorporates the possibility of a *changing universe* 'governed' (described) by changing laws.

A computer programmer, for example, could instruct one computer to analyze a given language. The computer can be taught to absorb a large body of literary works, then compute the most probable grammatical rules describing the works' language(s).

But it doesn't work the other way around. Feeding another computer this English grammar ('the laws') and an English dictionary ('the constants'), it may never teach the machine to produce intelligible communication. The ability to generate language requires *something more* than the laws and constants. It requires a mind.

Similarly, scientists have failed to explain how or why a fixed set of physical laws and constants should be animating our universe. We are to believe that the Big Bang fed our reality a physical grammar and a dictionary of physical phenomena. That doesn't explain how the universe evolved and developed as it did.

Mere knowledge of English grammar couldn't teach a child to speak. Something more is needed—the *metis* of language, or the innate skill required to produce full speech. For the nothingness to generate universes spontaneously, it would need to generate more than laws and constants. It would need a *metis*, the sort of ability that comes from experience and practice.

The scientific worldview offers the world a grammar and a dictionary but doesn't provide the required mind to get a universe to 'speak' as one. In fact, if our universe did have such a mind, it

wouldn't need a predesigned grammar or a preapproved dictionary at all. An organic, self-thinking universe could rely on its ability to learn organically. A living universe would acquire its 'language' through a process of trial and error.

Indeed, after creation and natural selection, *trial and error* offers us a third solution to the problem of growth and development.

A language (written or spoken), one's ability to speak it, and the grammar that describes (and helps predict) it are understood as three separate pillars. I believe this division applies to physical reality, as well. Physical phenomena are the languages spoken by the universe. Because the language changes unpredictably and is neither universal nor immutable, it will force scientists to continuously adapt their theories—paradigm shifts.

The scientific community isn't progressing toward some finite understanding of the laws of physics at all. There is no theory of everything. Knowledge of the laws of physics and their constants does not suffice to create a universe. Feeding a computer a book on Chinese grammar and a Chinese dictionary cannot teach it to speak Chinese. A universe also needs the ability to animate itself—a soul.

As a grammar of phenomena, and like mathematics, the laws of physics aren't part of the material world, but of the mental dimension of reality. These laws aren't unchanging but changing. Their truths don't apply universally but locally. They are not one but many.

Though the laws of physics—the grammar rules of physical phenomena—may have some predictive value, they merely explain the present state of reality. The laws don't govern the universe, the universe governs them. We aren't living in a rule-based universe governed by unchanging laws. We are living in a universe that can develop, speak its own language, and change its mind again.

Reality is the (by)product of thinking minds. Reality and the scientists studying reality are engaged in a conversation with one another; each action influences the other's reaction. Therefore, it is impossible to remove human observers from scientific observations, not even by proxy through the use of scientific instruments.

No scientist can point us to the cosmic Rosetta Stone onto which the alleged unchanging laws were engraved. There is no hard drive or crystal disk upon which the Big Bang has recorded the laws of physics. (It seems the scientific worldview hasn't strayed that far from the Mosaic belief in rule-based order.)

If the laws of physics only exist in the minds of scientists, and if their minds are constantly changing—as the scientific consensus does—there may not be any universal laws governing our universe.

Since languages develop locally and organically, no grammar can remain the correct one for long. Though the English language, for example, changes very little between successive

generations of speakers, languages become completely unrecognizable after just several centuries.

Designing a universal grammar of languages *implies arresting the development of language*. In fact, the laws of physics may stem from a (petty!) human need to enforce order and control onto the universe *by attempting to arrest its development* and *reducing its phenomena to what human beings can understand and predict.*

* * *

If the laws of physics are no more than a scientist's mental abstractions, what incentive did scientists have to proclaim them as unchanging? One reason might be to give higher authority to the physical sciences (over religion and philosophy). Another is to stress the importance of laws *per se*, i.e., to have laws for their own sake.

Even if the immutable laws are changing, it is the *belief* in fixed laws that garners support for them. Without the lure of eternal laws, people might never have invested so deeply in the promise of material wealth. If people had known in advance that the sciences were going to prove themselves wrong in the end, few would have embarked on a career in science.

There is another problem with the proclaimed rather than discovered laws of physics. I have to return to the language analogy to explain it. Once the first grammarians captured the first language in sets of descriptive rules, they unintentionally gave birth to the illusion of a chicken-and-egg problem. Did a first grammar perhaps come before a first language?

State officials in charge of the economy might want people to believe so. A standardized speech and writing system significantly increases an economy's efficiency. States have a financial incentive to teach their subjects the correct grammar. It has proven an irresistible temptation for states to begin standardizing a national language.

But the more successful authorities become at enforcing their (fiction of a) standardized grammar, the more the language's organic development will be repressed. Then, a process of linguistic and cultural retardation sets in, while other, less repressed peoples, find new, innovative ways to express themselves.

It is my opinion that empires begin to collapse when they begin to repress their peoples' innate need for organic growth and development (of their personalities and cultures), first and foremost, through the introduction of a state-sanctioned 'official' language. What serves the economy best does not serve its people best.

Have scientists employed a similar form of repression, but on a universal scale? Once the first physicists began describing cosmic phenomena with mathematical formulae, they, too, introduced the illusion of a chicken-and-egg problem. Did the laws of physics perhaps come before the events they once described?

I believe scientists have indeed bought into this illusion. They have reversed the natural order and proclaimed their invented *mental laws* were really discovered *material laws*. Scientists have antedated their abstractions to the time of the Big Bang and, henceforth, began declaring their inventions as the laws governing the universe.

But they lied. If Ministries of Education can endorse a particular grammar to be taught in schools, governments can also proclaim a formal physical grammar, i.e., a science (the most profitable one).

State-funded scientists have little choice but to obey. States and corporations rely on continued economic growth to be able to compete with other empires. Growing economies rely on the technological progress that scientists help produce. Scientists need funding to do their work. Scientists, states (corporations), and economies, therefore, are associates in a materialist conspiracy against God.

By proclaiming the laws of physics, atheist states have attempted to put themselves in charge of material reality. By removing God from their equations, scientists have made their laws the highest social and economic authority.

If we must conclude that a spoken language dictates its grammar, not the other way around, then we must also find that a living universe dictates the grammar, not the laws, of physics. If the universe is itself alive, developing organically, then its most fundamental phenomena may be changing in the same way our languages change over time.

Human authorities can only enforce a specific grammar as the (presently) correct one, never as the universally true one. *There is no such thing as scientific truth.* Economist Peter F. Drucker understood this principle when he wrote in *The Future of Industrial Man* that “there can only be scientific correctness.”

* * *

The Industrial Age ushered in the rapid urbanization of the world. It has led to the rise of massive urban infrastructures required to feed, house, and heal millions of people. The transition from low-tech to high-tech societies has propelled science rock stars from obscure tinkerers to masters of the universe.

Our overtly technologized world has placed a premium on material well-being. It is the scientist’s job to keep inventing new and more efficient ways to provide for the material economy. With the help of advanced technology, we can sustain a human population growth that has been accelerating for centuries.

More than the laws of physics, positive feedback loops between wealth, population, and technology appear to be governing the world of human beings. A faster internet connection means fewer abandoned carts in online commerce. More online sales mean more significant tax revenues for the states and businesses. More money for states means more funding for scientists, and a higher competition among them to make the internet faster.

The generation and application of (new) scientific knowledge lie at the heart of this cycle. In the service of continued human population growth, scientists have been responsible for increasing economic efficiency.

But material progress has come at a cost, namely the loss of a people's spiritual connection to one another, to their tribes and nations, and to nature. We have become radical individuals living in concrete jungles, pursuing our rational self-interest. We drown ourselves in monotonous work to forget about the fact we don't really have a life anymore. We have become gears in the materialist machine.

While some people manage to live without God, no one can live without water for more than a few days. Materialism's lure has changed human society. If, in the past, people preferred God to gluttony, they now prefer gluttony to God. If they feared God more than poverty, they now fear poverty more than God. We forgo the pleasures of tomorrow to ease the pains of today.

The possibility of endless material wealth has given us heaven on earth. The me-first society says: *Those who dare stand between me and my joys are authoritarian repressors.* A belief in science as the world's guiding principle has replaced faith in God in every situation in which material needs trump spiritual needs.

It is wholly irrelevant to a scientist that, to make things appear constant and, therefore, predictable, he has to ignore all non-physical or spiritual realities. A scientific mind under pressure from his funders to conceive a material utopia cannot concern himself with religious beliefs he deems inefficient. To science, religion has become a distraction. The scientist must know the facts and the facts alone. There is no room for meaning.

The global economy is a growth-based industry. It borrows from the future what it needs to build the present.

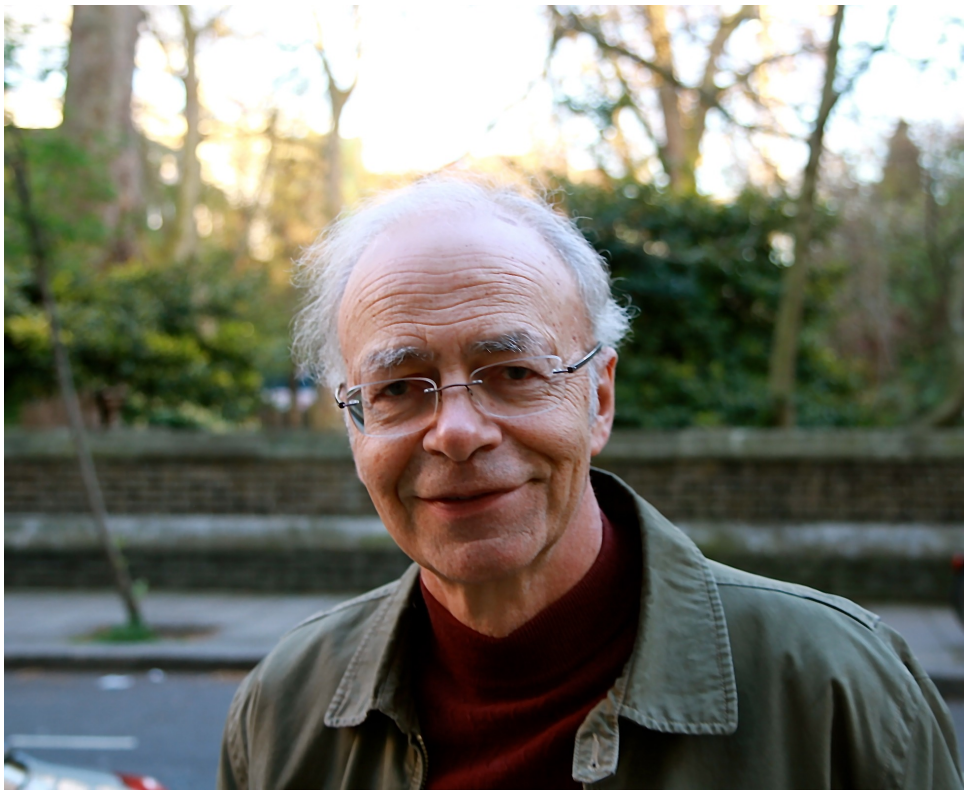
The inescapable scientific need to produce predictable outcomes has scientists worshiping anything that appears unchanging and knowable to them. The worship of universal phenomena, of immutable laws and fixed constants, has shaped the heart of scientism, the religion of science.

The fact God lost out in the competition with materialism doesn't prove there was never a God. Modern society's preoccupation with infrastructure doesn't mean people are better off without religion. It's the other way around. When, not if, materialism's promise of utopia on earth exposes itself to be a fraud, people will have nothing but God left to turn back to.

God, as the collective racial soul and the will of a people, provides meaning to life.

Peter Singer Interview

Peter Singer & Scott Douglas Jacobsen



Abstract

Professor Peter Singer's biographic statement on his website says the following: "Journalists have bestowed on me the tag of "world's most influential living philosopher." They are probably thinking of my work on the ethics of our treatment of animals, often credited with starting the modern animal rights movement, and of the influence that my writing has had on development of effective altruism. I am also known for my controversial critique of the sanctity of life ethics in bioethics. In 2021 I was delighted to receive the Berggruen Prize for Philosophy and Culture. The citation referred to my "widely influential and intellectually rigorous work in reinvigorating utilitarianism as part of academic philosophy and as a force for change in the world." The prize comes with $1 million which, in accordance with views I have been defending for many years, I am donating to the most effective organizations working to assist people in extreme poverty and to reduce the suffering of animals in factory farms. Several key figures in the animal movement

have said that my book *Animal Liberation*, first published in 1975, led them to get involved in the struggle to reduce the vast amount of suffering we inflict on animals. To that end, I co-founded the Australian Federation of Animal Societies, now Animals Australia, the country's largest and most effective animal organization. My wife, Renata, and I stopped eating meat in 1971. I am the founder of The Life You Can Save, an organization based on my book of the same name. It aims to spread my ideas about why we should be doing much more to improve the lives of people living in extreme poverty, and how we can best do this. My writings in this area include: the 1972 essay "Famine, Affluence, and Morality" in which I argue for donating to help the global poor; and two books that make the case for effective giving, *The Life You Can Save* (2009) and *The Most Good You Can Do* (2015). I have written, co-authored, edited or co-edited more than 50 books, including *Practical Ethics*, *The Expanding Circle*, *Rethinking Life and Death*, *One World*, *The Ethics of What We Eat* (with Jim Mason) and *The Point of View of the Universe* (with Katarzyna de Lazari-Radek. My writings have appeared in more than 25 languages. I was born in Melbourne, Australia, in 1946, and educated at the University of Melbourne and the University of Oxford. After teaching in England, the United States, and Australia, in 1999 I became Ira W. DeCamp Professor of Bioethics in the University Center for Human Values at Princeton University. I am now only teaching at Princeton for the Fall semester. I spend part of each year doing research and writing in Melbourne, so that Renata and I can spend time with our three daughters and four grandchildren. We also enjoy hiking, and I surf."

Singer discusses: Animal Liberation Now; and the awakening to the treatment of animals.

Keywords: *Animal Liberation*, *Animal Liberation Now*, Apuleis, Australia, Buddhism, Canadian student, Japan, Oxford, Peter Singer, Plutarch, Princeton University, Pythagoras, Romans, *The Golden Ass*.

Scott Douglas Jacobsen: So, today, we are back with Peter Singer. Different publication, second interview, you are coming out with a book again, *Animal Liberation Now*, as an update on *Animal Liberation*, which is an update on the original text. So, to begin, what was the first indication in your intellectual personal history when ethical consideration for non-human animals was considered important and legitimate?

Professor Peter Singer: To me, this can be traced to a very definite single event. There was a chance lunch that I had with a fellow graduate student. I was a graduate student at Oxford studying philosophy and came from Australia. I was talking after class to a Canadian graduate student about a topic completely unrelated to animals, but something going on in the class. He said, "Let's continue the discussion over lunch, over at my college." I said, "Sure". We went there to get served. At the table where you get served, there was either a salad plate or some spaghetti with some red-brown sauce on top of it. I took the spaghetti. The Canadian asked if there was meat in the spaghetti sauce. When he was told there was, he took the salad. We sat down and continued to talk, and the conversation that we were having. When that came to a natural conclusion, when I asked him what his problem was with meat, you have to realize this is 1970. There aren't a lot of vegetarians around.

Jacobsen: [Laughing]

Singer: I don't think I had a serious conversation with a vegetarian about eating animals. There weren't really any. You knew that some Indians didn't eat meat. There might be some people who thought it was bad for their health to eat meat, but they were pretty rare too. Richard said something much more straightforward than that. He said, "I don't think it is right to treat animals the way they are treated to turn them into food for us". It took me aback. I knew, of course, animals were turned into food. I thought they were outdoors in the fields, basically, having a good time before the grim day.

Jacobsen: [Laughing]

Singer: When they go to get dropped off for slaughter. Richard said, "No, they are inside, confined in sheds. The real test of how much you crowd them is if your profits go up. You will cram them until so many may drop dead that they can't cope, then profits decrease. Then you will stop. That is not the point at which their welfare is good. It is well past that." This pretty well disturbed me. I found myself reasonably kind to animals. I never thought of myself as an animal lover. I never had companion animals. Who wants to be cruel to animals? That is a bad thing. I didn't know much about it. Richard said there is a book out about this by Ruth Harrison called *Animal Machines*. It wasn't a well-known book and obscure book about animal farming. I don't think it was on any bookshelves. It was pretty revealing because it was building on what farm magazines were saying about how to treat your animals. "You make more money if you do this". It backed up what Richard was saying. "This is not good. Is it really okay to treat animals like this? Why would it be okay?" That is what got me thinking that there is a serious moral issue that I should think more about.

Jacobsen: If we go back to the 1970s story and the moral awakening on the treatment of animals, are there prior individuals in centuries past who gave serious consideration to the ethics of animals? I think we're all somewhat aware of the dismissal of moral concern for animals in intellectual history.

Singer: Yes. There, certainly, have been a few individuals in different civilizations. Interestingly, Buddha talks a lot about compassion. Buddha talks about compassion for sentient beings, not just for humans. If you go to visit a Buddhist temple, certainly, I visited some in Japan. You get a little admission ticket. You pay a small fee for admission. On the ticket, it says, "The first precept of Buddhism is compassionate consideration for all sentient beings". That doesn't mean all people following Buddhism and Buddhist priests are vegetarians. In the West, Pythagoras was a vegetarian. Although, we don't know why, because we have no direct writings. It may have been his thoughts on being reincarnated as animals. There was some connection with India or the East. That may have led Pythagoras to think that. But there are a couple of ancient writings. There is an essay by Plutarch, in the Roman period, called on abstinence from flesh. We don't have it all. But it is clear that what we have does talk about the suffering inflicted on animals, particularly by wealthy Romans having special kinds of what were supposed to be delicacies. If you have a pregnant sow, and if you trampled her to death, trampling the piglets inside her, and ate them, this was supposed to be a special gourmet delicacy. Plutarch didn't think this was very

good. The other work that I should mention is because I edited an abridged edition of it. *The Golden Ass* by Apuleis, he was a second-century Christian hero, and thinker. An African, actually, he came from what is now Algeria. He has this really amusing novel, which I think deserves to be better known about a man that gets turned into a donkey. He gets interested in magic and the magic turns out wrong. He becomes a donkey for quite a long time. So, the rest of the novel is told through the eyes of the donkey. The donkey doesn't get treated well by humans.

Jacobsen: [Laughing].

Singer: Clearly, Apuleis was sympathetic to the treatment of animals. The man who gets turned into a donkey. His family history includes Plutarch. So, clearly, there is a link between Plutarch and Apuleis.

[End Part 1 of interview]

Singer discusses: non-human animal consideration; reasons people make changes in diet regarding animal welfare; and sentientism.

Keywords: *Animal Liberation Now*, Australia, Chinese, Japanese, octopus, oyster, Peter Singer, Princeton University, Pythagoras, Sentientism, vegan, vegetarian.

Scott Douglas Jacobsen: Things have really ramped up in the last couple decades in terms of consideration of animal welfare. Although, there is mass killing of nonhuman animals, certainly, in factory farms and elsewhere. However, I think with a lot of technological advancements; the conversations seem to be happening a lot more. Things just happening around meat grown through stem cells - things of this nature. Has advancement of technology, in your opinion, changed some of the consideration of non-human animal welfare, simply for the fact that it may not be necessary to include as much suffering if you can get the same product in another manner that is more efficient?

Peter Singer: I am hopeful that cellular agriculture and plant-based analogues to meat are going to do that. I don't think they've done that to a really significant scale. I think that's largely because of cost. They are still more expensive than the standard meat products. If you buy an Impossible™ Burger or a Beyond Meat™ burger, it is going to cost you a little more than the ordinary beef burger. It may be just as good, but it is not clearly better. So, it needs to come down in price, I think, and then we need to get these other products that people are producing. There are chicken products, now, coming on the market, in Singapore anyway. They are selling chicken nuggets. I think they will start to come on the market here too. It is not as though you have been unable to nourish yourself because of these high-tech meat-like products. You could always live cheaply on plant proteins like lentils and beans of various sorts, and tofu, of course, is a product that has been around for millennia and takes a lot of different kinds of flavorings. I think it works well in a lot of dishes, particularly Chinese dishes as this is where it comes from – and Japanese dishes. So, you didn't really need it. But some people wanted the taste in their mouth or the chewiness of meat. I hope these products will get cheaper and widely sold and eaten.

Jacobsen: To the brass tacks of the considerations about making those changes, what have been, realistically, the main reasons people have made those changes in their diet or their buying patterns, purchasing patterns?

Singer: I think there are three major factors as to why people are moving away from meat in their diet. Some, like me, are primarily concerned over what we are doing to animals and you don't want to participate in this ruthless exploitation of literally tens of millions of animals giving them nightmarish lives without any consideration for their well-being. That's been one big factor. The second is that we are increasingly aware of the contribution of meat to climate change. Climate change, itself, wasn't an issue until the mid-1980s, then it will still focused on fossil fuels for a long time. It is only in the last 10 or 20 years that people have been more aware of the role meat plays in accelerating climate change. That's the second factor. The third factor is health, I

would divide the health factor into two. On the one hand, there are people who think, “I will be healthier if I don’t eat meat”. That is certainly a factor for many, many people. You live better. You feel better. You lower the risk of cancer of the digestive system and of heart disease. I think there is good evidence of all of those benefits now. That is a big factor. There is also the public health aspect of it, not just what you eat, but what others eat – because factory farms are a great place for growing new viruses. We have already had one major pandemic come out of a factory farm. That was the Swine Flu pandemic, which preceded the Coronavirus. It didn’t kill as many people as the Coronavrus. But it killed a lot. The big risk with the next virus to come out from animals crossing to us is that it is grown out of a factory farm with so many animals stressed together. Humans go in and out to take the animals out to kill them or to do routine maintenance. It could be both highly contagious as Coronavirus, but much more deadly. If that happens, we will be in a very serious problem. That’s a good public health reason for wanting to not take part in factory-farmed products as well.

Jacobsen: There’s a term “Sentientist” floating around. To myself, it matches, sort of, my own ethical considerations. I believe you identify as such. How does this term – this concept – encapsulate a lot of the ethical thinking for you right now?

Singer: Well, look, the point is a sentient being, in the sense we’re using here, is capable of suffering and feeling pain – and, hopefully, capable of experiencing pleasure and joy as well. But certainly, the capacity to feel pain is part of what it is to be a sentient being. It is a being with conscious experiences. The point of saying that you’re a sentientist is to say that you think that any being capable of feeling pain should have its interests given weight. I would say give similar weight to similar beings with similar interests - beings that might have a similar interest. If an animal feels a certain amount of pain through – let’s say – being hit, then that is just as bad or equal to hitting a human being and causing the human being a similar amount of pain. The term “sentientist” [gets used when] we talk about being vegan or vegetarian. They get termed if they eat animals or animal products. But it might not be the case that all animals are sentient. A good example of a non-sentient animal may be an oyster. Oysters have very simple nervous systems. They are unable to move away from sources of danger. So, it is arguable that they would have been less likely to evolve a capacity to feel pain, given that it wouldn’t do them much good, as opposed to animals who can move away from sources of pain. So, if you are a sentientist, you might say, “I don’t eat birds and mammals, vertebrates generally. I don’t eat fish.” Perhaps, an invertebrate that is clearly sentient is an octopus, which is a mollusc. You might say, “If an animal is not sentient, then I don’t object to eating it, because you can’t cause it to suffer or feel pain. It doesn’t have that capacity.”

Cory Efram Doctorow Interview

Cory Efram Doctorow & Scott Douglas Jacobsen

Abstract

Cory Doctorow is an activist, blogger, journalist, and science fiction writer. He discusses: geographic, cultural, and linguistic background; the influence on personal development of the background; pivotal moments in life; the ability to travel by bus and intellectual development; advice for gifted and talented youths; and an honorary doctorate from Open University.

Scott Douglas Jacobsen: In terms of geography, culture, and language, where does your personal and familial background reside?

Cory Doctorow: Geography, culture, and language, well, my father's parents are from Eastern Europe. My grandmother was born in Leningrad. My grandfather was born in a country that is now Poland, but was then Belarus, a territory rather, that is now Polish but was then Belarusian.

My father was born while his parents were in a displaced persons camp in Azerbaijan and his first language was Yiddish. My mother's family are first and second generation Ukrainian-Russian Romanians. Her first language was English, but her mother's first language was French and was raised in Quebec. I was born in Canada. My first language is English. And I attended Yiddish school at a radical socialist Yiddish program run by the Workmen's Circle until I was 13. I was raised in Canada. I moved to Central America – the Costa Rican-Nicaraguan border – when I was in my early 20s and from there to California, and I ping-ponged back and forth between Northern California and Canada for some years, and then I re-settled in Northern California, and then in the United Kingdom, and then in Los Angeles, and then back in the United Kingdom, and then back in Los Angeles, and then back in the United Kingdom, and I am currently residing outside of Los Angeles in Burbank, and seeking permanent residence in of the United States.

Jacobsen: In terms of the influence on development, what was it with this background?

Doctorow: I guess there is some influence. It is hard to qualify or quantify. I have written fiction about some of my family's experiences. My grandmother was a child soldier in the siege of Leningrad. It was something that I did not know much about until I visited Saint Petersburg with her in the mid-2000s and she started to open up. I wrote a novella called *After the Siege* that's built on that. I guess I have always had a sense that rhetoric about illegal immigrants or migration more generally was about my family. All of the things that people say illegal immigrants must and mustn't do were about the circumstances of my grandparents' migration. My grandfather and grandmother were Red Army deserters, and they destroyed their papers after leaving Azerbaijan in order to qualify as displaced people and not be ingested back into the Soviet population. Maintaining that ruse, they were able to board a DP boat from Hamburg to Halifax, and that was how they migrated to Canada. If they had been truthful in their immigration process, they would have almost certainly ended up in the former Soviet Union and likely faced reprisals for deserting from the army as well.

Jacobsen: What about influences and pivotal moments in major cross-sections of early life including kindergarten, elementary school, junior high school, high school, and undergraduate studies (college/university)?

Doctorow: I went to fairly straightforward public schools. My mother is an early childhood education specialist, and she taught in my elementary school. When I was 9, we moved to a different neighborhood, not far away, but far enough away that I could not walk to that old school anymore. At that point, I enrolled in a publicly funded alternative school called the ALP, the Alternative Learning Program. It was also too far away to walk. So, I started taking the bus on my own, which was significant in terms of my intellectual development later in life, and my ability to figure out the transit route, and jump on the bus, and go wherever it was that I wanted to go. It turned out to be extremely significant in my intellectual development. The alternative learning school, learning program rather, grouped kindergarten through grade 8 in one or two classes. Older students were expected to teach the younger students. There was a lot of latitude to pursue the curriculum at our own pace. That was also significant in terms of my approach to

learning. The school itself, when I was in grade 6, I think, or 7, and was rehomed in a much larger middle school that was much more conservative. A number of students there were military cadets. I had been active as an anti-war activist and an anti-nuclear proliferation activist that put me in conflict with the administration. I was beaten up and bullied by the students at the larger school. I was also penalized by the administration for my political beliefs. They basically did everything they could to interfere with our political organizing. We ran an activist group out of the school, and attempted protests and so on. They would confiscate our materials, and they would allow, tacitly, those kids who were violent against us to get away with it. When I graduated from that program, my parents were keen on my attending a gifted school for grade 9. I found it terrible, focused on testing and rigid. much the opposite of the program that I had gone into and thrived in. So, after a couple months of that, I simply stopped going. Grade 9, I started taking the subway downtown and hanging out at the Metro reference library in Toronto, which is a giant reference library. At the time, they had a well-stocked microfiche and microfilm section with an archive going back to the 18th century, and I basically spent two or three weeks browsing through the paper archives, going through the subject index and then finding things that were interesting, and then reading random chapters out of books that were interesting and so on, until my parent figured out I was not going to school anymore. We had a knockdown, dragout fight. That culminated with my switching to a publicly funded alternative secondary school called AISP, Alternative Independent Study Program. I went there for two years, and then enrolled in a school downtown called SEED school. SEED school was a much more radical, open, and alternative school, where attendance was not mandatory, courses weren't mandatory. I took most of the school year off to organize opposition to the first Gulf War. I took most of another year off to move to Baja California, Mexico with a word processor and write. I took about 7 years altogether to graduate with a 4-year diploma, and then I went through 4 undergraduate university programs. None of which I stayed in for more than a semester. The first was York University Interdisciplinary studies program. The second was University of Toronto's Artificial Intelligence Program. The third was Michigan State University's graduate writing program, which I was given early admission to, and then the fourth one was University of Waterloo's independent studies program. After a semester or so at each of them, I concluded they were a bit rigid and not to my liking, and after the fourth one, after Waterloo, I figured I was not cut out for undergraduate education. The tipping point was that the undergraduate program had a thesis year. It is a year-long independent project. I proposed a multimedia hyper-textual project delivered on CD-ROM that would talk about social deviance and the internet, and while they thought the subject was interesting, they were a little dubious about it. But they were foursquare that anything that I did would have to show up on 8.5×11, 20-pound bond and ALA style book. And I got a job offer to program CD-ROMs from a contractor that worked with Voyager, which was one of the largest and the best multimedia publishers in the world. I thought, "I can stay here and not do hypertext and pay you guys a lot of money, or I can take this job that pays more than I have ever made in my life and do exactly the work that you're not going to let me do here." When I thought about it in those terms, it was an easy decision to drop out and I never looked back.

Jacobsen: At the outset, you did mention that the ability to travel by bus was an important moment for you in terms of your intellectual development. Can you please expand on that?

Doctorow: Sure, as I went through these alternative schools, I had a large degree of freedom in terms of my time, and how I structured my work, and so, for example when I was 9 or 10, we did a school field trip to a library that was then called the Spaced Out Library, a science fiction reference collection, and now called the Merril Collection [of Science Fiction, Speculation & Fantasy]. It was founded by the writer and critic Judith Merril. She left the United States after the Chicago 1968 police riots, and moved to Canada in protest. She brought her personal library with her, which she donated to the Toronto library system, where she was the writer-in-residence. After going there once, and finding this heaven of books and reference material, and lots of other things, I started jumping on the subway whenever I had a spare moment and going down there. Merril herself, being the writer-in-residence, would meet with writers like me and critique our work. And from them, I discovered the science fiction book store, which I later went on to work at. I would add that to my daily or weekly rounds, and go and raid their news book section, and their 25-cent rack, and I began reading my way through the field. At the same time, my political activism and work in the anti-nuclear proliferation movement, and the reproductive freedom movement, working as an escort at the Toronto abortion clinics to escort women through the lines of protestors. As I became more and more knowledgeable about the city, and all of its ways of getting around, I also found myself engaged with all of these different communities.

Jacobsen: One of things that seems like a trend to me, and you can correct me if I am wrong, please. In the sense that, you have the rigid part of the educational system that you did go through. So, for instance, the earlier gifted program that you disliked, but when you had more freedom you did not note any general dislike of that, and, in fact, your general trajectory seems to indicate a trend towards more open-source information and in terms of educational style, too. That seems to be your preference, and that does seem to reflect a lot of gifted and talented students' experiences in the traditional educational system. Any advice for gifted and talented youths that might read this interview in terms of what educational resources that they can get too?

Doctorow: Phew. I do not know., one of the things that going through the gifted and talented program, which was called gifted back then, taught me is that being gifted is like this incredibly – it is a – problematic label. It privileges a certain learning style. I mean I did not thrive in a gifted program. I did terribly in a gifted program because the gifted program seems largely about structure, and same with the undergraduate programs, imposing structure on the grounds that if kids were left to their own devices, they would goof off. For me, although, I did my share of goofing off. If I was left sufficiently bored, and if I were given enough hints about where I would find exciting things that would help me leave that boredom, I was perfectly capable of taking control of my own educational experience, and because it was self-directed it was much more meaningful and stuck much more deeply than anything that would have been imposed on me. It is like intrinsic vs. extrinsic motivation. The things that I came to because I found them fascinating or compelling. I ended up doing in much more depth, and ended up staying with me much longer, than the things that I was made to do, and the things that the grownups and educators did for me was laid out the buffet, but not tell me what I had to pick off of it and in

what order, and that was super beneficial to me. I think that when we say gifted and talented we often mean pliable, as opposed to intellectually curious or ferocious. Although, I think we have elements of all of those in us. The selling of a gifted and talented program often comes at the expense of being independent and intrinsically motivated in your learning style.

Jacobsen: You earned an honorary doctorate in computer science from the Open University (UK). What does this mean to you?

Doctorow: It meant rather a lot. More than I even thought it would. My parents were upset at my decision to drop out of undergraduate programs and not finish them. A decade after I dropped out of Waterloo, after I had multiple *New York Times* bestsellers under my belt, they were still like, “Have you thought about going back and finishing that undergraduate degree?” For me, I think that undergraduate degree signified an escape and also was of becoming who they were. My grandparents were not well-educated. My grandfather was functionally illiterate in five different languages. [Laughter]. My grandmother, too. My parents were arguably the first people in their family to be literate. Being the eldest of their cohort, respectively, they were the first people to become literate, not the last by any stretch, but finished a doctorate in education. For them, formal structured credentializing education was a pathway to an intellectual freedom. For me, it was the opposite, and yet it was clear that my parents – no matter what I did – were less than delighted with my progress. There would always be something missing in my progress for so long as I did not have a formal academic credential. So, they were awfully excited when I got the degree. I had some vicarious excitement. Plus, I thoroughly enjoyed to riff them on why they did it the hard way and spent all that time and money on their degree, when all you needed to do was hang around until the someone gave you one. Of course, I have more respect for the Academy than that. [Laughing] [Laughing] But it also meant that instrumentally gave me a lot of advantages. I have been a migrant on many occasions into many countries and have suffered from the lack of formal academic credentials. Immigration systems of most countries rely on credentialing as a heuristic of who is the person they want to resettle in their territories, and the lack of an academic credential meant that, for example, to get my 01 visa in the United States is an alien of extraordinary ability visa, which is typically only available to people with doctorate or post-doctorate credential. I needed to file paperwork that demonstrated the equivalent. My initial visa application was 600, and 900 pages in my second renewal and 1,200 pages in my recent one. They were that long in order to convince the US immigration authorities that what I have done amounts to a graduate degree, so that instrumental piece of it was nice, but then, finally, it was a connection to the Open University, which is an institution that I think very highly of. Their commitment to a distance education, individualized curriculum for lifelong learning matches with my own learning style, and the way I think about pedagogy more generally. I was honored to gain this long-term affiliation with the university with what amounts to a lifelong affiliation with the university. It was exciting.

[End Part 1 of interview]

Abstract

Cory Doctorow is an activist, blogger, journalist, and science fiction writer. He discusses: philosophies appealing to him; a good grasp of the near future or lack thereof; Participatory Culture Foundation; the Clarion Foundation; the Metabrainz Foundation; The Glenn Gould Foundation; Alice Taylor and their love story; marriage and its change for personal perspective; Poesy Emmeline Fibonacci Nautilus Taylor Doctorow; three biggest changes in the next 50 years; timeline for the modification of more than half the human population; and the potential for the leveling off the accelerating technological changes.

Scott Douglas Jacobsen: What philosophies appeal the most to you – general, political, social, economic, aesthetic? [Laughing]

Doctorow: Gosh. You mean like logical positivism or utilitarianism, or whatever? I do not know. I do not know that I have a main, core general philosophy that I think is best, politically, I favor evidence-based policy, but you still have to ask yourself, evidence in support of what. Is it utilitarianism? I do not know. I do not know that I have a name for it. There are elements of anarcho-syndicalism and Marxism that I find compelling. A book that had a huge impression on me this year was a book called *Austerity Ecology & the Collapse-Porn Addicts*. It was a Marxist critique of the Green Left, which squared a lot of circles for me because I am a believer in material culture, and an enjoyer of material culture. I think physical things are cool, and I like them, and they bring me pleasure, and beautiful things bring me pleasure. The Green Left has conflated anti-consumerism with anti-materialism. Leigh Philipps' idea is that I do not need to step back from material abundance into a material austerity in order to save the planet. He talks about how high technology and its material abundance are the only way we can imagine both accommodating the human population as it is and what it will become, and the Earth. That organic farming is code for let's kill 3 billion people, and still not have enough food for everybody. It is only through GMO and nuclear power, and the Left has historically been the movement for material abundance for all. The Left's critique of the wealth of the rich was not that the rich had too much, but rather everyone else had too little. The Marxist Left viewed the capitalist system for improving material efficiency in material production so that the material abundance could be realized for all. And he makes many great little easily conveyable points like: "Capitalism and markets — because they favor firms that have lower costs — have radically reduced the material and energy-inputs into our physical goods, and continue to do so with virtually no end in sight." The downside of something like Uber or self-driving cars in a market economy is that all of the dividends of increased productivity and automation accrue to the forces of capital, but that's an economic phenomenon and not a technological one. The upside is that we are getting more people to more places and more comfort with less environmental consequences, and that if we can solve the labor side what you end up with is an enormous benefit to everybody. And solving the labor side is an economic question that relies or presumes that the technological side is allowed to go on. He also notes that with Walmart and Amazon non-market forces can be used to allocate resources extremely efficiently. These are not internal market places. They are command and control market places that nevertheless manage to move material products from one place to another very, efficiently, and so I guess I

am a post-Green Leftist. And I guess my view is that technology is humanity's servant and not its master but that it takes a political world for that to be the case. I do not know if that makes sense. It is the intersection of all of these other things. I think the two-dimensional Left-Right diagram or chart, graph, is insufficient. I think you need a Right-Left, centralist-decentralist, technology-anti/technology, material-spiritual, multidimensional shape to plot political ideology or life ideology correctly. I am a believer in self-determination, but I am also a believer in collective work and collectivism, and particularly in the same way that being gifted privileges a certain cognitive style or certain intellect without regard to any objective criteria for what is the best intellectually. I think that the idea of meritocracy is a self-serving, self-delusion. That meritocracy starts from the presumption that you can get rid of all the people whose skills are possessed by lots of people and take the people whose skills are more rarely distributed in the general population and that those people can have a perfectly good life. The reality is that it does not matter how excellent you are at being a nuclear physicist or a brain surgeon - if you are someone cleaning the toilets, you are going to die of cholera. I am skeptical of the meritocratic story, and, again, I do not know exactly what you would call that political philosophy. Egalitarianism? I do not know. Humanism? I am an atheist and a materialist. I am a believer in Enlightenment methodologies. I am a believer in the scientific method. And the idea that our own cognitive processes are subject to delusion and self-delusion. That self-delusion is a particularly pernicious problem for our cognitive apparatus and only by subjecting ourselves to adversarial peer review can we figure out what is true or not or whether we are kidding ourselves. I do not know what you call that philosophy.

[Editors' Note: The Political Compass essentially incorporates a 'centralist-decentralist' continuum via the Y-axis (Authoritarian/Libertarian): https://www.politicalcompass.org/analysis2]

Jacobsen: Who besides you might have the best grasp of the near future?

Doctorow: I do not think I have any real grasp of the near future. I think science fiction writers are Texan marksmen. We fire a shot out there and then draw a target around the place where the pellets hit. Science fiction makes a lot of predictions, and if none of them came true that would be remarkable, but that does not mean we are any better than a random number generator. I think that the near future – the way to find out about the present anyways, which is the moving wave front in which the past becomes the near future – is to look at all of those futuristic stories that we are telling that represent the futures that may be, and find the ones that are resonating in the popular imaginations, and that tell you about the subconscious fears and aspirations lurking in the public. I think that the reason that Millennials who were literally not born when *The Terminator* and *The Matrix* came out are still talking about the Red Pill and Skynet because the idea of transhuman, immortal life forms that treat us as inconvenient gut flora, is fantastically resonant in an era when the limited liability corporation has become the dominant structure for guiding our society. In the same way that *Frankenstein* had its popularity in England tells you an awful lot about the aspirations and fears of technology becoming our master, instead of our servitor, and of the people that read it and watched it on the stage at that time. I do not think anyone is good at the near future, but I think the keen observer is the one who acknowledges that and instead of predictions tends to observations about what's popular.

Jacobsen: You serve on the boards of the Participatory Culture Foundation, the Clarion Foundation, the Metabrainz Foundation, and The Glenn Gould Foundation. Let's run the foundations in order: why the Participatory Culture Foundation? What does it do?

Doctorow: Participatory Culture Foundation is an umbrella under which a group of now not-so-young, but then-young, activists that I liked and continue to like and admire were doing a bunch of projects. They started off as an activist group called downhill battle. It was founded by the music industry's attempts to regulate the internet and has gone on a wide variety of projects. And they created 501(c)(3) in order to have an umbrella to do fundraising through, and to organize their projects, and asked the people who have advised them over the years to join the 501(c)(3) board as a brain trust, which I was happy to do.

Jacobsen: Why the Clarion Foundation? What does it do? The Clarion Foundation oversees the Clarion writing workshop, which is the workshop I went to when I went to Michigan State. It was formative in my own writing career, and I teach it every couple of years. When the Michigan system was defunded by their state-level government and Clarion lost its home at MSU, and started seeking new accommodation, it restructured as a 501(c)(3) and asked me if I would join the board. I joined to be their technological know-how person. Arts organizations are a little short on technological prowess. Since then, I have filled that role and done some fundraising for them. I teach at Clarion every couple of years.

Jacobsen: Why the Metabrainz Foundation? What does it do? Metabrainz Foundation oversees something called Metabrainz, which is a metadata system for music that's open. It was founded in the wake of a now-forgotten scandal. There was something called CDDB or CD Database. The way that it works is that every time you stick a CD in your computer you would be prompted to key in the track listing for it. That would go into CDDB, which was organized as an informal project. And then a company called GraceNote took the project over, and made that database proprietary for access to it and freezing out new media players, and you may have noticed that the market for media players has all but vanished in the wake of that – in part because of other phenomena to do with lock-in and platform strategies. But also, in part, because that metadata resource that made music sortable and playable was cut off. That the commons had been enclosed, and Metabrainz is formed to create an open repository of metadata that was user generated and crowdsourced, and to lock that open in the bylaws of the (c)(3) so that it could never be enclosed, so that people would have the ability and the confidence to contribute to the project knowing that it would never be enclosed. It has been successful since and has built a database whose metadata is reliable in ways that GraceNote and other databases have never been, and can be accessed with audio fingerprinting algorithms to automatically generate trackless things and other information. It is a good example of information politics. How political structures, and how economic structures, and how data handling practices can lock services open and make sure that you can have new entrants and new competitors as opposed to locking them closed and pulling up the ladder behind someone who was scrappy a couple years ago and has now developed as a player.

Jacobsen: Why The Glenn Gould Foundation? What does it do?

Doctorow: That's one of the ones that lies largely dormant. Gould died without any heirs. Glenn Gould was obviously this famous pianist, and they started an arts foundation and put on a conference that attracted some great talent, but, unfortunately, no audience. There were 80 performers and maybe 60 tickets sold. And they asked me if I would join the board, and I did. Then, they said, "If we have any secure events, we will contact you as a support member." As far as I know, they haven't done that.

Jacobsen: You married Alice Taylor. How did this love story begin and develop into the present?

Doctorow: We met when I was working for Electronic Frontier Fund (EFF). I attended a meeting in Finland that was organized by Tim O'Reilly and Joe Eigo and Marko Ahtisaari (son of the former Prime Minister in Finland). It was called the Social Software Summit. I was at the time a smoker, as was Alice. I came in from San Francisco and had a carton of duty-free cigarettes with me, which we proceeded to smoke together over the course of the conference. It was mid-Summer and the sun never set. We sat on the roof of the hotel bar. This 12-story hotel in the middle of Helsinki. It is the tallest building in Helsinki. It was KGB headquarters during the occupation. We stayed up all night. It was romantic, and it kindled a long-distance love affair, which was less doomed than other long-distance love affairs might have been because I was already planning to take this job as European Director at the EFF, which would have me relocating to London. And about six months later, I moved to London and we took up the relationship in person and moved in together about a year later, and had a baby together in 2008, and got married later that year, and are still together to this day.

Jacobsen: How does marriage change personal perspective on life and its progression?

Doctorow: Well, I guess it forces you to, especially coupled with parenthood, take account of the priorities of other people. When you decide that you're going to set aside your own pleasure activity or downtime for personal development time to achieve a professional goal, suddenly, that decision gets a lot harder. You have to take account of other people's priorities. I think it makes you more empathic and better at taking other people's point of view. I think it is required that you be more empathic about other people's complaints about you. Of course, you have a best friend and sounding board from someone who keeps you intellectually honest and who is always there, and I think that makes you more rigorous and smarter, too.

Jacobsen: On February 3, 2008, Poesy Emmeline Fibonacci Nautilus Taylor Doctorow came into the world with Alice Taylor and Cory Doctorow as her new parents. How does parenting change personal perspective?

Doctorow: I think it makes you have more of a stake in the future. I certainly have always thought that it will be terrible for people who come after me if our worst mistakes go on unchecked, but now there is a much more personal and emotional element to it. It also makes you, I think, a lot more cognizant of the soup to nuts of cognitive development. Having lived through your own cognitive development gives you a certain amount of perspective on how

people think and how other people think, and how you often thought, and how you changed, but parenthood makes you confront it on a daily basis as an actual project with consequences. You need to figure out how to get another human being who lacks your experience, but isn't dumb by any means, to agree to do the things that are the right things to do including acquiring knowledge and experience and context and the ability to put it all together. That is a humbling thing, and that is a continuous challenge, but it is also exciting and rewarding. I also think, at least for me, it eliminated my ability to be objective or to emotionally distance myself from the peril or consequences of children who suffer. And so that is in movies and books, where I find it intolerable now, when children are used as plot devices. Not intolerable intellectually, but emotionally, and having strong emotional reactions to the plight of children who are badly off. The refugees today. I have always worried about the refugee issues, but there is a new dimension when you think of a parent in that situation at least for me. That I was not or never had before I was a parent. I am only 8 years in. There is only more to come. I am sure.

Jacobsen: What seem like the three biggest changes in the next 50 years without appropriate international preparation?

Doctorow: With that caveat that science fiction writers suck at predicting the future, I think that climate change is on its way, and we have already released so much carbon into the atmosphere that there will be catastrophic effects felt as a result – regardless of what we do. And so our arguments now or challenge now is to see the cataclysmic consequences of that early carbon release and take motivation from it to do something about it before subsequent carbon releases come along that do even worse damage to the planet and to us, and to the living things that we care about. I think that there is a similar thing happening in our information ecology. That we've had 25 or 30 years of surveillance capitalism and mass data gathering on us, and I think the leaking of all that data is more or less a foregone conclusion. Anything that you collect is likely to leak, and I think that given that breaches are cumulative in their harm. That having a little bit of information of you leaked is bad, but it can be pieced together with the next little bit of information so that it can be significantly worse, and so on and so on. So what we are not arguing about is not whether or not all of that data is going to leak and we are all going to feel the consequences of it, but if we are going to learn from it early enough to not collect too much more information in much more detail from many more sources as computers disappear into our skin and as we put our bodies into computers more often, as our houses we live in and our hospitals have computers that we put people into and so on. So, I think both of these are related issues as they deal with long-term consequences and immediate short-term benefits. And problems with markets and marketability of things that have long-term consequences and the force to internalize the consequences of their actions. They both have to do with regulatory barrier, and they both are related to mass wealth inequality. One of the things that has driven wealth inequality is corruption, and the ability of the elites to fend off fakes and attempts to make them internalize the costs of their bad decisions, and that corruption is also driven by mass surveillance and mass surveillance allows corrupt states to perpetuate themselves longer because surveillance can be used to find the people that are most likely to make changes to status quo and neutralize them by telling the cops who to take out or by allowing for the disruption of their organizing or activism. And so, I think those two issues are related, and I am interested in how we decarbonize surveillance capitalism as well as the

question of how we decarbonize industrial capitalism. I guess the third is the line between surveillance capitalism and political surveillance. They are intimately related. On the one hand, the otherwise destabilizing impact of mass wealth disparity can be countered through surveillance, and surveillance is much cheaper and easier to attain because markets have offloaded the costs of surveillance from the state to the individuals who are under surveillance. You buy the phone and pay for the subscription that gathers the data about you, so the state does not have to bear that cost. During the Cold War, the Stasi had one snitch for every 60 people. Now, the NSA manages to survey the whole planet at the rate of about 1 spy to about every 10,000 people.

Jacobsen: How long until more than half of the human population is significantly modified, genetically, with augmented thought processing, with continuous blood monitoring and drug administration or the like?

Doctorow: Gosh, I have no idea. I think that my generation assumes that if industrial and technological civilization does not collapse, then all of my generation will have some medical implant if we live long enough. We are logging enough ear-punishing hours that we'll all have hearing aids. The numbers on what percentage of people are legally blind by the time they die is a crazy number. It is like 89% or something. The life limit that will use some prosthesis, heads-up display, or goggles as we become legally blind is high. It depends on what you count - such as wheelchairs and so on. We are already cyborgs to some extent, but in terms of direct germplasm modification. I have no idea. That seems to me like a real wild card. Bruce Sterling has made a compelling case that it is an incredibly dumb idea because the chances are that we'll come up with better germplasm modification and you'll be forever stuck with this year's mod, given how much of our metabolic and maybe even our cognitive function is regulated not by our own cells, but by our microbial nations and given how much easier it is to manipulate a single-celled organism. Maybe what we'll we do is manipulate our microbes rather than our germplasms.

Jacobsen: Will accelerating technological change ever level off?

Doctorow: I honestly have no idea. I think that things like Moore's Law tend to be taken as laws of physics rather than observations about industrial activity. Moore's Law is more of an observation than a prediction, and I do not know that we understand entirely what underpins it. I also think that when we look at something like Moore's Law. We say the power of computation is doubling every couple of years or 18 months. What we mean is not only are we getting better at making faster computers, but we are also choosing the kinds of problems that computers that we know how to make faster are good at, and so it may be that as computing power becomes cheaper or cooler. Then we can add more cores rather than faster cores, that we decide that we solve the problems that can be solved in parallel rather than serial [processing] is a problem that we think of as an important one without ever consciously deciding it. That's where all of the research is because that's where all of the productivity gains are. We never even notice that we are not getting much better at solving problems in serial because we end up figuring out how to solve problems that matter to us in parallel and pretending we do not see the problems that aren't practical in parallel.

Sigma Test Extended

Hindemburg Melão Jr.

(Translated from Portuguese to English by Eisque Nezuka)

Sigma Test Extended aims to be the most difficult and reliable cognitive test for measuring the "intelligence" construct, especially for people with an IQ above 160 (σ=16), requiring a wide range of cognitive skills at different levels of depth and complexity.

At the same time, it is a test that does not require specialized knowledge. Just knowledge of Elementary School, Middle and High School. In some specific cases it may be necessary to make small queries about the meaning of some words, but there is no need for specialized training in any specific area.

The ultimate goal of a good intelligence test is not to measure your ability to solve the questions on the test itself. The aim is to use these questions as an indirect means of discovering other, more important competencies. Therefore, one cannot lose sight of the primary objective to be achieved, otherwise one runs the risk of creating addicts to IQ tests, instead of discovering talents for science, mathematics and other important fields of knowledge.

This is the purpose of STE, measuring the ability to solve diverse real-world problems, problems ranging from everyday issues to problems with an Olympic level of difficulty, requiring a combination of divergent and convergent thinking at different levels of sophistication, whose issues are compatible with the skill levels you want to measure. This is an important differentiator because IQ tests have severely skewed ceilings.

The Stanford-Binet V, for example, can have the ceiling extrapolated by up to 225 IQ, as can be seen in the following table:

Comparison of Form L-M and SB5 Gifted Categories and IQ Scores

Form L-M		**SB5**	
Levels of Giftedness	IQ Score Ranges	Levels of Giftedness	IQ Score Ranges
Moderately Gifted	125-144	Superior	120-129
Highly Gifted	145-159	Gifted or Very Advanced	131-144
Exceptionally Gifted	160-179	Very Gifted or Highly Advanced	145-160
Profoundly Gifted	180+	Extremely Gifted or Extremely Advanced	161-175 *
		Profoundly Gifted or Profoundly Advanced	176-225 *

*Via EXIQ
EXIQ = Extended IQ
Note: Form L-M and SB5 categories are not directly equivalent

However, the most difficult questions on the Stanford-Binet V can be easily solved by people with an IQ of 135 to 140.

This produces a very large disparity between measured IQ and true IQ. Anyone with an IQ of 140, as long as they are fast enough and have a good cultural level, can reach over 200 IQ on this test, generating a gigantic amount of false diagnoses of genius. This does not mean that distortions are always upwards. The way in which standardization is done, this would not be possible, because if it were like that, the average would be displaced. Therefore, upward distortions occur at approximately the same frequency and magnitude as downward distortions.

As a result, really great people can score far below their true potential on this test and this has been proven several times. In the study carried out by Lewis Terman, starting in the year 1921, 1,528 children with an IQ above 135, none of the 1,528 selected children won a Nobel Prize, nor any other international prize of great importance in scientific areas or in mathematics. But among the children who failed the test, two of them were awarded the Nobel Prize in Physics. This makes it evident that the Stanford-Binet, while very good and accurate for measuring IQs between 70 and 130, is not appropriate for higher levels. Terman's group included about 100 children with an IQ over 175, but none of them won 1 Nobel, with the average IQ of Nobel laureates in science being 154. This is another serious inconsistency in the scores produced by the Stanford-Binet at the highest scores.

How Terman's study was carried out with people screened as children, it could be argued that the problem was not inherent in the test, but in the fact that they were screened too early. In fact, this is also one of the problems, but it is not the only one and it is not enough to explain all the observed anomalies. To better clarify this point, it is worth citing the cases of people registered in the Guinness Book for having the highest IQ in the world based on Stanford-Binet scores applied at different ages:

The first record of this modality in the Guinness Book occurred in 1966, in which Chris Harding was presented as the person with the highest IQ in the world, for having obtained a score 196-197 in the Stanford-Binet (I believe that the 1960 standardization form, Stanford-Binet L-M, was used). In a normal distribution with a mean of 100 and a standard deviation of 16, only one in 1 billion people have an IQ above 196. However, the number of people screened with the Stanford-Binet was in the few thousand. In the standardization process, the samples were also in the few thousand. Thus, the best that could be done was to place the test ceiling close to 155 to 160 IQ, and even then there would still be the problem that the most difficult questions were at a difficulty level close to 140 IQ, so scores of 160 IQ would only indicate higher speed to solve problems at the 140 IQ level, instead of indicating an intellectual level of 160 IQ.

In the 1970s and 1980s, Kevin Langdon and several other people started showing up with scores of 196-197 IQ, claiming to share the record for the highest IQ.

Some of the people who applied for registration as the person with the highest IQ in the world between 1966 and 1978 were:

- Christopher Philip Harding
- Kevin Langdon
- Bruce Whiting
- Robert Bryzman
- Leta Speyer
- Johannes Douglas Veldhuis
- Ferris Eugene Alger

There were also other cases after 1978 claiming the record, with nominal IQs above 197:

- Kim Ung-yong with IQ 210
- Marilyn vos Savant with IQ 230, then corrected to 228, then corrected to 218, then corrected to 186, then 190
- Keith Raniere, with IQ 242

Finally Guinness removed this modality. One of the likely reasons is that it became clear that there was not adequate standardization that would allow a fair comparison. The adjustment metrics from childhood to adulthood scores were skewed, the use of different tests also produced very different scores. Another reason that may have aggravated this situation was the controversy over Marilyn being accused of falsifying the dates in her report and Keith Raniere being arrested, accused of several crimes, including murder. In Marilyn's case, I think her version is very plausible. She claims she took the test at age 10, but it was incorrectly recorded on her chart as if she had been tested at 11 years and 4 months. About this controversy, to the point of knowing the facts, I side with Marilyn and I explain the reason: in 2004 and 2005, I worked as a consultant at the main Psychology publisher in Brazil, I standardized and revised several tests of IQ, and I could see that the number of registration errors in the data of the people examined was absurdly large, reaching more than 5%. It was very common for people registered with birth year 2040, birth month greater than 12, among others. So I think it's much more likely that the psychologist who examined her actually entered the date incorrectly than that Marilyn lied about it. Considering Marilyn's history, I have no reason to question her sincerity, while the history of recording errors in psychometric reports is very frequent. In Keith's case, the facts and evidence against him are plentiful and unquestionable.

The important point is that a test applied to a few thousand people in the standardization process, does not allow to establish a ceiling above 160 IQ with the aggravating factor that the ceiling of difficulty does not exceed 140 IQ. But even if the test was really able to measure correctly at the level up to 196 IQ and even if everyone in the world had been examined with the

Stanford-Binet (considering that some people would be children and others would be very old), it wouldn't expect to find more than 3 or 4 in the world with an IQ above 196.

However, in a sample of a few thousand people there were 10 people with an IQ above 196, some reaching 242 IQ, whose rarity is many orders of magnitude outside the limit of the number of people ever born, with a rarity level of 1 in 2.86 × 10^15 where the number of people already born is about 10^11.

It is a fact that this sample of a few thousand is not representative of the general population. Therefore, it is natural that more people with high IQs would be found in this sample than in a random sample of the population. If you apply an IQ test to Harvard or Cambridge students, it is natural that the average score is much higher than the average score of the general population, and it is also very likely that some of the 10 smartest people in the US or the UK are in these institutions.

The main problem is not the statistical anomaly. The biggest problem is that 100% of those people with IQs above 196 didn't stand out as scientists, mathematicians or authors of brilliant intellectual works that matched the measured IQs.

Marilyn herself, in an interview on the David Letterman show, made the following comment (excerpt from the interview):

> Marilyn: I have uh, I have miserable teeth. I mean, they're healthy... [Paul laughs aloud] They're just odd, they're odd. You know, I can eat things through fences. [laughter] Not that there's any call for that, but uh...
>
> David: All right, now Marilyn, let's get back to you and your... uh... head. [laughter] Uh, what uh... now how do we know you're the smartest woman in the world?
>
> Marilyn: Well, you probably don't know that, I don't think anyone really knows that, not that many people have taken an IQ test. And so I had the highest score on the Binet... so far... but this very...
>
> David: [trying to interrupt] Now when did you...
>
> Marilyn: ...small minority of people in the world have taken a test, and... [dramatically] what did Binet know, for heaven's sake? [Paul & Dave both chuckle as Marilyn rambles] I mean back in 1904, he didn't... [laughter] he didn't stumble over a Rosetta Stone, he said, "This is what I think I'm gonna do," and everybody's been imitating him ever since.

Chris Harding, in a 2013 article stated:

> “Genius is not intelligence. Genius is creative ability of the highest possible kind. True, most geniuses are highly intelligent, but this depends on the field their genius was recognized in. And here there is a plethora of problems. Recognized by whom; which

> people, what society, when and where. There is an old joke that goes something like I will believe in psychologists devising tests from geniuses when monkeys devise tests for psychologists. I do have ideas of my own on this, but so far no one seems interested in this. I was listed in the Guinness Book of World Records (seven editions: 1982-88) under "Highest IQ" and was given a certificate for this. I was also listed in 500 Great Minds of the Early 21st Century in 2002. All such lists-comparisons are temporary.
>
> There appears less and less match between persons and outcomes these days. Humanity hangs by its intellectual neck on the tree of tragedy –there are no Leonardo's in the 19th, 20th, and so far in the 21st Century. Yet he/she must still exist we should think? With mass education has come the noisy ones but no Geniuses to show for it all. Bad money has driven out good money - bad people, good people. The masses have come to judge the best and are part of this process to drive out the very people they need most, all in the name of incorrectly accessed political correctness. Today the system has driven down performance; today big institutional science has been a spoiler of great insights delaying progress everywhere. Today it is business as usual. The criminal comes to the top. My greatest fear is that an end is coming to the centuries of progress that mankind has grown used to. The age of genius may be at an end. I'm sorry to ramble on about this in such a `scatter gun' way."

Marilyn's statement is superficial because it is compatible with the TV show aimed at the mass audience, but her columns in *Parade* magazine are very high and deep, consistent with the IQ 186-190 that she got on the Mega Test. Chris Harding's statement, although short and on a topic that doesn't offer much depth, also reveals a very high intellectual level. His opinion on the meaning of "genius" is questionable, but for a one-paragraph text it is acceptable. And the key point is that both recognize that scores measured by conventional IQ tests present several problems and cannot be taken too seriously when used to try to assess intelligence at higher IQ levels.

This shows that, although IQ scores in the range of 70 to 130 are able to measure intelligence reasonably well, as the scores move away from the mean, what the tests measure gradually ceases to be intelligence and becomes something shallower, such as reasoning speed for trivial questions or mechanical repetition of tasks. The problem is that as the IQ to be measured increases, the test continues to measure the same variable, but the meaning of intelligence changes. For children aged 8 to 12 with an IQ between 80 and 130, it may be appropriate to measure the ability to spell words without making mistakes as a satisfactory criterion for determining written communication aptitude, but if applying this same method to try to estimate the communication aptitude of writing by Shakespeare or by Dostoevsky, it is evident that the result will be skewed. It is not because these writers are too quick at spelling nor because they are infallible at it. They can even make more mistakes than a well-trained youngster who has "talent" at spelling. The point is that this criterion is no longer useful at the levels of Shakespeare, Goethe or Dostoevsky. In fact, it ceases to be useful at much lower levels, close to 125 or 130. The same problem occurs when trying to use elementary questions like the Stanford-Binet ones to measure intellectual levels above 140.

The fact that the Nobel Prize-winner average IQ is at the rarity level of one in 3,000, while the frequency of Nobel Prize winner in the population is less than one in 1 million, also corroborates that scores above 130 on the Stanford-Binet are highly distorted, dramatically failing to “let go” of the brightest people, while at the same time incorrectly selecting several who are not really bright, but just quick at performing trivial tasks.

This is not a defect unique to the Stanford-Binet. All the best IQ tests including WAIS, Raven, Cattell, DAT, D70 etc. have this same problem (and obviously there are more and worse problems in tests that aren't the best). One of the main reasons for this is the same as already mentioned: these tests attempt to measure IQs at levels well above 140, but do not include questions with a difficulty level above 135.

To solve this problem, in 1973 Kevin Langdon created the LAIT (Langdon Adult Intelligence Test), the first really difficult intelligence test, capable of measuring correctly until close to 165 IQ. In 1982, Ronald Hoeflin published his Mega Test, later the Titan Test, Ultra Test and Power Test. The Hoeflin tests could correctly measure up to about 170 or even 180 IQ.

Thus, a new era of intelligence testing had been inaugurated. The traditional tests used in clinics to measure in the range of 70 to 130 IQ continued to exist, covering more than 95% of the population, and it also became possible to measure intelligence at much higher levels.

However, these tests have not yet reached the “critical point” that allows us to correctly identify genius minds. The people with the highest scores on the Hoeflin tests are undoubtedly very smart: Rick Rosner, Chris Langan, Marilyn Vos Savant, etc. with scores of 190 IQ or above. But when you compare the intellectual output of these people with that of a Nobel laureate with an IQ of 160, the difference is blatantly favorable to the Nobel Prize winner. Something was still missing from the variables to be measured at the top of the difficulty level. In the years and decades that followed, other tests were created, including The Eureka Test, Logima Strictica, and The Sigma Test.

The Sigma Test, since its first version, tries to be innovative in several aspects. This does not mean that it has achieved this purpose, but at least we are trying, and some of the results obtained have been encouraging. There is controversy over how much difficulty The Sigma Test can measure correctly. Some people think the actual ceiling is no more than 180 IQ, others think it goes up to 200 IQ or a little more. This is difficult to determine until the number of people evaluated is large enough or until there is some great genius internationally recognized as such (Fields Medal, Abel Prize, Nobel Prize in Physics) who is evaluated by The Sigma Test. But regardless of the difficulty ceiling, The Sigma Test also brings other relevant innovations and some of them have already been experimentally corroborated. Among these innovations, the most important is the new standardization method, first introduced in 2000 and first applied in 2003.

The new normalization method used in The Sigma Test is distinguished from all others by generating scores whose antilogs are on a scale of proportion. Furthermore, this method makes

it possible to correctly calculate the corresponding percentages, avoiding the inflated results that are produced by traditional methods. This topic is covered in more detail in other articles.

Another differentiator is the variety of cognitive processes required to solve the questions. This is extremely important for measuring intellectual capacity in a wide range of settings. The ability to play chess, for example, measures a very specialized and very narrow latent trait, which cannot be interpreted as representative of general intelligence. Chess skill is positively correlated with intelligence, but as the rating moves away from the average, this score is determined more and more by chess-specific skill and less and less by general intelligence.

The same happens if a test uses exclusively series of figures, or if it uses exclusively series of numbers. The measured variable cannot be interpreted as representative of general intelligence. This statement runs counter to some “psychometric mantras” that have been repeated for decades – in particular, about homogeneity (the higher the better) and about *g* saturation – so it requires a little more detailed analysis:

The series of figures have the virtue of minimizing the requirement for knowledge, preventing cultural and age factors from interfering with the result, and this is a good thing. On the other hand, they limit the ceiling of difficulty and complexity, but the main problem is excessive homogeneity.

There are many different ways to measure homogeneity. One of the best and most common is through Cronbach's α.

In order to understand how Cronbach's α works, first it is worth explaining how the Kuder-Richardson works: the idea is quite simple, the test is divided into two equivalent halves and the score that each person obtained in each half is verified. This division can be between odd and even questions, it can be by lottery, or by any other reasonable criterion. If the halves are equal, each person is expected to score approximately the same score on each half. The idea of Cronbach's α is similar, but all covariances between all items are considered, making this measure independent of the criterion adopted to separate the two halves, this is almost equivalent to comparing all possible combinations of two halves.

It is positive and desirable that a good test has a high Cronbach's α (above 0.7), because it indicates that the test items are contributing to measure the same variable. This everyone knows and repeats religiously.

On the other hand, it is bad if Cronbach's α is excessively high (above 0.9), because it indicates that the test items are not covering a sufficiently wide range of the characteristics that should be measured, that is, the items are excessively redundant and specialized. This fact is apparently neither known nor well understood, so it requires a little more detailed explanation. For this, I will use a didactic example:

A test consisting exclusively of 60 numerical series tends to present Cronbach's α greater than a test that includes 20 numerical series, 20 series of figures and 20 analogies. If the difficulty

distributions are the same on both tests, then the one with 60 numerical series is likely to have a higher Cronbach's α, in which case having a higher Cronbach's α may be worse. In other words, a Cronbach's α of 0.85 may be better than 0.92.

An analogous effect can also produce illusions about *g* saturation, making a test appear to be more *g*-saturated than it actually is, simply because it is excessively homogeneous. In a test that is too homogeneous, the first factor extracted may be sufficient to explain more than 80% or 85% of the variability, not because the test is in fact more saturated with the *g* factor, but because within the limits of what is being evaluated by this test. Thus, a leading factor common to all items accounts for 80% to 85% of the variance or even more.

In this context, pseudo saturation of *g* is a bad symptom, unless the ultimate goal is to measure the ability to solve a series of numbers and figures. But this is usually not what you want to measure. The purpose of a good intelligence test is to gather an appropriate list of questions to assess your ability to solve real problems. The objective is not the score on the test itself, but to ensure that this score is able to reflect the ability to solve different problems in real life. And in this, STE stands out, as it includes several problems with a structure very similar to real problems.

The ability to solve a series of pictures is also useful, because this same ability also contributes to solving other problems in other situations. However, directly measuring the type of skill you want to know is preferable to measuring a correlated attribute. To clarify this problem, let's analyze two more well-known variables: weight and height.

People's weight and height are moderately correlated variables. This means that by knowing a person's weight, one can estimate that person's height. However, if it is possible to directly measure one's height, this is better than measuring weight and trying to estimate height based on weight. If it is not possible to measure height, and the only information available is weight, it is possible to use this information to try to roughly estimate height, but the error can be very large, because there are short people with a lot of fat mass and there are tall, very thin people.

Therefore, if there is a group of variables more closely related to height, such as femur size, foot size, arm size, then measuring these variables should provide a more accurate estimate of height than trying to estimate height based on weight. Femur size is not exactly proportional to height, but variation in femur size preserves the proportion to variation in height much better than variation in weight to variation in height.

The same applies to foot size and arm size. When you consider femur size, foot size, and arm size together, you can make a much more reliable estimate for height than if you tried to estimate height on the basis of weight.

So, using a series of figures to estimate intelligence is like using weight to estimate height, that is, it works, but the errors and distortions are large. Furthermore, as you get closer to the higher levels of weight, the error also increases and the same happens when you want to measure correctly at the highest levels of height, because the higher levels of height rarely correspond to

the highest levels of weight. The tallest people in the world are not the same as the heaviest people in the world. Usually, the heaviest ones are normal height or just a little above normal.

But if the measurement were based on the size of the femur, arm, and foot, estimating height based on each of these variables, then averaging the results, the estimating for height would be much closer to the correct value.

Another detail to consider is that in addition to the correlation between femur size and height being much stronger than between weight and height, this correlation is preserved at the highest levels, so that the largest people in the world also have larger femurs, bigger arms and bigger feet. Therefore, the measurement of these body parts remains effective in estimating the correct height of people at all levels, from the average population to the tallest people in the world.

Likewise, the use of items with the properties of The Sigma Test questions, closely related to the cognitive processes that represent intelligence, covering a wide variety of cognitive characteristics and skill levels, provides a much more accurate and realistic estimate for intelligence.

There are also disadvantages to The Sigma Test, which produces less fair results if it is applied to rural groups or groups with a level of education far below the middle school level. But I don't see much need to create tests aimed at this audience, because there are already good tests for that, including Logima Strictica and some of the excellent tests by Iakovos Koukas and YoungHoon Kim. So my focus is on trying to fill a gap that has existed since the early days of IQ tests, which is trying to correctly measure the intellectual level in the higher strata. The Stanford-Binet tests were able to measure correctly up to about 135 IQ, then the Langdon and Hoeflin tests were able to correctly measure up to about 170 IQ. The Sigma Test Extended aims to realistically and accurately measure above 190 IQ and perhaps above 200 IQ.

As already mentioned, Hoeflin tests pioneered the correct measurement of IQ at levels far above the limits of traditional IQ tests, but as there was no proper method for calculating the corresponding percentiles, norms were calculated using the methods available to standardization, resulting in skewed estimates, especially near the ceiling.

The “correct” ceiling for Mega Test, based on data that was available on the Miyaguchi website and using the same standardization method as The Sigma Test (2003 standard) is about 186 IQ, very close to the nominal ceiling of 190+ (~193), which was adopted by Hoeflin. The ceiling calculated by Grady Towers was 202. Bob Seitz also made an attempt to establish a new norm that would fit the correct levels of rarity, and he came up with around 170 IQ, very close to the rarity norm I found in 2003 for the ceiling of the Mega Test (168.5 IQ).

[Editors’ Note: http://miyaguchi.4sigma.org/hoeflin/meganorm.html

http://miyaguchi.4sigma.org/hoeflin/megadata/gradynorm.html]

This divergence between the results obtained by Towers and by Seitz already signaled a disparity between the true rarities and the rarities obtained based on the hypothesis that the scores were normally distributed. By the late 1990s, the problem was well established: the actual rarity did not agree with the IQ scores measured in the tests. But the solution to this was not yet clear.

The nominal IQ score does not present major problems. The Mega Test ceiling presents an error of 7 points, which is tolerable and for lower scores the error is smaller and smaller. However, the corresponding percentile is very different from the correct one. The theoretical level of rarity for IQ = 193, assuming the distribution of scores were perfectly adherent to a Gaussian curve, would be one in 325,000,000, but the correct level of rarity, given the true shape of the distribution of scores, is about one in 435,000. If you consider the correct ceiling to be 186 IQ instead of 193 IQ, then the rarity level is one in 130,000. So the true level of rarity differs from the level indicated in the standard by a factor greater than 2,000. A huge mistake. The data on Miyaguchi's website is incomplete, so the 186 IQ value indicated as "correct" for the ceiling may be slightly different, perhaps close to 190. However, the percentile distortions are too large to be explained by some bias present in the data available on the Miyaguchi website. This is a serious methodological error that has been systematically repeated for decades.

Hoeflin's and Langdon's tests differ in some important points. Langdon's tests, as well as some tests by Paul Cooijmans, Robert Lato and others, followed a similar line to the Raven's tests (figure series), while Hoeflin's tests followed a more similar line to that of Binet and Wechsler (diversified).

At this point it is worth recapping how the first attempts to measure intelligence went. Here I will give a brief summary focused on the topics we are covering.

The Binet test represents an important advance in the evolution of cognitive tests. After the attempts by Francis Galton (1884) and James Cattell (1890) to measure intelligence proved unsuccessful, Alfred Binet (1904) tried to approach the problem from a different perspective. Galton and Cattell believed that it would be possible to measure the elementary components of intelligence, while Binet decided to measure the combined result of these components in synergistic action, obtaining much more promising results, making it possible to identify mild deficiencies and some aptitudes. This suggests that the combined use of questions that require different types of thinking working together in solving complex problems may work better than questions that try to measure each type of thinking separately. The STE follows a similar line, betting on the measure of a combined set of skills to solve complex problems, with the differential of including questions that reach levels much higher of difficulty than the Stanford-Binet ceiling (140 IQ), reaching and surpassing 190 IQ and even 200 IQ.

While the Stanford-Binet test is one of the best for correctly measuring IQs between 70 and 130, it fails badly by continuing to produce scores far above what it is actually capable of measuring. The same problem is present in the tests by Wechsler, the Cattell Culture Fair and others. The

extrapolated Stanford-Binet nominal ceiling reached 225 IQ, but the actual ceiling never went above 140 IQ. I'm not saying the IQ 140 is low; to say so would be a gross error.

What I am saying is that a test with a ceiling of 140 IQ would be like a clinical ruler to measure height with a maximum limit of 1.87 m. The 1.87 m threshold is not low, but it is also not enough to serve a considerable fraction of the population.

In fact, the problem with the Stanford-Binet standard is worse than that. It is as if it were a ruler with a nominal ceiling of 2.15 m, but that started to get crooked and with the 1 cm intervals getting smaller and smaller for heights above 1.80 m. On this ruler, the size of 1 cm in the range of 1.50 m to 1.80 m is approximately uniform, but above 1.80 m, each 1 cm interval becomes increasingly narrow. When it gets close to 2.15 m, every 1 cm is so short that it is less than half a 1 cm in the region between 1.70 m and 1.80 m. With a ruler skewed at this level, measurements are only reasonably reliable up to 1.80 m or, with a little optimism, up to 1.85 m.

The descriptive image below shows an example of a distorted (non-gap) scale where up to a certain point (the first 10) the intervals are uniform, but then they get increasingly narrower:

Using a ruler that had each unit spaced this way would obviously produce big errors. This is basically what happens with almost all IQ tests, including The Sigma Test before 2003, because although this method for standardization had already been devised and published in 2000, first The Sigma Test standard had to be determined by comparison with other tests already standardized by existing methods and the number of tests in The Sigma Test in 2000 was still not enough for adequate standardization using the new method. Therefore, the first standard applying this method was in 2003.

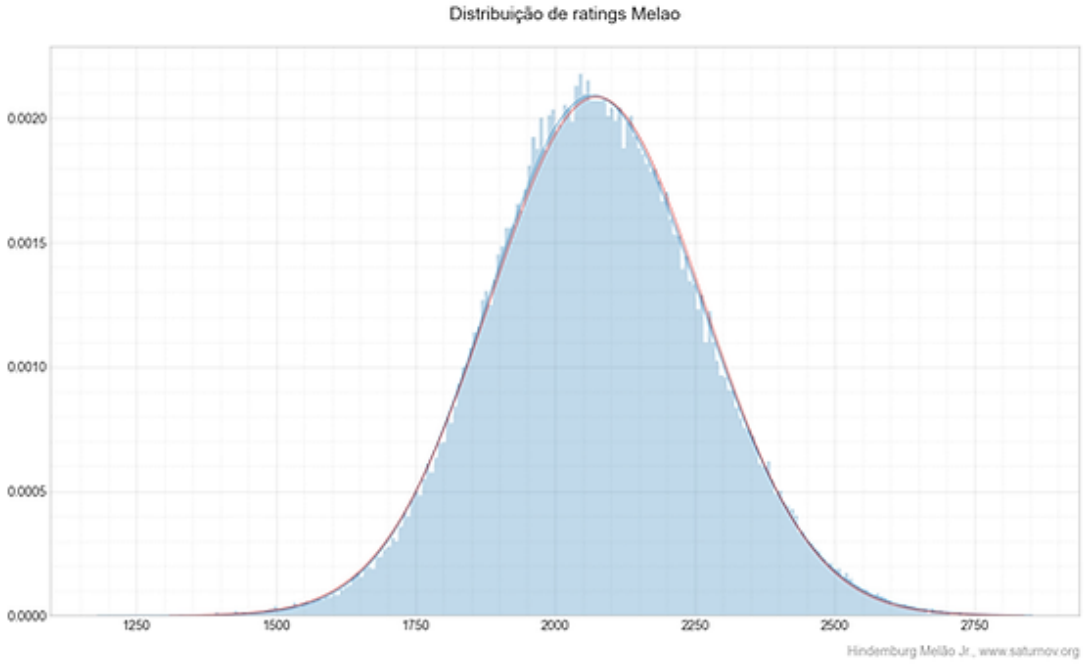
Therefore, all traditional IQ tests and all high-range IQ tests had this distortion up to 2003 and this distortion causes several problems.

If there were such an error in a ruler or a tape measure, where one part of the ruler was correct and another was distorted, it would be easy to correct it by using the “healthy” part to compare side by side with the anomalous part, and then repair the error. But on an IQ scale this is much more difficult and complex to correct. On a crooked ruler with a distorted scale, the problem is noticed visually, but the distortions in the scale of an IQ test are invisible and can only be detected with an adequate statistical treatment. In addition to the detection not being trivial, the correction is even more difficult because it is necessary to establish a reference scale that is invariant. Binet tried to do this using ages and it was an interesting initial idea, but it was quickly found that it didn't produce an interval scale. To produce a ratio scale is even more difficult.

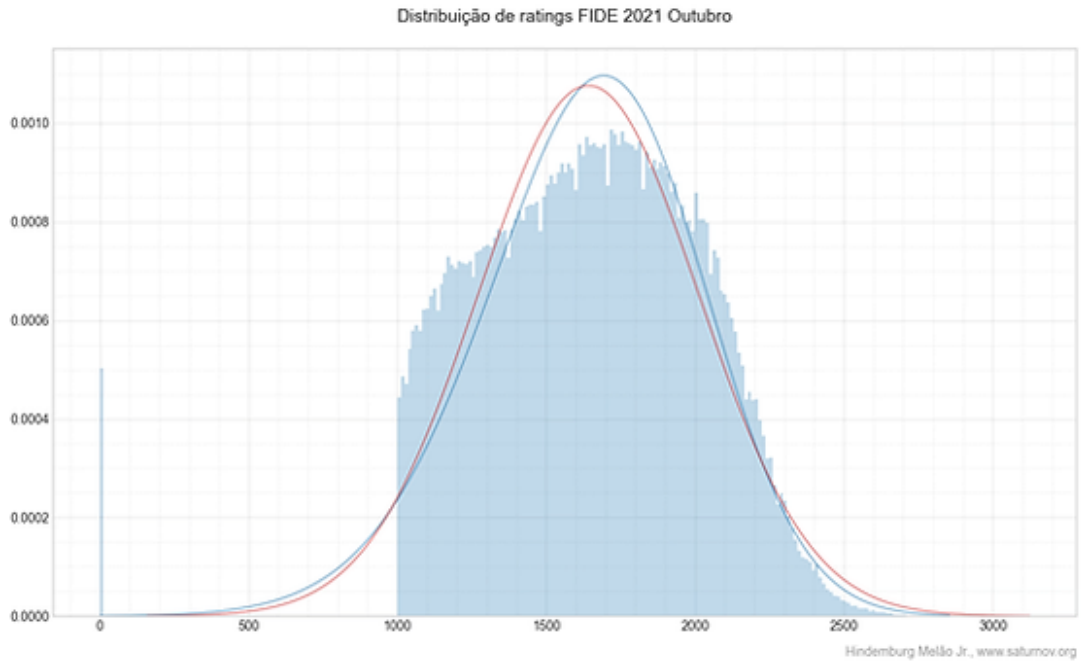
The solution adopted in the 2003 Sigma Test standard manages to generate a proportion scale taking advantage of Bill McGaugh's idea of converting Chess rating into IQ. However, FIDE rating, USCF rating and especially online ratings are highly distorted, in addition to the inflationary effect.

Therefore, before it was necessary to establish an appropriate rating scale from which a potential ratio scale would be established and then this could be applied to the IQ. It is clear that Bill McGaugh's formula could not be used in its original form either, just because it was calculated based on the FIDE rating, but it was an important inspiration.

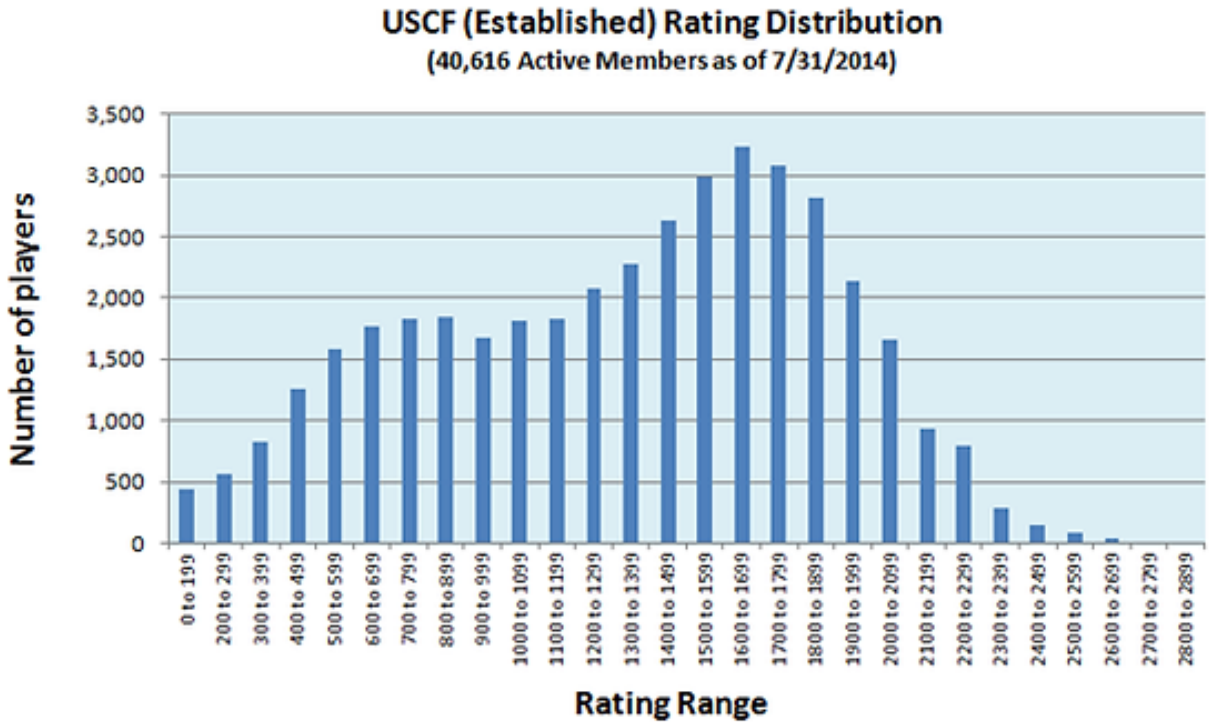
The rating calculation method is described in this book: https://www.saturnov.org/livro/rating and the distribution of scores using this method is this:



By way of comparison, the distribution of the FIDE ratings is as follows:



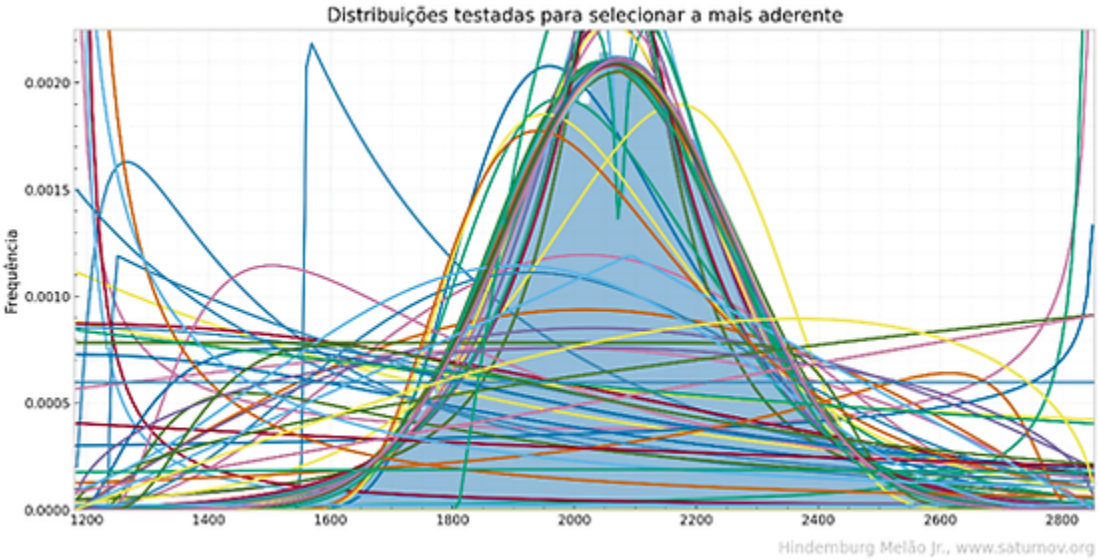
And the distribution of USCF ratings is this:



Converting FIDE ratings with this distribution into IQ scores or converting USCF ratings into IQ, it would require some acrobatics, but even then there would be major distortions. That's why it was first necessary to recalculate the ratings, and in this process, I've already taken the opportunity to improve the traditional method, in addition to introducing a new one based on the quality of the bids.

Furthermore, the two distributions, the IQ and the rating were fitted to suitable curves, rather than using the forced assumption of a Gaussian distribution. Altogether, 91 continuous and 17 discrete distributions were tested to verify which one is the most appropriate to represent this data set. In the preliminary selection, Kolmogorov-Smirnov was used to assess the goodness of fit. In a later step, Anderson-Darling and a Chi-square comparison were used with a fitting model of a neural network. In cases where the discrete distribution made the comparison impossible because it contained the n-factorial function, this was replaced by Gamma (n+1).

The following graph shows a summary of all tested curves:



The distributions tried were these:

Alfa
Anglit
Arcseno
Bernoulli
Beta
Beta Prime
Beta-Binomial
Beta-Kappa de Mielke
Binomial
Binomial Negativa
Birnbaum-Saunders
Boltzmann (Planck truncado)
Bradford
Burr
Burr12
Cauchy
Cauchy assimétrica
Cauchy empacotada
Cauchy Envelopada
Chi
Cosseno
Erlang
Exponencial
Exponencial Generalizada
Exponencial Truncada
F descentralizada
Fisk (Log logística)
F-ratio (ou F)
Função de Potência
Gama
Gama dupla
Gama Generalizada
Gama Invertida
Gauss Hipergeométrica
Gaussiana Inversa Generalizada
Gaussiana Inversa Normal
Gaussiana Inversa Recíproca
Geométrica
Gilbrat
Gompertz (Gumbel truncado)
Gumbel (LogWeibull, Fisher-Tippetts, Valor Extremo Tipo I)
Gumbel assimétrica levogira (para estatística de mínima ordem)
Hiperbólica generalizada
Hipergeométrica
Hipergeométrica descentralizada de Fisher
Hipergeométrica descentralizada de Wallenius
Hipergeométrica Negativa
Intervalo Studentizado
Johnson SB
Johnson SU
KS-bilateral
KS-bilateral para grandes amostras
KS-unilateral
Laplace (Double Exponential, Bilateral Exponential)
Laplace assimétrica
Laplaciana Discreta
Lévy
Lévy assimétrica levogira
Logarítmica (série logarítmica, série)
Log-Gama
Logística (Sech-quadrado)
Logística Generalizada
Log-Laplace (Log Dupla Exponencial)
Log-Normal (Cobb-Douglass)
Log-Uniforme
Lomax (segundo tipo de Pareto)
Maxwell
Nakagami
Normal
Normal empacotada
Normal Generalizada
Normal Inversa (Gaussiana Inversa)
Normal Truncada
Pareto
Pareto Generalizada
Planck (exponencial discreta)
Poisson
Potência exponencial
Potência lognormal
Potência Normal
Qui-quadrado
Qui-quadrado descentralizada
R-
Rayleigh
Rice
Secante Hiperbólica
Semi-Cauchy
Semicircular
Semi-Logística
Semi-logística Generalizada
Semi-Normal
t de Student
t descentralizada
Trapezoidal
Triangular
Tukey-Lambda
Uniforme
Uniforme (randint) Discreta
Valor extremo generalizada
Von Mises
Wald
Weibull de Máximo Valor Extremo
Weibull de Mínimo Valor Extremo
Weibull dupla
Weibull exponenciada
Weibull Invertida
Yule-Simon
Zipf (Zeta)
Zipfian

After determining the most suitable curves to represent the distribution of the IQs and the most suitable for the rating distribution, some further adjustments were made to correct for the self-selection that varies with the rating band and with the IQ band and does not vary in the same proportion.

More details on the procedures are described in volumes I and II of the book: "CHESS - 2022 Best Players in History, Two New Rating Systems".

By these means, it was possible to slightly refine the values of some parameters used in the standardization of The Sigma Test, highlighting some of the conceptual and quantitative advantages that were already present in the 2003 standard.

The result is that IQ measured by ST or STE generates scores on practically the same scale as other high-range IQ tests, i.e., a person with an IQ score of 180 on the Mega Test should score around 180 IQ on the STE, while two other people with an IQ score of 150 and 120 on the Mega Test should also get around 150 and 120 IQ on STE, respectively. For scores above 170 IQ and especially above 180 IQ, ST generates slightly lower (and more correct, less inflated) scores than other tests. For IQ scores below 170, there is practically no difference.

The ST and STE percentiles are realistic, so they are much lower than those generated by the other tests. Therefore, if your goal is a certificate with too many nines to hang on the wall, unfortunately The Sigma Test won't be able to help you. But if you are sincerely curious to know your real intellectual capacity, based on a correctly standardized scale and with an adequate level of difficulty, if you want to know the true percentile in which you are in relation to the world population, among other information (*), STE is exactly what you are looking for.

(*Supplementary information that cannot be calculated based on other standards is the "proportion of potential". If you are interested in knowing exactly what this means, please read this article: https://www.sigmasociety.net /scalesqi.

In summary, the ratio of potential determines the number of people with IQ = 100, working together, to achieve the same level of "intellectual output" as a person with IQ = x. This calculation requires that the scores are on a proportion scale so that the values are not distorted.)

Another detail that I would like to comment on is the difference between intrinsically difficult questions and very difficult questions.

Questions that are just laborious, but not really difficult, measure perseverance, persistence, patience and other attributes rather than actually measuring intelligence. When testing with no time limit is applied, it is necessary to take some additional care, to prevent a person from having a higher score just by dedicating larger time.

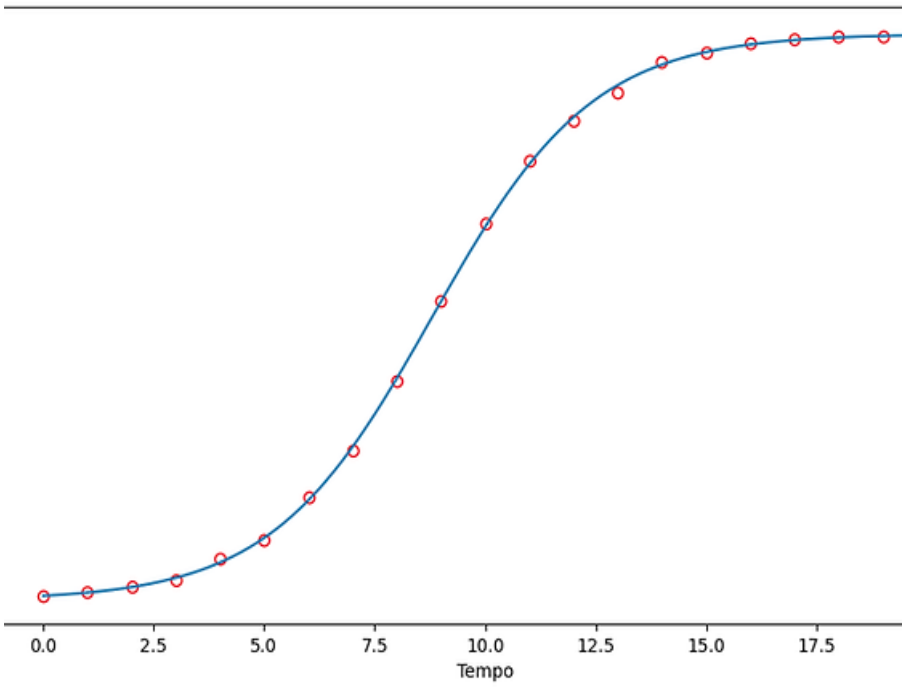
For each problem, there is a curve that determines the probability of success as a function of the time devoted to it and this curve reaches an asymptotic limit that means that after a certain

limit, dedicating more time does not contribute to increasing the probability of success in a proportion that justifies the greater amount of time invested.

When this curve is similar to a straight line, it indicates that the problem is inappropriate because it predominantly depends on mechanical effort and work, but if the curve is like a logistic one, it indicates that the problem predominantly depends on intellectual capacity. That's because in the most difficult problems, if the person solves 5% of the problem in 5 minutes, he will solve approximately 10% in 10 minutes, 50% in 50 minutes and so on.

These are problems characterized by repetitive tasks, where repeating 10 times implies going twice as far as repeating 5 times. But in cases of predominantly intellectual problems, it is different. In the first 10% to 20% of the time, the person makes almost no progress, just trying to understand and outline a solution strategy. Then the resolution begins and at this stage, advances occur quickly with 50% to 70% of the central region of the logistic curve.

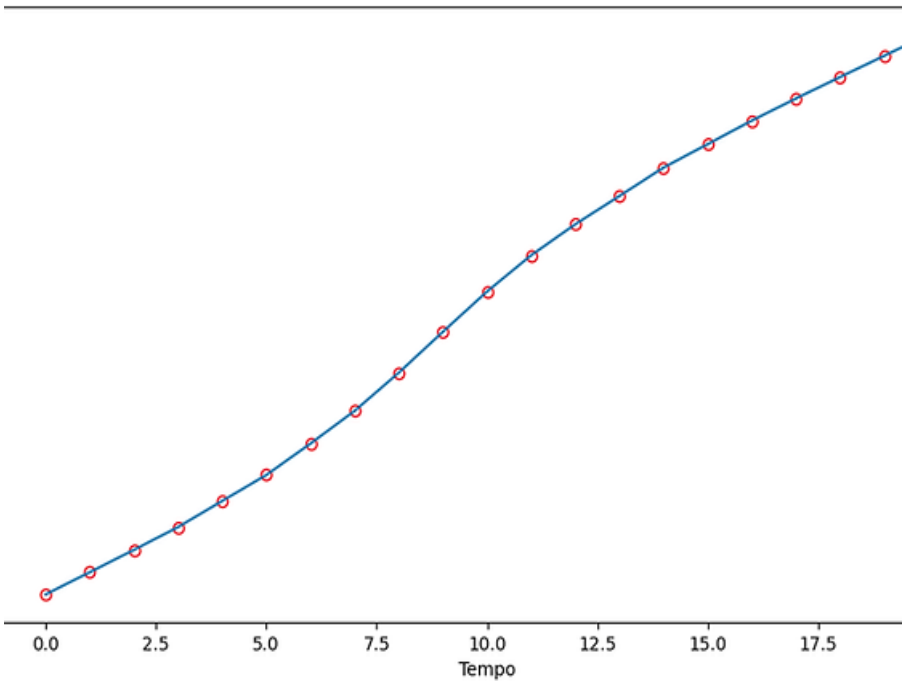
As you progress in the resolution, getting closer to the definitive answer, you realize that there are small details that can still improve the answer. But these details require more and more time and are smaller and smaller and contribute less and less to the result. The curve below represents this situation:



It reaches a point where the person concludes that it doesn't make sense to spend more time to keep improving the response, because they would need to dedicate a lot of time to producing small increments.

On some of the great problems of science this takes centuries. Newton's solution, for example, was later improved by Einstein and in the future, it will be improved again. The atomic model

has also experienced several stages of evolution and this happens in different situations in which one is dealing with a difficult and predominantly intellectual problem. If it is a laborious problem, where the resolution is more repetitive and mechanical, the graph that determines the percentage resolved as a function of time is more similar to the one below, where the time devoted to the resolution grows almost linearly with the percentage resolved.



The type of problems desirable for a good intelligence test is the one that presents the behavior of graph 1. And all the items in the STE are designed with this objective in mind.

Graph 1 is a simplification, because many times there can be several stagnations in the resolution process. The person advances quickly, until he encounters some difficulty that impedes the advance until a strategy is developed to solve it. Then it goes back to solving the problem, then it hits another obstacle, etc. Several of the more difficult problems in STE have this characteristic, where the person needs to have more than one insight during the solving process in order to be able to keep moving forward.

Since the time that Kevin Langdon created the first high range IQ test until the mid-1990s, there were less than half a dozen such tests. But from the 1990s onwards, several others were created and currently there are hundreds. I don't know all the high-range tests that currently exist, so I can't generalize, but I can say that many of these tests are made up of difficult questions, but they are not really difficult. This is common in tests with a series of numbers or figures, where if a person spends enough time, testing many different alternatives in an organized way, at some point he will discover the underlying pattern.

Of course the use of some heuristics can speed up this process, but they are very basic heuristics and after a person trains to solve many tests of this type, he ends up becoming “specialized”. There are also issues that just depend on the person having a vast vocabulary to

solve an analogy, without there being any intrinsic difficulty in the analogy itself. The same applies to association problems. Certainly ST and STE are not immune and also have their own flaws and limitations, but as far as possible we have tried to avoid some of the problems listed here.

Compared to the best traditional IQ tests, such as Stanford-Binet and Wechsler, the high range IQ tests adequately solve the problem of measuring correctly at the highest levels of difficulty, reaching 170 IQ or even 180 IQ and in this respect The Sigma Test did not bring great contributions, except perhaps for pushing the ceiling up a little as far as you can measure correctly. But there are other aspects in which the ST made relevant contributions:

- Generation of scores on a ratio scale
- Correct determination of percentiles and rarity levels
- Unprecedented determination of proportions of intellectual production potential
- Adequacy of different cognitive processes to the skill level measured
- Other possible advantages: https://www.sigmasociety.net/escalasqi

Mothers and fathers often find their kids the most beautiful in the world, so it's possible that my opinion of ST and STE is skewed. So it's best to rely on the opinions of other people who have been tested with The Sigma Test and have given their testimonials. A list of these opinions can be accessed here: https://www.sigmasociety.net/depoimentos. So, although maybe my opinion is biased, ST and STE were built thinking about solving some of the weaknesses (from my point of view) that are present in other tests and I believe that the ST and STE are the psychometric instruments that best meet my criteria for correctly measuring intellectual level at the highest levels. Some other deeply talented people would agree with this opinion, others might not. This space is open to receiving new positive and negative opinions about ST and STE.

For these reasons, in Sigma Society, as the cut-off is 132, within the range in which other tests also work well, there was no problem in accepting other tests as criteria for admission, because the distortion is not great for scores up to this level. In Sigma III there were some doubts about whether to accept other tests and it was decided to initially keep only the ST with the possibility of accepting other tests later as well. As of Sigma IV, only the ST itself was accepted. For these same reasons, STE will be accepted as the standard exam for admission to Sigma VII and the Deliberative Council in Immortal Society. It will also be used as criteria for admission to Sigma VI, Sigma V, Unicorn, Platinum, Sigma IV, Immortal Society, Sigma III and Sigma Society.

Having made these clarifications, we hope that everyone who accepts this challenge will enjoy the pleasant intellectual adventure offered by the STE questions and obtain fair and accurate results.

After taking the Sigma Test Extended, the person receives a certificate from the Sigma Test Extended and a certificate based exclusively on the Sigma Test questions, since the ST is a subtest of STE. Although question 36 of the STE was not included, as there was no correct answer in this question, it does not interfere with the norm.

Real Empiricism and The Problem of Proof

Ken Shea

Philosophers Bertrand Russell and Gilbert Ryle did much to forge the distinction between knowledge by description and knowledge by acquaintance, or 'knowing-how' and 'knowing-that' in the literature, cf. Ryle's *The Concept of Mind*. Chapter Five of Bertrand Russell's *The Problems of Philosophy*, i.e., Knowledge by Acquaintance and Knowledge by Description, logically advances to demonstrate how the raw sense-data or 'knowledge of things' in a Berkelian/Humean mode adhere to create more complex 'knowledge of truths', cf. W.V.O. Quine's *Word and Object*. Basically a card-carrying empiricist, Russell naturally adds: 'All our knowledge, both knowledge of things and knowledge of truths, rests upon acquaintance as its foundation. It is therefore important to consider what kinds of things there are which we have acquaintance.' Because Russell wants to paint an overall picture, ironically, closer to Donald Davidson's Quinean holism or Martin Heidegger's *Dasein* (being-in-the-world), as opposed to the static, Cartesian 'mirror of nature' à la correspondence theory of truth which Richard Rorty impugned in *Philosophy and the Mirror of Nature*, Russell adds a time- and self-dimension. These Russell terms 'extensions', memory and introspection and abstraction to encompass universals, like whiteness, from particulars, cf. Gerald Edelman's *The Remembered Present*.

Bertrand Russell even embraces, under the umbrella of acquaintance, an 'inner sense' akin to what William James grokked an 'inner fact' in *The Varieties of Religious Experience*; Russell correctly says, 'When I desire food, I may be aware of my desire for food; thus "my desiring food" is an object with which I am acquainted. Similarly we may be aware of our feeling pleasure or pain, and generally of the events which happen in our minds. This kind of acquaintance, which may be called self-consciousness, is the source of all our knowledge of mental things', cf. Merleau-Ponty's *Phenomenology of Perception*. In principle, then, are there limits to the 'events which happen in our minds' - the events that *can* happen to form a necessarily-subjective epistemic *weltanschauung* in the largest-possible meaning of a worldview?

In the *Tractatus*, Ludwig Wittgenstein, a student of Bertrand Russell, famously said, 'The proposition is a picture of reality' (§ 4.01) and '*The limits of my language* mean the limits of my world' (§ 5.6). The self-imposed limits for the logical positivists appeared to be logic, policed language (question-begging 'verifiability criterion' and 'protocol statements'), and the ego body-mind complex. However, once Wittgenstein published *Philosophical Investigations* the landscape had sufficiently flowered to include the *lebenswelt* (lifeworld): 'For a *large* class of cases – though not for all – in which we employ the word "meaning" it can be defined thus: the meaning of a word is its use in the language' (§ 43, cf. § 561). In essence, the *lebenswelt* (lifeworld) is the inter/subjective realm of consciousness, organic communication, and everyday practices; Wittgenstein is thought to have exploded the parameters from the 'picture theory of language' in the *Tractatus* to the 'meaning is use' perspective and phenomenological lifeworld.

The apparent sea change undergone by Ludwig Wittgenstein - spanning the *Tractatus* and *Philosophical Investigations* - rhymes the phenomenological distinction Martin Heidegger painstakingly made in *Being and Time* between present-at-hand (*Vorhandenheit*) and ready-to-hand (*Zuhandenheit*) apprehensions of the world. The former, present-at-hand, refers to the artificial scientific mode of partitioning objects from the environment, whereas the latter, ready-to-hand, refers to the more natural and pragmatic uses which the objects in the

environment might possess, without further theoretical ado. Heidegger makes the added existential point that humans are 'always already' in a lifeworld horizon of possibilities, or a thrown projection (*geworfener entwurf*). The lyric by Jim Morrison of *The Doors* in 'Riders On The Storm' about being thrown into a world ('Into this house we're born, Into this world we're thrown') is reckoned to derive from Morrison's readings of Heidegger. In any case, the late philosopher and Heidegger scholar Hubert Dreyfus has astutely noted the revolutionary nature of Heidegger's phenomenology in general and *Being and Time* in particular insofar as, for example, the notions of preexisting states and moods, cf. *Befindlichkeit*, *Stimmung*, were chronically overlooked by Cartesian philosophers, very much including the logical positivists, and true believers in the faith of scientism and the myth of cultural progress.

Important to remember: The actual Random House Dictionary definition of empirical is 'derived from or guided by experience or experiment', as well as (supplementary definition) 'provable or verifiable by experience or experiment.' Moreover, empiricism is defined by the same source as 'the doctrine that all knowledge is derived from experience', which chimes with Russell's commentary from above: 'All our knowledge, both knowledge of things and knowledge of truths, rests upon acquaintance as its foundation.' The contested epistemic battleground seems to revolve around what counts as 'experience or experiment' and what counts as being 'provable or verifiable by experience or experiment'. Certainly one kind of 'experience' and even 'experiment' (see below) is what Ken Wilber terms 'mystical or contemplative experiences' in *Sex, Ecology, Spirituality*: 'Another common objection is that mystical or contemplative experiences, because they cannot be put into plain language, or into any language for that matter, are therefore not epistemologically grounded, are not "real knowledge." But this simply bypasses the problem of what linguistically situated knowledge [post-semiotics/Saussure] means in the first place.' Wilber rightly insists that 'Saussure's great insight' and the basis of structuralism - and arguably grist for postmodernism and the coherence theories of truth, I might add - is that the signifier, signified, and referent can be distinguished, meaning is bound by (endless) contexts, and 'the entire structure of language is involved in the meaning of each and every term [in the underlying language]' (*Sex, Ecology, Spirituality*, pages 276-277). A sign does not really mean anything shorn of a context, highlighting the relevance of hermeneutics.

Put another way, the very use of language is dependent on a context and shared experience for discerning accurate meanings. Therefore, the fact that rarer 'mystical or contemplative experiences' elude widespread understanding renders the experience 'no more and no less handicapped in this regard than any other experience' (*ibid*., page 279), since more 'prosaic' happenings, e.g., easing into a bath or savoring carrot cake, depend on context and shared experience, as well. 'If I say "dog" and you've had the experience, you know exactly what I mean. If a Zen master says "Emptiness," and you've had that experience, you will know exactly what is meant. If you haven't had the experience "dog" or an experience "Emptiness," merely adding more and more words will never, under any circumstances, convey it.' Wilber implies that '*Godhead* and *Spirit* and *Dharmakaya*' are verbal signifiers whose referents are disclosed in the community of the 'transpersonal or *spiritual worldspace*' (*ibid*., pages 279-281). Because the minds of most people are attuned to one particular worldspace does not mean that that particular worldspace is the only possible experience to be had; the common experience might imply, however, the majority of people alive today are *subjectively attuned* to a similar frequency. Interesting to consider: Neuroscientists were baffled to discover brain activity depressed, not heightened as some predicted, under the influence of psychedelics like psilocybin. The finding that brain activity, *contra* neuroscientific predictions, was 'objectively' depressed yet experience was 'subjectively' vivified, potentially to access the paranormal, suggests the brain and mind are not conterminous, setting aside for now near-death experiences and out-of-body experiences, and that the brain acts as a governor or veil against grander potentials of Consciousness.

All right - but how would one go about testing these empirical claims for oneself? Ken Wilber has formulated - influenced, perhaps, by Jürgen Habermas, - a process of screening the 'validity claims' of mysticism, in the manner of more mundane empirical claims. Wilber sees the process as threefold moving from an (1) injunction to an (2) illumination then (3) confirmation by a community of trained researchers or experts. The practice, hence, could be Zazen and the illumination could be *satori* and the confirmation might entail *dokusan* and *shosan*, in the Zen tradition. In an essay titled 'The Problem of Proof' in *Eye to Eye* Wilber says 'valid data accumulation in any realm has three basic strands' and outlines thus:

> '1. *Instrumental injunction*. This is always of the form, "If you want to *know* this, *do* this.'
>
> 2. *Intuitive apprehension*. This is a cognitive grasp, prehension, or immediate *experience* of the object domain (or aspect of the object domain) addressed by the injunction; this is, the immediate *data*-apprehension.
>
> 3. *Communal confirmation*. This is a checking of results (apprehensions or data) with others who have adequately completed the injunctive and apprehensive strands.'

Wilber will insist that, while the threefold process is the same for gathering knowledge across domains, the actual knowledge maps onto different territories. There can be an empiric-analytic inquiry, a mental-phenomenological inquiry, and a transcendental inquiry. There might be an empiric-analytic inquiry, in which, for instance, a lab technician could be trained (injunction) to perform a chemical assay, analyze the results (apprehension), and compare with other trained researchers or experts (confirmation) in the field. With an empiric-analytic inquiry, the data are supposed to be actual 'things' in the environment, whereas with a mental-phenomenological inquiry the data are supposed to be 'thoughts' or mental 'symbols', e.g., in the domains of mathematics or history (*ibid*., page 53). Wilber notes that, 'At the heart of and foundation of Zen is not a theory, a dogma, a belief, or a proposition, but, as in any true knowledge quest, an *injunction* (*ibid*., page 60). Zazen is seen as the 'injunctive tool' *qua* transcendental inquiry, in the same way that adequate reading ability is a prerequisite for, say, addressing a literary issue centering around 19th-century English literature *qua* mental-phenomenological inquiry, partly because the data at that level are symbolic. The dis/confirmable 'intuitive apprehension' of a transcendental inquiry has been likened to Georg Hegel's assessment of 'Spirit's return to itself on a higher plane, a level at which subjectivity and objectivity are united in one infinite act.' The German term 'Geisteswissenschaften' (*geist* meaning mind/spirit, and *wissenschaft* meaning science) intimates a liberating vantage and joyful rediscovery along the path Hegel brightened.

'Nel suo profondo vidi che s'interna
legato con amore in un volume,
ciò che per l'universo si squaderna:
sustanze e accidenti e lor costume
quasi conflati insieme, per tal modo
che ciò ch'i' dico è un semplice lume.' (*Paradiso*, Canto 33)

'In its profundity I saw — ingathered
and bound by love into one single volume —
what, in the universe, seems separate, scattered:
substances, accidents, and dispositions
as if conjoined — in such a way that what
I tell is only rudimentary.'

-Dante Alighieri

Where was Fermi?

When the Earth was flat, everyone knew it.
Truth was determined by the stock market
then as now.

There's a vaccine
for those who don't think
truth is a Conspiracy Theory.

“Where is everybody?”?
Where was Fermi?

Nothing will come of anything
that comes of anything.

May-Tzu

Notes:

1. Speaking at Australia's Lowy Institute as part of a talk entitled "Preparing for Global Challenges: In Conversation with Bill Gates," the Microsoft founder made the following admission:

"We also need to fix the three problems of [COVID-19] vaccines. The current vaccines are not infection-blocking. They're not broad, so when new variants come up you lose protection, and they have very short duration, particularly in the people who matter, which are old people."

2. "The Fermi Paradox is Neither Fermi's Nor a Paradox

Robert H. Gray

https://arxiv.org/pdf/1605.09187.pdf

Abstract

The so-called Fermi paradox claims that if technological life existed anywhere else, we would see evidence of its visits to Earth—and since we do not, such life does not exist, or some special explanation is needed. Enrico Fermi, however, never published anything on this topic. On the one occasion he is known to have mentioned it, he asked "where is everybody?"—apparently suggesting that we don't see extraterrestrials on Earth because interstellar travel may not be feasible, but not suggesting that intelligent extraterrestrial life does not exist, or suggesting its absence is paradoxical.

The claim "they are not here; therefore they do not exist" was first published by Michael Hart, claiming that interstellar travel and colonization of the galaxy would be inevitable if intelligent extraterrestrial life existed, and taking its absence here as proof that it does not exist anywhere. The Fermi paradox appears to originate in Hart's argument, not Fermi's question.

Clarifying the origin of these ideas is important, because the Fermi paradox is seen by some as an authoritative objection to searching for evidence of extraterrestrial intelligence—cited in the U. S. Congress as a reason for killing NASA's SETI program on one occasion—but evidence indicates that it misrepresents Fermi's views, misappropriates his authority, deprives the actual authors of credit, and is not a valid paradox.

Keywords: Astrobiology, SETI, Fermi paradox, extraterrestrial life"

3. "UFOs and the National Security State," volumes 1 and 2 by Richard M. Dolan

"Wonders in the Sky, Unexplained Aerial Objects from Antiquity to Modern Times" by Jacques Vallee and Chris Aubach or any of Dr. Vallee's other works

"Disclosure: Military and Government Witnesses Reveal the Greatest Secrets in Modern History" by Dr. Steven M. Greer

‘The poem is the cry of its occasion,

Part of the *res* itself and not about it.

The poet speaks the poem as it is,

Not as it was: part of the reverberation

Of a windy night as it is, when the marble statues

Are like newspapers blown by the wind. He speaks

By sight and insight as they are. There is no

Tomorrow for him. The wind will have passed by,

The statues will have gone back to be things about.’

-Wallace Stevens (excerpted from *The Auroras of Autumn*)