THE TRIO RELIED ON OBSOLETE DATA TO CLAIM THAT UNIVERSITY GRADUATES' IQ WAS ABOVE AVERAGE

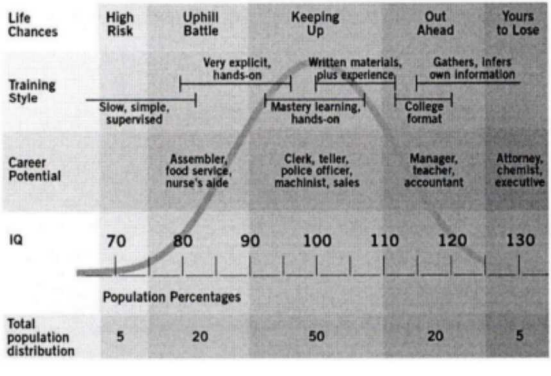
256. The Trio claimed that "college format" and university graduates' IQ or GMA is above average, in 112 to 120 range based on several sources of very obsolete data:
(a) Gottfredson (1997, 1998, 2003) WAIS (1955)/Wonderlic (1992) data
(b) Barona Index (Barona, 1984) predicting WAIS-R (1981) IQ data
(c) Kaufman et al. (1987) WAIS-R (1981) IQ data

257. The Trio ignored more current and far better (more representative) the WAIS-IV US (2008) normative sample data on mean FSIQs of the college graduates being 107 in US, mere average. Furthermore, WAIS-IV US (2008) data and Longman et al. (2007) analyses indicate that WAIS-IV CDN (2008) average IQ of Canadians with 16 or more years of education was mere 104.2 IQ points, including those with Master's and PhD degrees, and the middle 96% of such graduates had IQs ranging from 73.5 to 137.5 IQ points.

258. Dr. Janzen also had at his disposal the most recent data by Uttl, Violo and Gibson (2022) confirming the decline of university students' IQ down to average, undistinguishable from 100.

Gottfredson's (1997, 1998, 2003) data are obsolete

259. Two members of the Trio – Drs. Westcott and Mandel -- reproduced and relied on the figure below from Gottfredson (1998), from *Scientific American*, to claim that the "college format" and university graduates had above average IQ, and that "teachers' intellectual abilities are lumped with those of accountants and managers and clearly fall within the above average range (IQ 110 – 125; top 25% of the population)."



260. The third member of the Trio – Dr. Suffield – relied on nearly identical figure Gottfredson (1997) published earlier to claim the same.

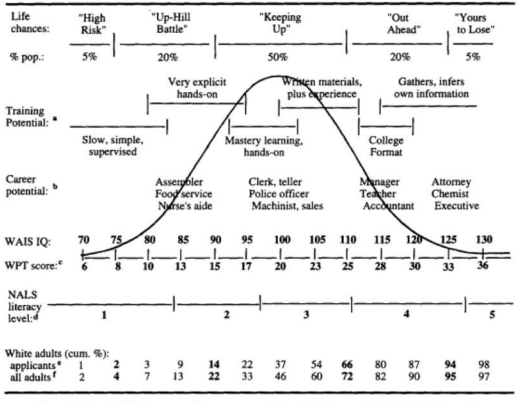


Figure 3. Overall life chances at different ranges of the IQ bell curve. [a]Wonderlic (1992, p. 26). [b]Figure 1. [c]Wonderlic (1992, p. 20). [d]Table 8. [e]Wonderlic (1992, p. 34). Job applicants in 1992, aged 16–72. [f]Based on mean WAIS IQ for Whites of 101.4 and SD for Whites of 14.7 (Reynolds, Chastain, Kaufman, & McLean, 1987, p. 330). Percentiles for IQ scores estimated using cumulative normal probability tables.

261. WAIS (1955) IQ data in Gottfredson's figures are again derived from Wonderlic (1992) WPT scores translated to WAIS (1955) scores.

262. Obviously, Gottfredson's (1998) claims about life chances, training potential, career potential, college format, etc. are:
   (a) based on non-representative unknown samples of examinees tested by unspecified corporations in unspecified circumstances (see Wonderlic, 1992)
   (b) not representative of US Census for any time period (see above)
   (c) at least 40 years obsolete and irrelevant given massive changes in the society
   (d) based on WAIS (1955) IQ data that are nearly 70 years obsolete
   (e) false as mean IQ of "college format" is within a few points of 100 and undistinguishable from the general population
   (f) false as mean IQ of those same teachers would be only 96.1 if they were assessed with WAIS-IV (2008)

263. Equally notably, the WAIS (1955) scores and WPT scores were never linked to WAIS-IV CDN (2008).

264. The Trio never mentioned nor considered any of these facts.

Barona Index (Barona et. al., 1984) is obsolete

265. Dr. Suffield used Barona Index, an equation predicting WAIS-R (1981) FSIQ rather than WAIS-IV CDN (2008) FSIQ based on education and other demographics.

266. Dr. Suffield wrote (CFS1057):

> One technique is to use demographic variables such as age, education, and occupation – the most powerful predictors of premorbid intellect – in a regression equation to estimate IQ scores. However, these equations are associated with very large standard errors of estimate (circa 13 points). Moreover, the most commonly used of these equations, the Barona Index, predicts the 1981 WAIS-R, 30 years and two test generations previous to Ms.[redacted]assessment using the WAIS-IV. Still, that Index yields a predicted Full Scale IQ of 116. Including the standard error of measurement will yield a range of 103 – 130.

267. Dr. Suffield admits that

(a) estimates of "premorbid" IQ are associated with "very large standard errors of estimate [SEM] (circa 13 points)" (CFS1057)

(b) Barona Index predicts the WAIS-R (1981) IQ, "30 years and two generations previous to Ms[redacted]assessment using WAIS-IV" CDN (2008). In other words, it does NOT predict WAIS-IV CDN (2008) IQ scores.

268. Dr. Suffield did not mention that Barona Index was developed over the US as opposed to Canadian data and that its performance in Canada for WAIS-IV CDN (2008) was unknown but certain to be different (see Longman et al., 2007).

269. Next, Dr. Suffield stated (CFS1057):

> Still, that Index [Barona Index] yields a predicted[redacted]Full Scale IQ of 116. Including the standard error of measurement will yield a range of 103 – 130."

270. Assuming Dr. Suffield is correct that (a) Barona Index predicts WAIS-R FSIQ of 116 for Ms.[redacted] and (b) SEM is 13 IQ points, Dr. Suffield is astonishingly incompetent when he stated that the index predict "range of 103 – 130" for Ms[redacted]IQ, obtained on WAIS-IV CDN (2008) rather than on WAIS-R US (1981).

271. First, "30 years difference" between the WAIS-R and WAIS-IV means that 9 IQ points would have to be subtracted from WAIS-R estimate (0.3 per year), yielding only 107 IQ points as the Flynn Effect adjusted WAIS-IV US estimate.

272. Second, 95% confidence interval (95% CI) is calculated by adding and subtracting approximately TWO TIMES SEM (not one times SEM as used in Dr. Suffield's calculations). This is plainly explained in WAIS-IV manuals and any introductory statistical or psychometric text. Thus, this rather speculative range – 95%CI for WAIS-IV FSIQ is: 107 +/- 2 x SEM = 107 +/- 26 = 81 – 133

273. Since Longman et al. (2007) demonstrated that the relationship between education and mean IQ is substantially more flatter, less pronounced in Canada, Dr. Suffield would also need to subract another 3 IQ points or so to get to WAIS-IV CDN estimate from WAIS-IV US estimate. Thus, using Dr. Suffield's speculations, Ms.[redacted]Barona Index predicted WAIS-IV CDN FSIQ is 104 +/- 2 x SEM = 78 to 130.

274. Since Ms [redacted] WAIS-IV CDN observed FSIQs – 86 in Westcott's assessment and 91 in K[redacted]s assessment -- fit squarely within this 95% CI ranging from 78 to 130, **Dr. Suffield has exactly zero evidence of any cognitive decline, even under his numerous speculative assumptions that his Barona Index calculations are based on.**

Kaufman et al. (1987) IQ data for WAIS-R are obsolete

275. Dr. Suffield goes on and claims that "the relationship between IQ and education can be expressed in a simple regression formula: "IQ = (years of education X 3.5) + 58". Dr. Suffield, as usual, does not state the source of this equation.

276. Dr. Suffield next plugged 8, 12, and 16 into the above equation and marvelled that "these calculated figures track quite closely to those cited by Longman et al. In their study..."

277. Actually, no, **Dr. Suffield is patently wrong again; he is again incompetent.** For the Canadian sample, the equation over-predicted the mean WAIS-III CDN IQ for those with 16 or more years of education by 5 IQ points or 1/3 standard deviation.

278. Dr. Suffield next presented the table of WAIS-R (1981) FSIQ data from Kaufman et al. (1987) tabulated by education and claimed:

> "... this relationship between intellect (or general mental ability, "g") and academic attainment has been known for decades, and is not contentious."

279. Kaufman et al. data for WAIS-R (1981) are not contentious for 1981; Kaufman et al. analyzed WAIS-R normative sample data. However, **Reynold et al. WAIS-R data are 40+ years obsolete and were 30 years obsolete in 2010**. They are simply hopelessly outdated, irrelevant.

280. The table below reproduces the first two columns of Dr Suffield's table based on Reynolds et al. (1987) (CFS1059). The third column shows the mean estimated WAIS-IV US (2008) FSIQ using WAIS-R (1981) data adjusted for Flynn Effect of 0.3 IQ points per year, that is, WAIS-R FSIQ minus 8 IQ points (27 years X 0.3 IQ points). The final column shows the actual WAIS-IV US (2008) FSIQs of normative sample as reported by Holdnack & Weiss (2008) two decades later – **more modern literature** Dr. Suffield had a duty to read and comprehend.

Mean WAIS R (1981) FSIQ	Years of Schooling	Mean **Estimated** WAIS-IV US (2008) FSIQ using 0.3 points/year or (2007 – 1980) * 0.3	Mean **Actual** WAIS-IV US (2008) FSIQ (Holdnack & Weiss, 2013)
115	16+ (College graduate)	107	107.4
107	13-15 (some college)	99	101.4
100	12 (high school graduate)	92	96.2
96	9-11 (some high school)	88	86.4
91	8 (elementary school grad)	83	82 (8 years or less)
83	0-7 (some elementary	75	N/A

school)

281. Flynn Effect adjusted WAIS-R means for "16+ (College graduate)" predict nearly perfectly actual means for WAIS-IV US (2008).
282. Dr. Suffield's education Barona Index is a full 7 IQ points off, making Ms [redacted] appear less intelligent, or in the language Dr. Suffield is fond of, more "impaired".
283. Again, one need to subtract approximately 3 IQ points from WAIS-IV US means for 16+ years of education because Longman et al. (2007) showed that effects of education are flatter in Canada vs. USA (see also Dr. Suffield summary of Longman et al. data at CFS1059).
284. The relevant part of the Table 4.3 from Holdnacck & Weis (2013) is copied below for the CRC's convenience.

TABLE 4.3 WAIS–IV Core Index and Subtest Mean Scores, by Education Level

	Education Level (By Years)													
	8 or Less		9–11		12		13–15		16		17–18		More than 18	
Score	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Verbal Comprehension Index	81.3	13	86.7	13.9	95.2	12.8	101.6	12.5	108	12.8	110.9	11.8	115.5	11.3
Perceptual Reasoning Index	86.5	12.3	89.7	13.6	97.4	14.8	100.4	14.2	104.4	15.1	106.5	14.2	106.1	14.3
Working Memory Index	84.3	12.5	88.7	14	97	14	100.8	14.1	106	14.2	107.4	12.9	109.5	13
Processing Speed Index	89.3	17.3	90.7	15.3	98.3	14.7	101.2	14	104	14.5	106.1	13.8	105.7	15
Full Scale IQ	82	12.6	86.4	13.8	96.2	13.7	101.4	13.1	107.1	14	107.1	14	111.7	12.5
Vocabulary	6.5	2.2	7.4	2.6	9.1	2.6	10.5	2.6	11.6	2.7	12.3	2.6	13.1	2.3
Similarities	6.9	2.9	7.9	2.9	9.3	2.6	10.1	2.5	11.3	2.4	11.7	2.5	12.7	2.1
Information	6.7	2.6	7.6	2.8	9.1	2.7	10.3	2.8	11.6	2.8	12	2.6	12.6	2.6
Block Design	7.9	2.9	8.4	2.8	9.6	3	10.1	2.9	10.8	3.1	11.1	2.9	10.6	3.1
Matrix Reasoning	7.4	2.5	8	2.9	9.5	3.1	10.2	2.9	11.1	3.1	11.6	3	12.2	3
Visual Puzzles	7.9	2.4	8.4	2.7	9.7	3.1	10.1	3	10.6	3.2	10.9	3	10.6	2.9
Digit Span	7.5	2.9	8.3	3.1	9.7	2.9	10.1	2.9	11.1	3	11.1	2.7	11.5	3.1
Arithmetic	7	2.2	7.8	2.5	9.3	2.7	10.2	2.8	11.1	2.9	11.6	2.7	12	2.5
Coding	7.7	3.2	8	3	9.6	2.9	10.3	2.9	10.8	2.9	11.4	2.7	11.6	3.2
Symbol Search	8.3	3.8	8.6	3.3	9.7	3	10.2	2.9	10.7	3.1	10.9	2.9	10.9	2.9

Note: Sample size 0–8 years = 220, 9–11 years = 243, 12 years = 647, 13–15 years = 553, 16 years = 267, 17–18 years = 297, more than 18 years = 43.

The GATB CDN (Nelson, 1986) General Working Population norms are obsolete

285. The Trio also used the GATB CDN (Nelson, 1986) General Working Population norms to claim that Ms. [redacted] GATB CDN scores were below those of university graduates.

286. For example, Dr. Westcott claimed in her report that Ms. [redacted] GATB CDN G score:
   (a) "is not consistent with her past achievement of a university degree. Elementary school teachers typically demonstrate above general learning ability compared to the general working population."
   (b) "This finding suggests a decline in Ms. [redacted] general learning ability subsequent to the completion of her Bachelor of Education degree.

287. Again, as detailed above, the GATB CDN 1985 "normative" sample is unknown; the selection, characteristics, and representativeness of the examinees forming the "norms" is unknown. No norms were ever provided for holders of Bachelors of Education degrees. Finally, the GATB ND GWP norms were 25 years obsolete when the Trio used them.

288. Since 1985, there have been massive changes in Canadian society invalidating the GATB CDN GWP norms:
   (a) The composition of the General Working Population has changed massively since 1985.
   (b) Calculators, computers, world wide web, smart phones, etc. have all become ubiquitous.
   (c) School curricula changed, introduced calculators, computers, world wide web, etc. and de-emphasized arithmetic fluency

289. Ten years after it was normed, the GATB CDN was administered to 62 undergraduate students (14 males, 48 females, mean age of 20.86 years) at Lakehead University, Ontario, together with the computerized GATB CDN by Yeasting (1996). Half of the students received GATB CDN first followed by GATB CDN-CA or Computerized Administration (Group 2) and the other half received GATB CDN-CA first followed by GATB CDN (Group 1). The undergraduate students who completed the GATB CDN first scored approximately 1/2 SD or 10 GATB CDN Standard Score points (not IQ points) below the mean of the GATB CDN GWP "norms" on G, V, and N.

Aptitude	GATB CDN First
G	90.94
V	90.34
N	87.22

290. Accordingly, Yeasting (1996) data confirm that the GATB CDN GWP norms became quickly obsolete and irrelevant with massive changes in the society.

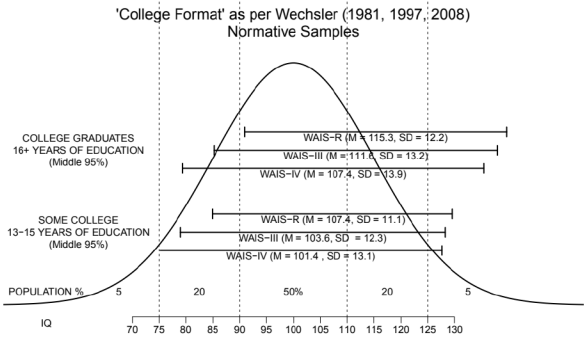
291. Yesting (1996) data confirm that the GATB CDN should not be used for anything but job counselling and explorations and, even for that purpose, only with clear and prominent cautions that (a) the GATB CDN normative sample's representativeness is unknown, (b) no one actually established any representative norms for Canadians, for Canadians of certain age, for Canadians working in specific actual occupations, for Canadians with university degrees, etc., (c) the GATB CDN norms were 25 years obsolete in 2010 and are 37 years obsolete today, and

(d) the more recent data suggests that even undergraduate students scored 1/2 SD below the 1985 GWP norms in 1995 already.

292. Contrary to Dr. Westcott, Ms [redacted] G, V, N scores are perfectly consistent with Ms. [redacted] B.Ed. degree.

More current data demonstrate WAIS-IV FSIQ of undergraduate students is only average

293. Accordingly, as detailed above, far more recent and far more trustworthy data show that the average WAIS-IV US (2008) IQ of college format was only 101.4 and of college graduates was 107.4, merely average, and certainly not above average. The above is reprinted here for convenience.



294. Furthermore, applying Longman et al. (2007) findings with the WAIS-III US (2007) and WAIS-III CDN (2007) to the WAIS-IV (2008) suggests that WAIS-IV CDN (2008) average IQ of Canadians with 16 or more years of education was likely mere 104.2 IQ points, including those with Master's and PhD degrees, and the middle 96% of such graduates had IQs ranging from 73.5 to 137.5 IQ points.

The Trio's contravention of the HPA, COE and SOP

295. Most of the Trio's actions detailed above occurred in 2021 or later. According, the HPA, COE2017 and SOP2019 apply. However, for some actions, the HPA, COE2000, and SOP2005 apply.

296. The Trio members, individually and jointly, contravened the HPA 1(pp)(i) by "displaying a lack of knowledge or or lack of skill or judgment in the provision of professional services" and the HPA 1(pp)(xii) by "conduct that harms the integrity of the regulated profession", by

(a) ignoring more current data on IQ of university students and university graduates published by Holdnack and Weiss (2013) for WAIS-IV US (2008) and by Longman et al. (2007) for WAIS-III US and CDN (1997)
(b) ignoring more current data on the GATB CDN (Nelson, 1986) performance of Canadian university students published by Yesting (1996)
(c) misusing obsolete Gottfredson (1997, 1998, 2008) WAIS (1955)/Wonderlic (1992) data
(d) misusing obsolete Barona Index (Barona, 1984)
(e) misusing Kaufman et al. (1987) WAIS-R (1981) IQ data
(f) failing to recognize that Kaufman et al. (1987) education data were for a different test (WAIS-R) collected at different historical era
(g) failing to disclose and to consider the Flynn Effect in any kind of speculation
(h) failing to adjust obsolete data for the Flynn Effect when speculating about IQ of university students and university graduates
(i) failing to understand how to calculate 95% Confidence Interval
(j) failing to understand limitations of using Barona Index and other similar demographically adjusted predictions
(k) making false statements about IQ of university students and university graduates

297. The Trio's members' actions detailed above also contravened the COE2017 standards:
(a) Standard I.7 (misuse of psychological knowledge)
(b) Standard II.6 (competence)
(c) Standard II.9 (keep up to date with relevant knowledge...)
(d) Standard II.17 (benefit/risk)
(e) Standard III.1 (no participation in dishonesty, fraud, misrepresentations)
(f) Standard III.4 (maintaining competence)
(g) Standard III.8 (acknowledge limitations)
(h) Standard III.10 (communicate completely and objectively)

298. The Trio members' actions detailed above, individually and jointly, also contravened the SOP2019 Standards requiring the Trio members to practice only within their areas of competence, to have sufficient knowledge, to base their opinions only on "the professional knowledge of the discipline", etc.:
(a) Standard 4.1 "A psychologist shall not provide a professional service or supervision of a professional service unless the psychologist is competent through education, training and/or experience to provide that professional service."
(b) Standard 4.2 "A psychologist shall maintain competence to ensure that any professional services provided conform to current standards of the profession."
(c) Standard 5.2 "A psychologist shall not provide a professional service when there are reasonable grounds to believe that the treatment may lead to harm and no demonstrable evidence of benefit exists, even if the client has consented to the treatment and/or intervention."
(d) Standard 5.9 "In stating a professional opinion, a psychologist shall note limitations regarding inferences made by the psychologist in forming the opinion."
(e) Standard 5.10 "A psychologist shall base an opinion on, and limit an opinion to, reasonable and generally accepted practice standards and the theoretical and scientific knowledge base of the discipline."
(f) Standard 13.3 "A psychologist shall not provide, nor permit others to provide, false or misleading information concerning professional services offered by the psychologist."

299. With respect to some of the actions, the Trio contravened corresponding standards in the COE2000 and SOP2005.

300. The Trio also contravened the APA Ethical Principles of Psychologists and Code of Conduct that make it clear that they ought not to rely on obsolete tests and outdated test results:

> 9.08 Obsolete Tests and Outdated Test Results
> (a) Psychologists do not base their assessment or intervention decisions or recommendations on data or test results that are outdated for the current purpose.
> (b) Psychologists do not base such decisions or recommendations on tests and measures that are obsolete and not useful for the current purpose.

301. As the Trio says, they were selling their services to the SD5, the British Columbia client. Accordingly, the Trio also contravened College of Psychologists of British Columbia (CPBC) Code of Conduct that also make it clear that psychologists must not rely on obsolete tests/data:

> Standard 11.21 Obsolete/outdated results/tests
> A registrant must not based their assessment or intervention decisions or recommendations on:
> a) data or test results that are outdated for the current purpose; or
> b) tests and measures that are obsolete and not applicable to the current purpose