

7 recessive genes and psychological profiles

 bebee.com/producer/7-recessive-genes-and-psychological-profiles



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Introduction

This article is referring a mere speculative 7 recessive genes theory quantitative model (7RG model) which would have the aim to suggest a genetic pre-birth profiling of physiological main traits.

- The fundamental hypotheses of this model has been theorised reading articles about genetic related to autism spectrum disorders and Asperger characters which nowadays are still considered within the ASD spectrum due to the strong statistic correlation that the two have shown.
- This disquisition is based on a speculative hypotheses which claims that our psychological profile is genetically predetermined and it represents the architecture of our thinking, character and attitudes before any environment, education and society contributes took place.

 ***| ATTENTION |*** 

- At the time of writing, you **SHOULD NOT** trust this article for anything else than a simple speculative exercise about genetics modelling.

Every mere theoretical model like this **should not** trusted, until scientific peer-review will take place and scientific investigations would conduct in such a way it may possible to bind its claims and results to real-world facts by a cause-effects relationship proof.

Every contribution and comments would be welcome

Every contribution and comments would be welcome in order to falsify, criticize, improve or simple brings data which is or is not aligned with the conclusions or any logical passage of the model explanation and description.

How many unique profiles with 7 recessive genes?

Fig. 1
7 GENES
RECESSIVE
TRANSMISSION

P	M	F	C
1	X	-	-
2	X	-	-
3	X	X	X
4	X	X	X
5	X	X	X
6	-	X	-
7	-	X	-

Fig. 2
7 GENES
COMBINATIONS
EXAMPLES

P N	1	6	3
1	X	-	-
2	-	X	-
3	-	X	X
4	-	X	X
5	-	X	X
6	-	X	-
7	-	X	-

P1 !P1 345

Fig. 3
7 GENES
UNIQUE
COMBINATIONS

N	Total	520
0	1	1
1	7	7
2	7x6	42
3	7x6x5	210
4	7x6x5	210
5	7x6	42
6	7	7
7	1	1

Fig. 1 P: position; M: mother; F: father; C: child

Fig. 2 P: position; N: n° of active; P1: first only; !P1: all but first; 345: just an example

Fig. 3 N: n° of active genes; Total: n° of total unique profile 345 = {345, 435, ..., 543}

Summarizing

- Total numbers of unique profiles: 520.
- Total n° {5+} genes unique profiles: 50.
- Total n° {6+} genes unique profiles: 8.

What about profiles with 5 or more active genes?

		Minimum Maximum								Average													
		father								father													
		0	1	2	3	4	5	6	7	N	0	1	2	3	4	5	6	7	F%	N	weight		
mother	0	00	00	00	00	00	00	00	00	0	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00		7	7,0	6,5%
	1	00	01	01	01	01	01	01	11	1	0,00	0,14	0,39	0,65	0,85	0,96	0,99	1,00		6+	19,0	17,7%	
	2	00	01	02	02	02	02	12	22	2	0,00	0,39	0,65	0,85	0,96	0,99	1,00	2,00		5+	34,1	31,8%	
	3	00	01	02	03	03	13	23	33	3	0,00	0,65	0,85	0,96	0,99	1,00	2,85	3,00		4+	50,9	47,4%	
	4	00	01	02	03	14	24	34	44	4	0,00	0,85	0,96	0,99	1,00	2,96	3,65	4,00	8,1%	3+	64,9	60,3%	
	5	00	01	02	13	24	35	45	55	5	0,00	0,96	0,99	1,00	2,96	3,65	4,39	5,00	1,3%	2+	83,5	77,7%	
	6	00	01	12	23	34	45	56	66	6	0,00	0,99	1,00	2,85	3,65	4,39	5,14	6,00	0,2%	1+	90,5	84,2%	
	7	00	11	22	33	44	55	66	77	7	0,00	1,00	2,00	3,00	4,00	5,00	6,00	7,00		0+	107,5	100,0%	
												14%		9,4%		9,6%							

Summarizing

- 9.6% of the combinations are in {5+} pool and lay in 9.4% of matrix locis.
- 18% the parents* have 1+ member(s) in {5+} and account for 14% of matrix locis.
- 90% of the combinations have less than 5 genes and account for 68% of genes weight.

Parents' distribution of probability

Mating matrix of probabilities

		father								
		0,2%	1,3%	8,1%	40%	40%	8,1%	1,3%	0,2%	
		N	0	1	2	3	4	5	6	7
mother	0,2%	0	0,0%	0,0%	0,0%	0,1%	0,1%	0,0%	0,0%	0,0%
	1,3%	1	0,0%	0,0%	0,1%	0,5%	0,5%	0,1%	0,0%	0,0%
	8,1%	2	0,0%	0,1%	0,7%	3,3%	3,3%	0,7%	0,1%	0,0%
	40,4%	3	0,1%	0,5%	3,3%	16%	16%	3,3%	0,5%	0,1%
	40,4%	4	0,1%	0,5%	3,3%	16%	16%	3,3%	0,5%	0,1%
	8,1%	5	0,0%	0,1%	0,7%	3,3%	3,3%	0,7%	0,1%	0,0%
	1,3%	6	0,0%	0,0%	0,1%	0,5%	0,5%	0,1%	0,0%	0,0%
	0,2%	7	0,0%	0,0%	0,0%	0,1%	0,1%	0,0%	0,0%	0,0%

Summarizing

- 94% of the parents accounts for 20% genes weight and 25% matrix locis.

- 65% of the parents account for 3.7% genes weight and 6.2% matrix locis.
- 18% of the parents* account for 89% genes weight and 61% matrix locis.
- 9.6% the combinations are in {5+} and account for 32% genes weight.

General overview

- The {5+} combinations have 9.6% ($\frac{1}{11}$) frequency, lay in 9.4% ($\frac{1}{11}$) locis and account for 32% ($\frac{1}{3}$) of genes weight.
- At least one of the {5+} combinations is present in 18% ($2 \cdot \frac{1}{11}$) of parents couple which children accounts for 89% ($1 - \frac{1}{10}$) genes weight and 61% ($\frac{1}{2} + \frac{1}{10}$) of locis.
- The 0.9% ($\frac{1}{10} \cdot \frac{1}{11}$) of the parents have both members in {5+} which children accounts for 43% ($\frac{1}{2} - \frac{1}{14}$) of genes weight and 14% ($2 \cdot \frac{1}{14}$) of locis.

The X-chromosome factor in autism (ASD)

		Y(F)	X(F)	X(M)					
Exposing Factor:		1	50%	0					
1C. sex [X,Y] frequency	First Chromosome 1C. line [F,M] frequency		2 nd Chromosome 2C. line [F,M] frequency		frequency	risk	1:N	1/K	1:N
	Y Male 50%	Y(F) 50%	X(F) 50%	X(M) 50%					
X Female 50%	X(M) 0%	X(M) 25%	X(M) 25%	6,25%	1,56%	1:32	5,91	1:189	
	X(M) 0%	X(F) 25%	X(M) 25%						
	X(F) 0%	X(M) 25%	X(M) 25%						
	X(F) 50%	X(F) 25%	X(F) 25%						
Ratio between male and female risk factors:						4	4,5		
Ancestor's Mother protective factor in X(F)						risk	1:N		
Y(F)	X(M) 50%	75%	X(M)X(M)	X(M)X(F)	2,08%	1:24			
	X(F) 1		X(F)X(M)	X(F)X(F)			0,52%	1:96	
		1:2	1:3	25%	risk	1:N	1/K	E[+]	
Ancestor's Mother protective factor in Y(F)						0,00%	1:48	0,875	14%
						0,00%	1:192	0,984	2%

Summarizing

A plain confrontation between expected frequencies for ASD male and female may with statistical data collected from the real world observations may indicate that there are two surpluses in the real world data.

- It seems that social environment factor, like *intrinsic social bullying*, puts under pressure the males in such a way that they have a 7x times greater (+14%) of adverse reaction surplus than females (+2%).

We may argue about the fact that nobody bully others people, except in few rare cases. Moreover, the autism appears very early in age and also before first scholarization, sometimes.

However, I think that it is very hard to understand what *bullying* really means for anyone that in a group of many peers would found many friends rather than someone who in the same group would be judged in a spectrum varying among {weird, dumb, retarder, asocial, childish, freakish, etc..} by almost all others peers because his/her diversity.

- Thus, the social burn out hypothesis could be considered as realistic like a saturation process that triggers a specific genetic predisposition.

The appearance of these surpluses of cases could put in analogy with the post traumatic stress disorder (PTSD) syndrome which it could be triggered by environmental stress burn out. Most of autistic people shown also some degree of attention deficit hyperactivity disorder (ADHD) which it means that they may have difficulties in keeping focused their attention in a social complex environment. Among others difficulties about being socially accepted or finding friends or mating, etc.

Jumping to the conclusions

Instead of relying on the X-chromosome factor, we can jump to the conclusions at the end of this article and note that 7RG ASD frequency expected for males is perfectly matched while the real world ASD frequency for females (1:189) is lower than the 7RG expectation (1:172) by -9% ($\frac{1}{11}$) less.

This may could be explained in two ways: 1. like above but in this case the males surplus reference is missing; 2. the 7RG model is missing some sort of $\frac{1}{11}$ second order correction about ancestors X-chromosome protection factor because the 2nd point in the "General overview" subsection about the "Parents' distribution of probability" shown that $\frac{1}{11}$ is a recurrent key-fraction. I bet on the 2nd.

However, the 1st is still a good explanation for rare and extreme cases because the $\frac{1}{11}$ - $\frac{1}{10}$ · $\frac{1}{11}$ of population has the genetic potential to develop autism at any age, if X-chromosome protection factor would be inhibited or because PTSD like experiences.

Profiles accounting

- Total numbers of basic profiles: 520.
- Combination for males are count of $\langle Y, X(F|M) \rangle = 2$.
- Combination for females are count of $\langle X(F|M), X(F|M) \rangle = 4$.
- Total numbers of unique profiles: $520 \times 2 + 520 \times 4 = 3'120$.

Consideration about ASD for males

- Total numbers of unique profiles: $520 \times 2 = 1'040$.
- Total n° {5+} genes not-standard profiles $50 \cdot \langle Y|X(F) \rangle = 50 \cdot 50\% = 25$.

So far, the total number of profiles increases and the picture changes in this way:

- Total numbers of unique profiles: $520 \times 2 + 25 = 1'065$.
- Total n° {5+} genes not-standard profiles: 25 which is 2.35% (1:42) of all.

Consideration about ASD for females

- Total numbers of unique profiles: $520 \times 2 = 1'040$.
- Total n° {5+} genes not-standard profiles $50 \cdot \langle X(F|F) \rangle = 50 \cdot 25\% = 12''$.

So far, the total number of profiles increases and the picture changes in this way:

- Total numbers of unique profiles: $520 \times 4 + 12'' = 2'092''$.
- Total n° {5+} genes not-standard profiles: $12''$ which is 0.58% (1:172) of all.

Consideration about the entire population

- Total numbers of unique profiles: $1'065 + 2'092'' = 3'157''$
- Total n° {5+} genes not-standard profiles: $25 + 12'' = 37''$ which is 1.17% (1:85)
- Theoretic ratio of ASD frequencies between male and female is 4.05 (4:1).

Confrontation with real-world statistics

«I disturbi dello spettro autistico (DSA) sono disturbi dello sviluppo a livello neurologico che colpiscono più frequentemente i ragazzi rispetto alle ragazze, in un rapporto di 4 a 1. In generale si stima che circa 1 su 42 ragazzi e 1 su 189 ragazze sia autistico, mentre l'incidenza complessiva varia invece da 1 su 68 bambini a 1 su 150 (average 0.9%).»

–Source: galileonet.it based on molecularautism.biomedcentral.com data.

Data confrontation:

- PERFECT – male frequency is 1:42 vs 1:42 found.
- OK – female frequency is 1:172 vs 1:189 found.
- OK – the ratio between male and female is 4.05 vs 4 claimed but 4.5 found.
- OK – population frequency 1:85 vs 1:94 which is the half of the [1:150, 1:68] range found among children.

Adding X-chromosome factor correction to 7GR model

Adding X-chromosome protective factor correction to 7GR quantitative model the new total number of {5+} not-standard profile:

- $NSP(\{5+\}, XX) = 50 \cdot \langle X(F|F) \rangle = 50 \cdot 25\% = 12^{oo}$

Considering all {5+} excluding those are protected by a parent with less of 5 genes:

- $XCF(\{5+\}, XX) = 1 - (18\% - 9.6\%) = 91.6\%$

Thus, the new total number of non-standard profile are

- $NSP'(\{5+\}, XX) = 50 \cdot 25\% \cdot 91.6\% = 11^{oo}$

So far, the recalculated frequency became

- $FREQ(\{5+\}, XX) = 11^{oo} / 2091^{oo} = 0.526\% (1:190)$

Which fits perfectly (1:190) the real-world data (1:189).

By the way, the new total number of unique profile would be 3'156 and those ASD related 36 which accounts for 1.14% of the population (1:88) which falls nearby (1:94) the half of the range [1:150, 1:68] seen for children.

Data confrontation changes

- OK → PERFECT – female frequency is 1:190 vs 1:189 found.
- OK → PERFECT – fe:male ratio 1:4 could be explained by the $X^Y|X$ combinatorial mechanisms while the 4.5 ratio found in the real world data could be explained integrating a XCF to 7RG. The two ratios match perfectly between expected and data values.

Conclusion

Considering this 7 recessive genes model of human psychological profiles, we have that

- 0.9% ($1/10$)² of people are within the autistic spectrum with a fe:male ratio of 1:4;
- 9.6% ($1/10$) of the people account for 32% ($1/3$) diversity in 7RG pool;
- 90% ($1 - 1/10$) of the people account for 68% ($2 \cdot 1/3$) diversity in 7RG pool.

So far people with 5 or more active genes in 7RG pool, would shown 4 times more thinking diversity than others [1].

While autistic people account for about 1%, ten times more (10% of the) people have the genetic potential to develop autism at any age under certain specific conditions.

X-chromosome protection factor

The sex determination by the $X^Y|X$ combinative mechanism provide to the female an advantage of 4 times ASD lower risk than men.

Moreover, the X chromosome is responsible for a protection factor that decrease the risk for female about 9% ($1/11$) raising the fe:male ratio from 4 to 4.5.

Note about the ratio calculation

[1] The thinking diversity among {5+} group has been evaluated as ratio between the two 7RG densities, in such a way $32:9.6 \cdot 90:68 = 10:3 \cdot 4:3 = 40:9 = 4.4 \sim 4.5$ because the algebraic ratio by integers is $(3 \cdot 11 : 10) / (6 \cdot 11 : 9 \cdot 10) = 1 / (2:9) = 3^2:2 = 4\frac{1}{2}$.

Legenda

- PERFECT – accepting a deviation about 1% c.a. or less
- OK – accepting a deviation about 10% c.a. or less
- Some numbers^o has been rounded at the nearest upper or lower bound integer.

Discover more in the related linked below

- [Creatività e pensiero laterale](#) (28 marzo 2017, IT)