



Evolutionary psychology

brought to you by

Ilya Zakharov

&

Alexander Fenin

Evolutionary psychology in Russia in one picture

Google курс по эволюционной психологии

Все Видео Новости Карты Картинки Ещё Настройки Инструменты

Результатов: примерно 679 000 (0,53 сек.)

Эволюционная психология. Секреты поведения Homo sapiens
evolution.powernet.ru/library/evolution_psychology.html ▼
Эволюционная психология - это изучение адаптивного значения поведения ... в том числе студентов семинаров и курсов по эволюционной психологии, ...

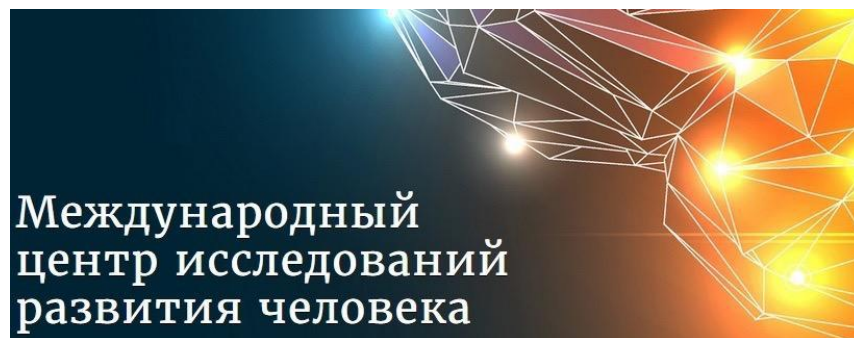
На чем основана уверенность ученых в эволюционном ...
<https://postnauka.ru/lectures/16645> ▼
На чем основана уверенность ученых в эволюционном происхождении «души»? Что могут палеолитические орудия рассказать о мышлении наших ...

Книги: эволюционная психология | Прикладная психология
<https://pripsy.wordpress.com/2014/10/03/книги-эволюционная-психология/> ▼
3 окт. 2014 г. - Сегодня начну с двух книг по эволюционной психологии. ... Это даже не книга, а курс лекций в двух частях (ссылка на первую часть) в ...

MSC в эволюционной психологии, Stirling, Великобритания 2017
www.masterstudies.ru > ... > MSC в эволюционной психологии ▼
4 нояб. 2016 г. - MSC в эволюционной психологии в University of Stirling, ... том числе иностранных студентов, формально принятые на курс магистра, ...

ЦКМ эволюционной психологии, Uxbridge, Великобритания 2017
www.masterstudies.ru > ... > ЦКМ эволюционной психологии ▼
19 сент. 2016 г. - ЦКМ эволюционной психологии в Brunel University: College of Health and ... Этот курс особенно подходит для студентов в области наук о ...

Эволюция психологии | МЕЖДУНАРОДНАЯ АКАДЕМИЯ КАББАЛЫ ...
www.kabbalah.info/rus/content/view/full/114221 ▼
... сайт Международной академии каббалы. Нажмите, чтобы узнать о курсе подробнее. ... Курс "Схема мироздания" ... Каббалистическая психология ...

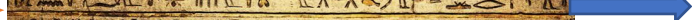
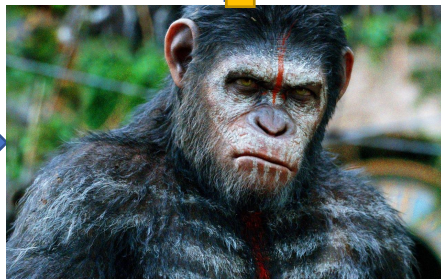
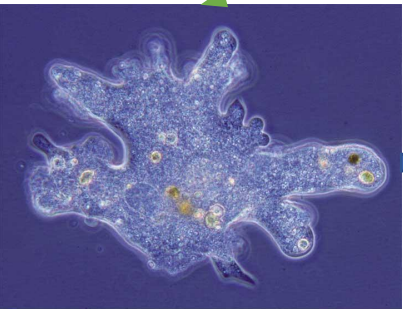
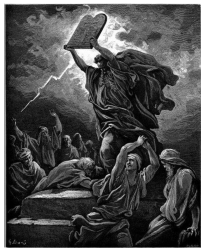
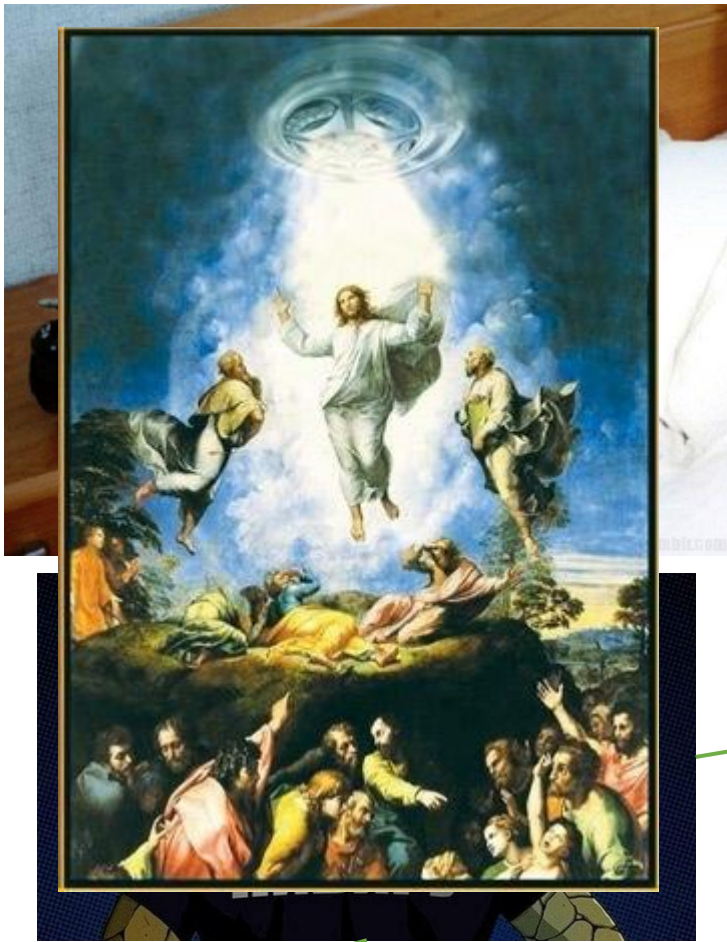




What we thought we were

What we actually are

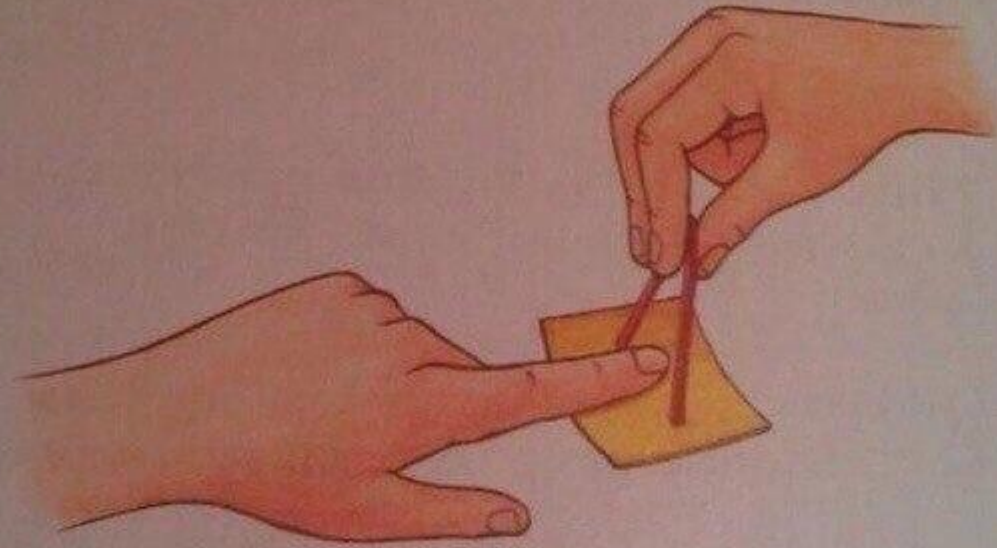




Alamy/Melba Photo Agency

EP is about how evolution
shaped our behavior.
Functionally speaking.

3 Просунь палец под первую резинку. Другой рукой оттяни ее и отпусти.



Результат
.....

Ты почувствуешь боль.

Pure cognitive psychology
is working this way too!

Наука
 15:18 | 29 Ноябрь, 2016
 Сложность | 3.1

Найден ген любви к алкоголю

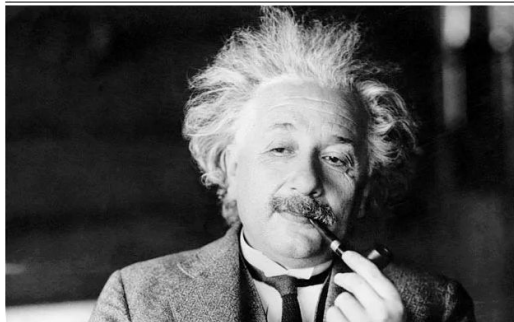


Свежи
 14 января
 первого
 сентяб
 14 января
 необхо,
 полету

The Telegraph

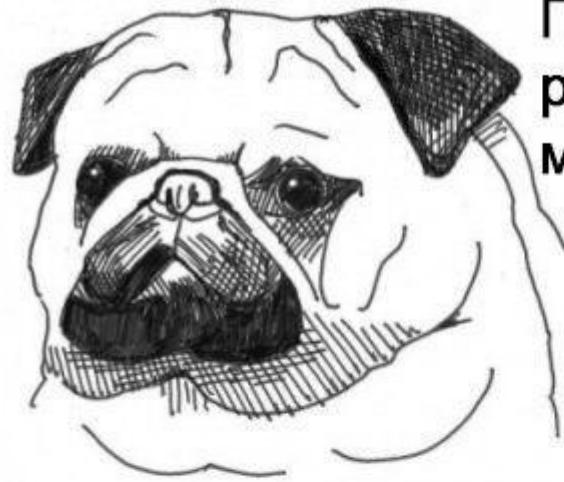
Intelligence genes discovered by scientists
 Imperial College London has found that two networks of genes determine whether people are intelligent or not so bright.

11K 0 0 11K Email



National Puzzle Day: Albert Einstein would be a fan Photo: AP

By Sarah Knapton, Science Editor
 4:00PM GMT 21 Dec 2015
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Генетика
 расплющила
 мою морду,



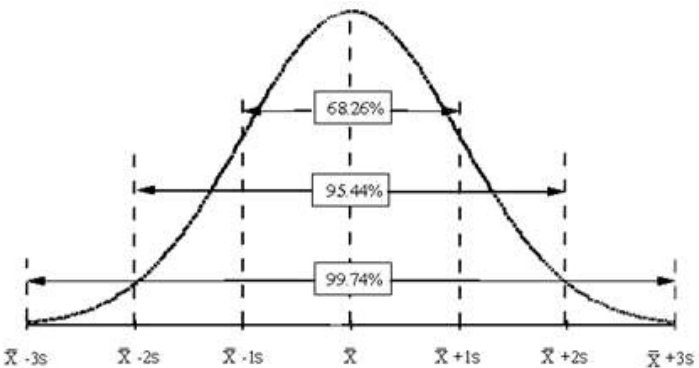
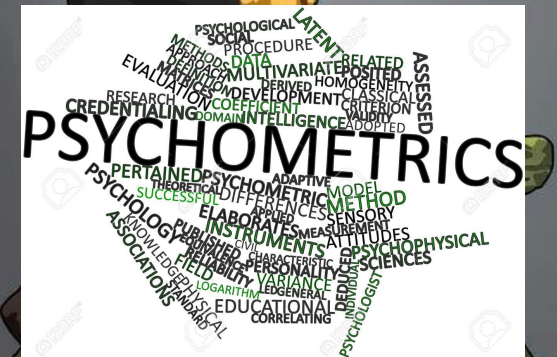
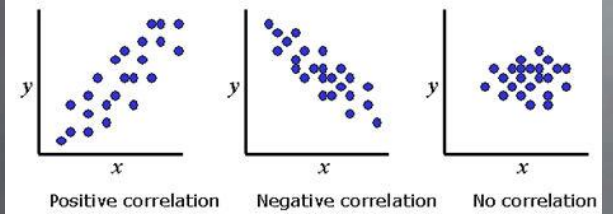
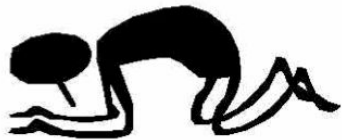
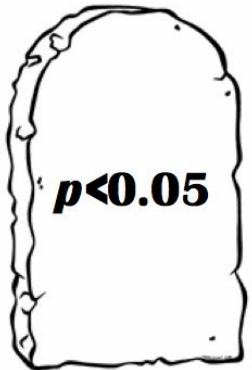
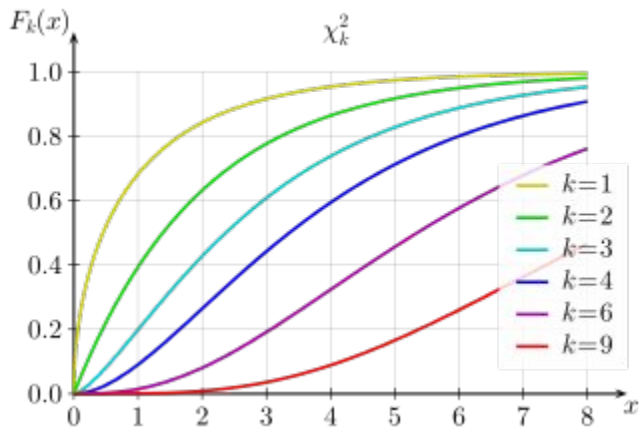
Behavioral
 genetics
 Nature
 Vs.
 Nurture



Но общество
 "расплющило"
 мою душу.



So how do genetics and
environment form us?

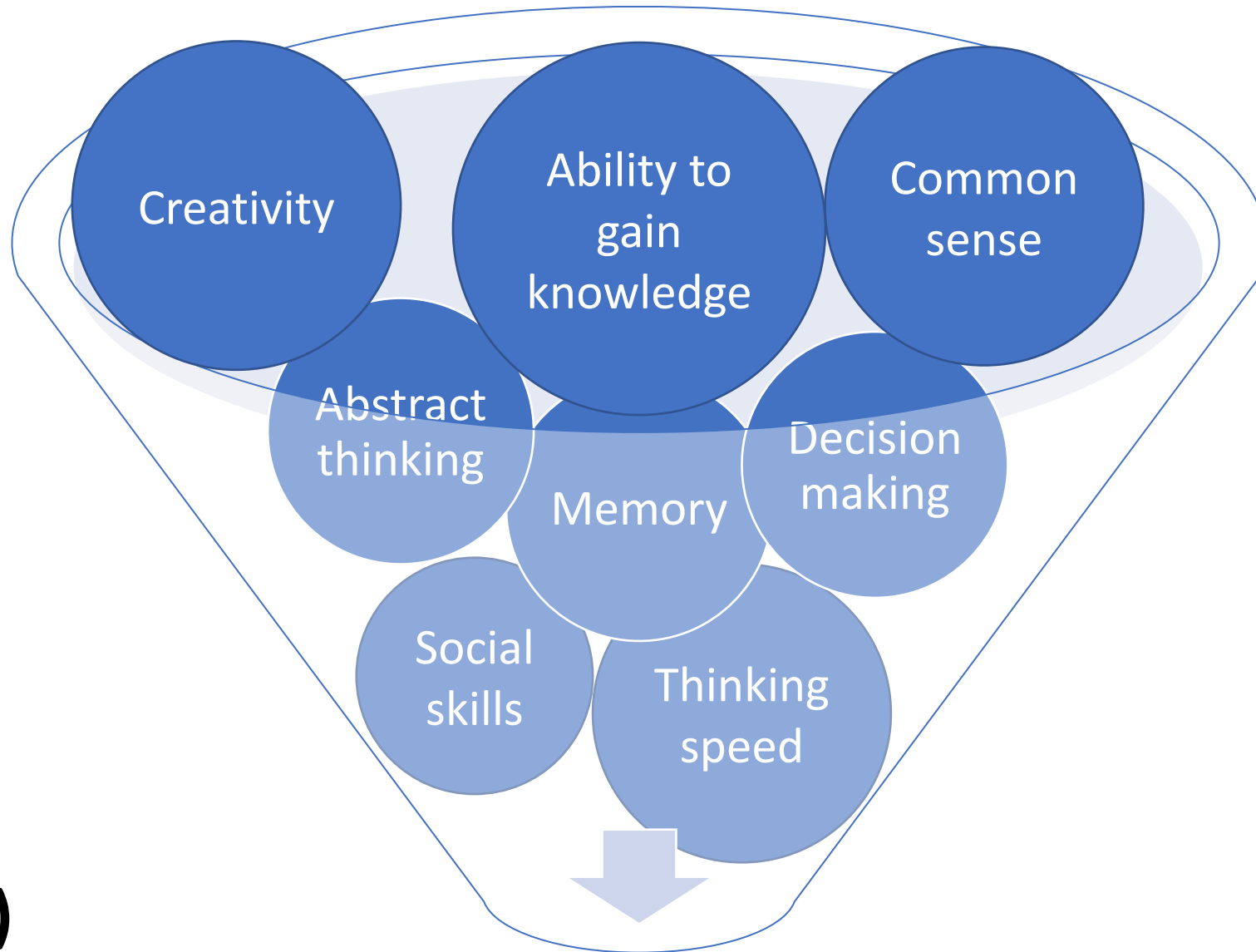


Quantitative genetics

To proceed, we will need several terms from behavioral genetics

- Every phenotype (and that could be any trait) in any population has a dispersion rate
- We may suggest that this dispersion consists of:
 - h – heritability. The difference in genes.
 - c – common environment. The difference in family environment.
 - e – individual environment + the measurement error.

Let's take a look at how it works.



Creativity

Ability to
gain
knowledge

Common
sense

Abstract
thinking

Memory

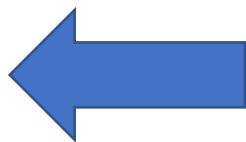
Decision
making

Social
skills

Thinking
speed



G



Analytical (IQ)

Practical
Creative

Fluid
Crystallized

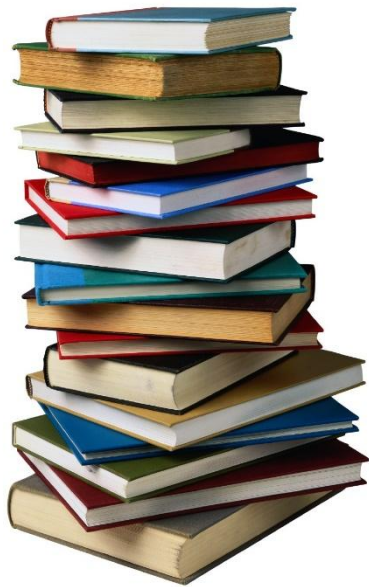
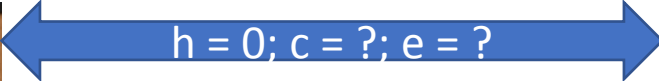
Suppose we have an infinite amount of identical twins couples



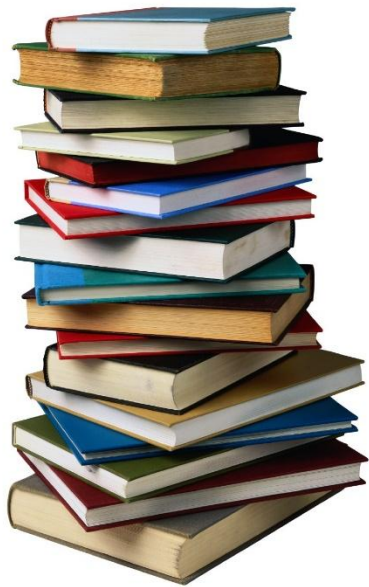
Let's put them apart



Now let's place them in different conditions

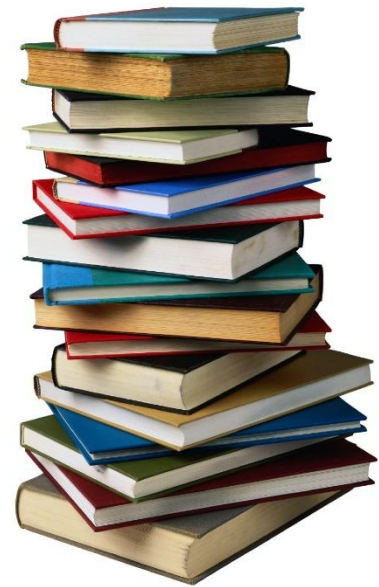


Okay, what if we place them into the same conditions?

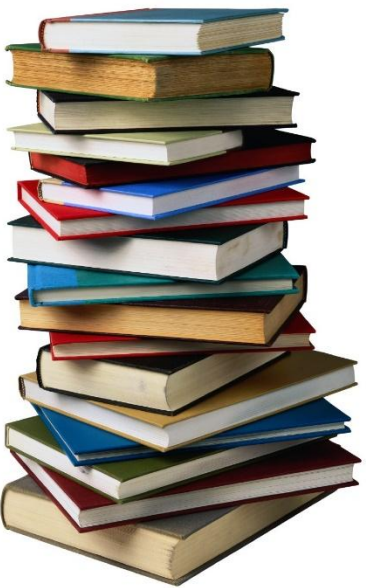


← $h = 0; c = 0; e = ?$ →

CONSIDERING THAT

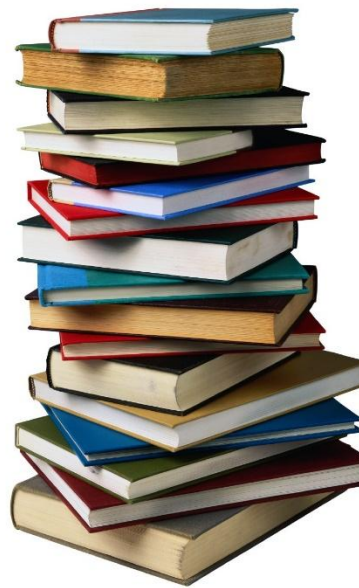


Now what if we take fraternal twins?

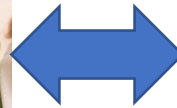
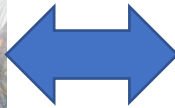


← $h = ?; c = \text{const}; e = \text{const}$ →

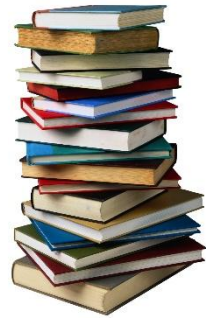
IF SES AND THE OTHER ENVIRONMENTAL FACTORS ARE ACCOUNTED FOR



And here is how twin method works

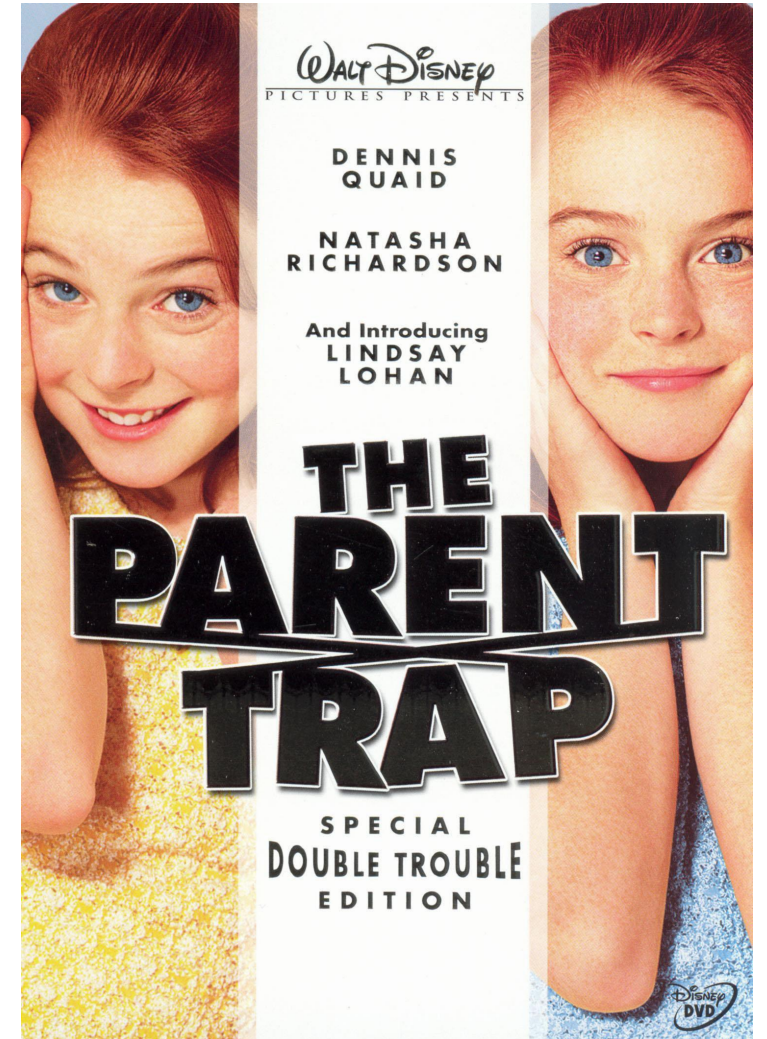


h



Biographical method and reared-aparts

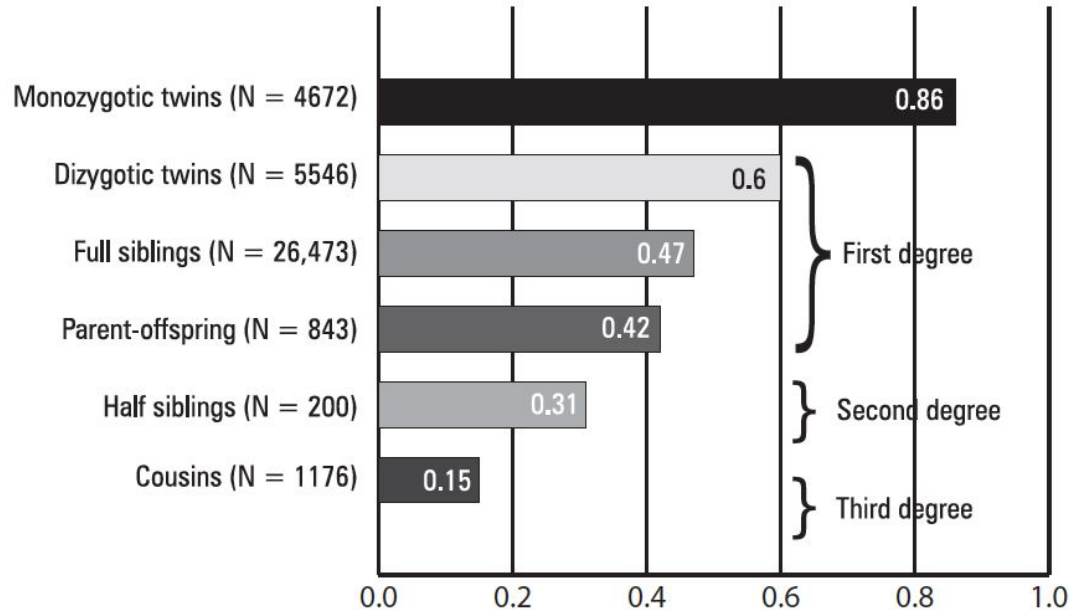
Сын	Ты	Отец	Дед	Прадед
50%	Гений	30%	15%	3%



By this moment we already can say much

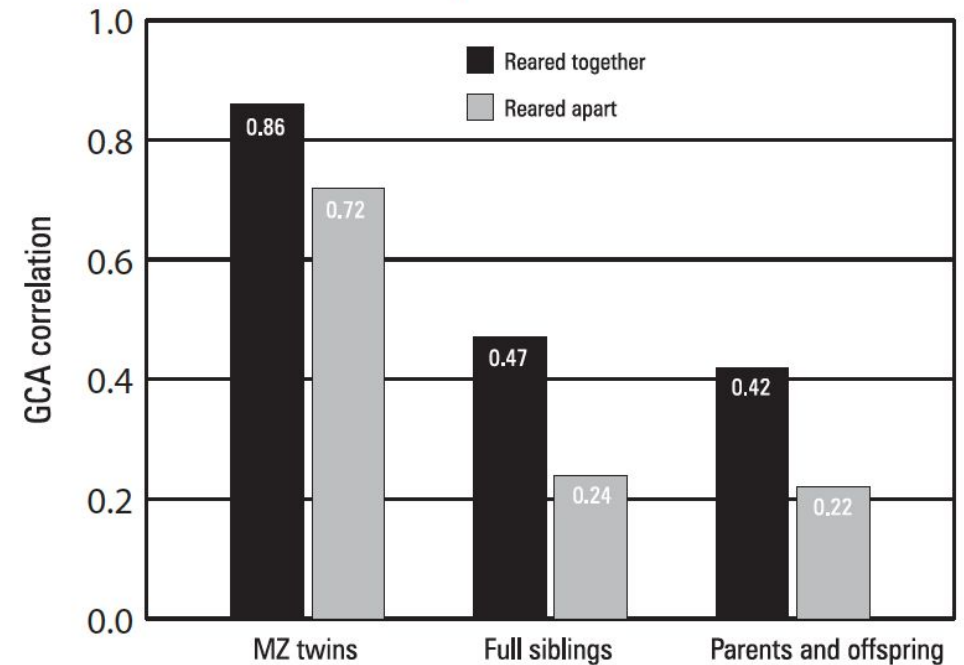
Figure 2.

Average correlation for general cognitive ability among reared-together relatives as a function of degree of genetic relatedness



(T. Bouchard and M. McGue, "Familial Studies of Intelligence: A Review," *Science* 212 [1981]: 1055-59).

Average correlation for general cognitive ability among reared-together versus reared-apart relatives

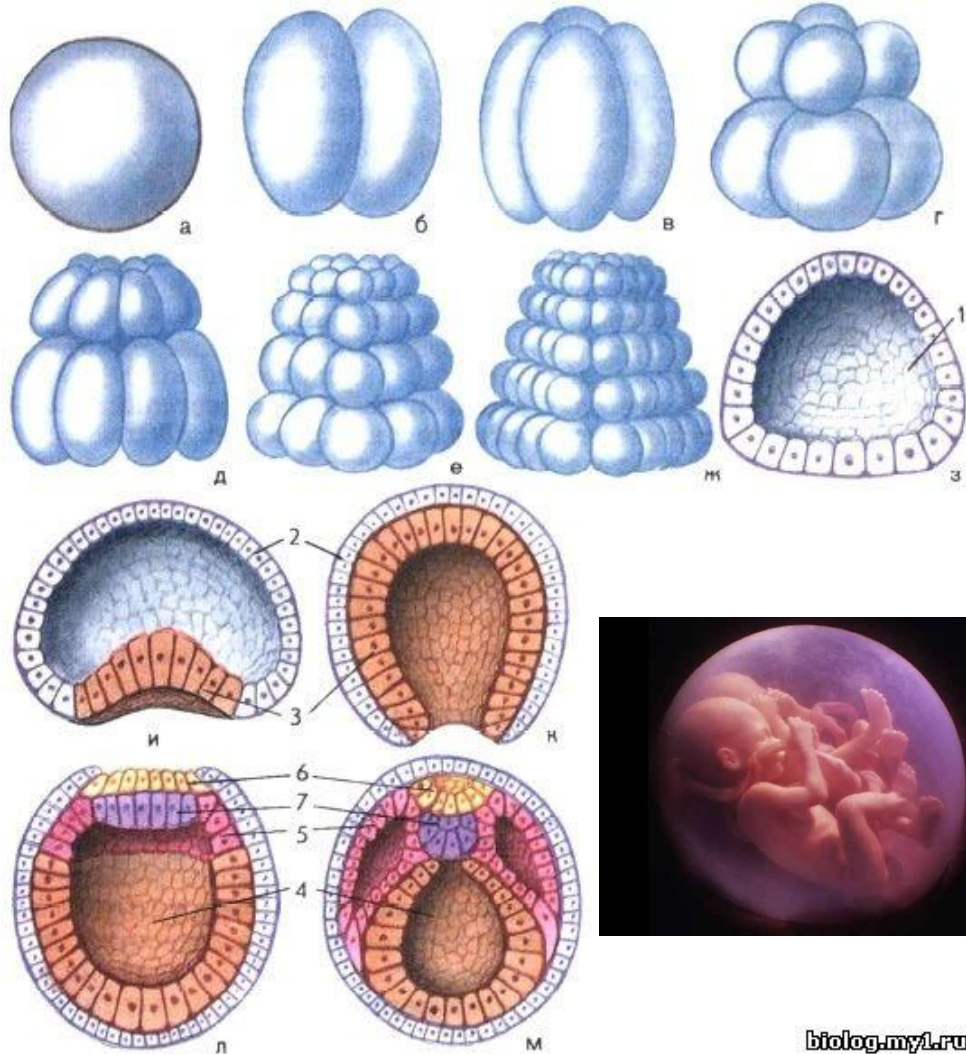
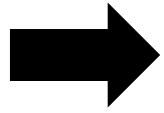


(T. Bouchard and M. McGue, "Familial Studies of Intelligence: A Review," *Science* 212 [1981]: 1055-59).

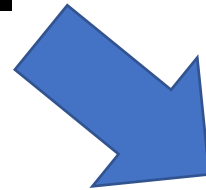
Problems, officer?

- MZ twins are supposed to be equal in many ways, but they are actually not
- Genotypic-environmental covariation makes it hard to distinguish genetic influences from the environmental

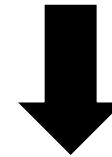
Prenatal influence



biolog.myl.ru



Perinatal influence

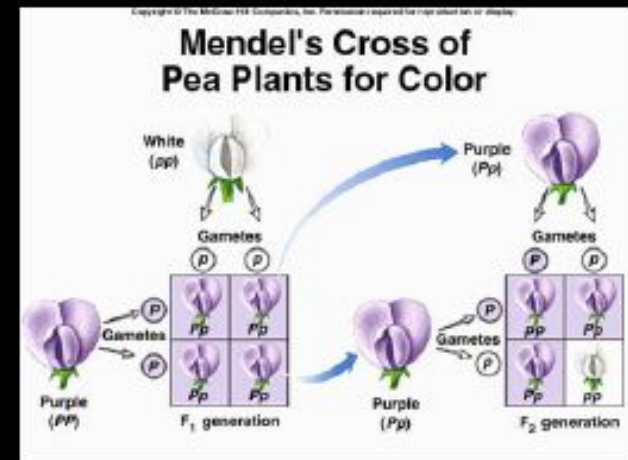
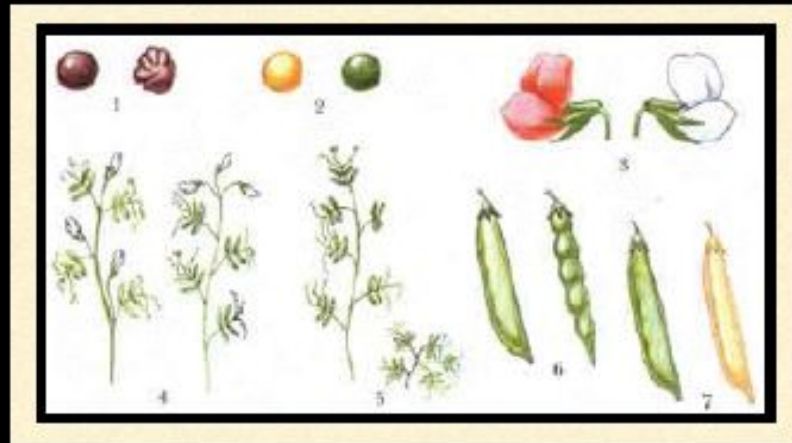


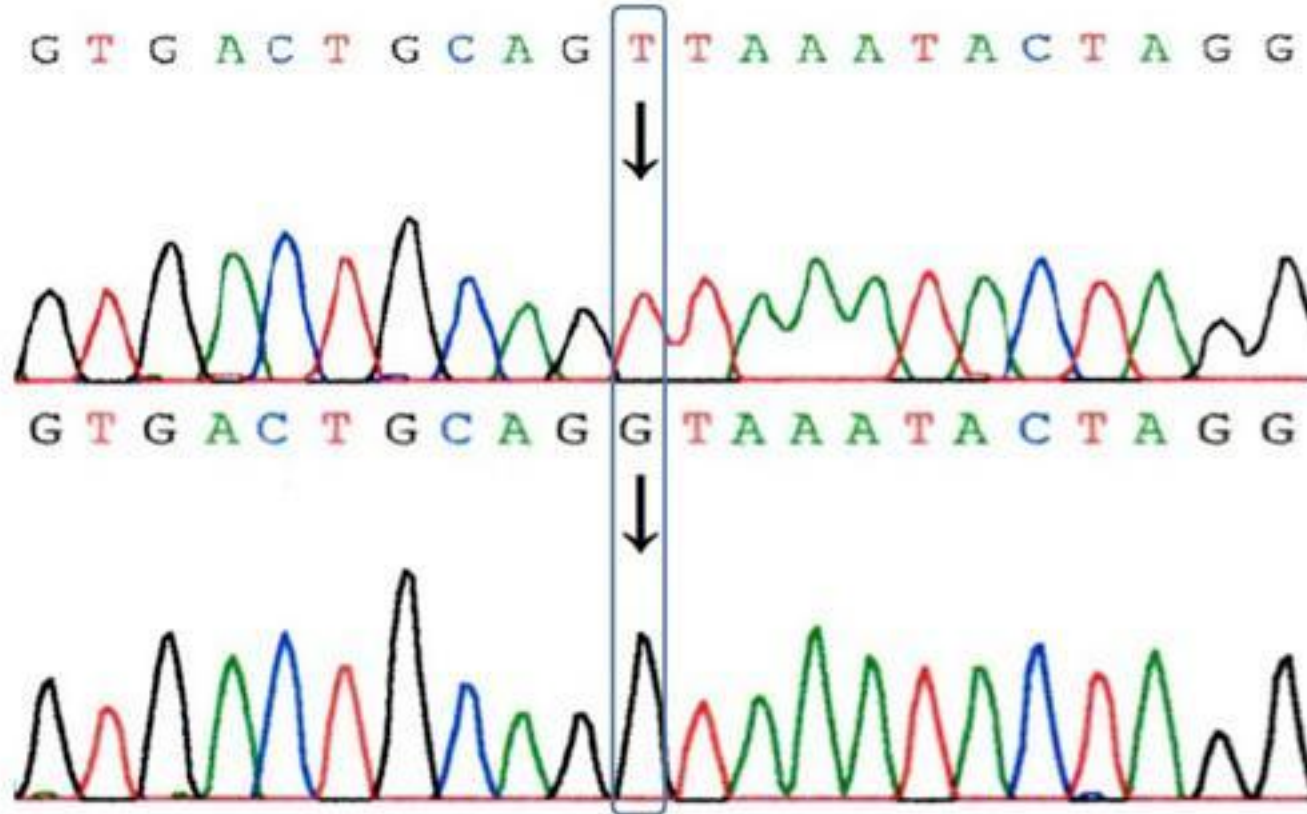
Covariation



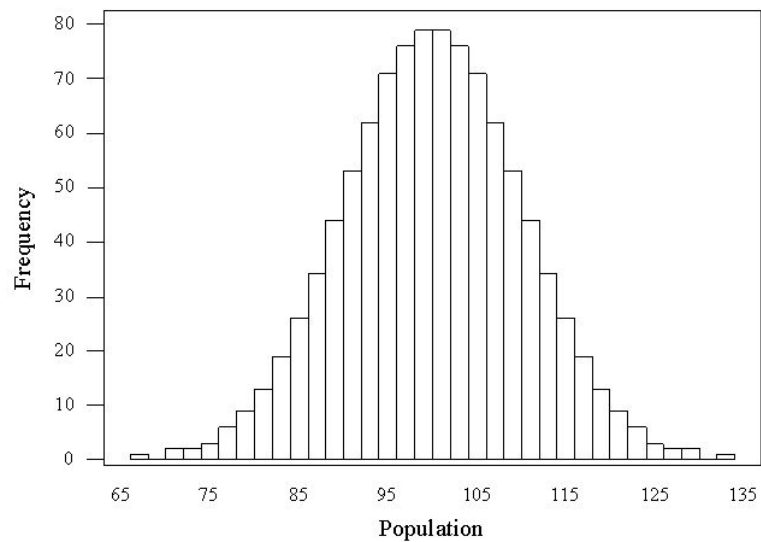
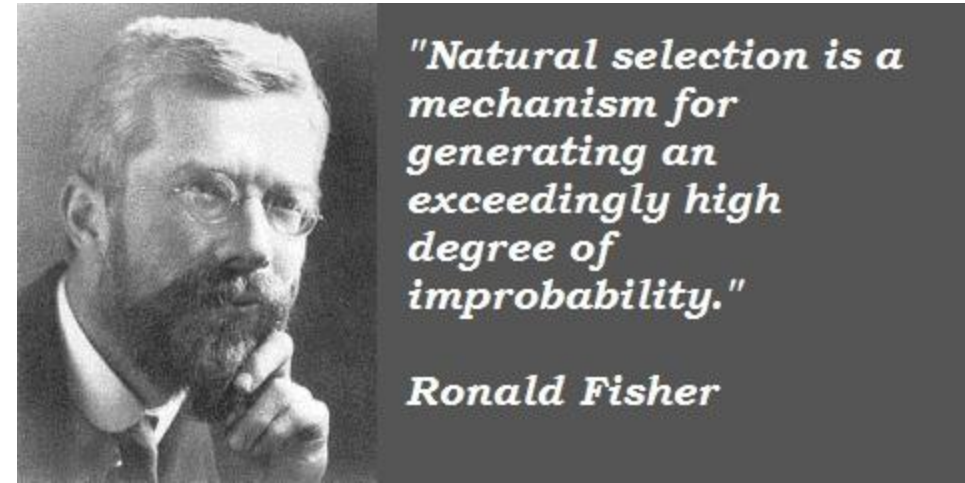
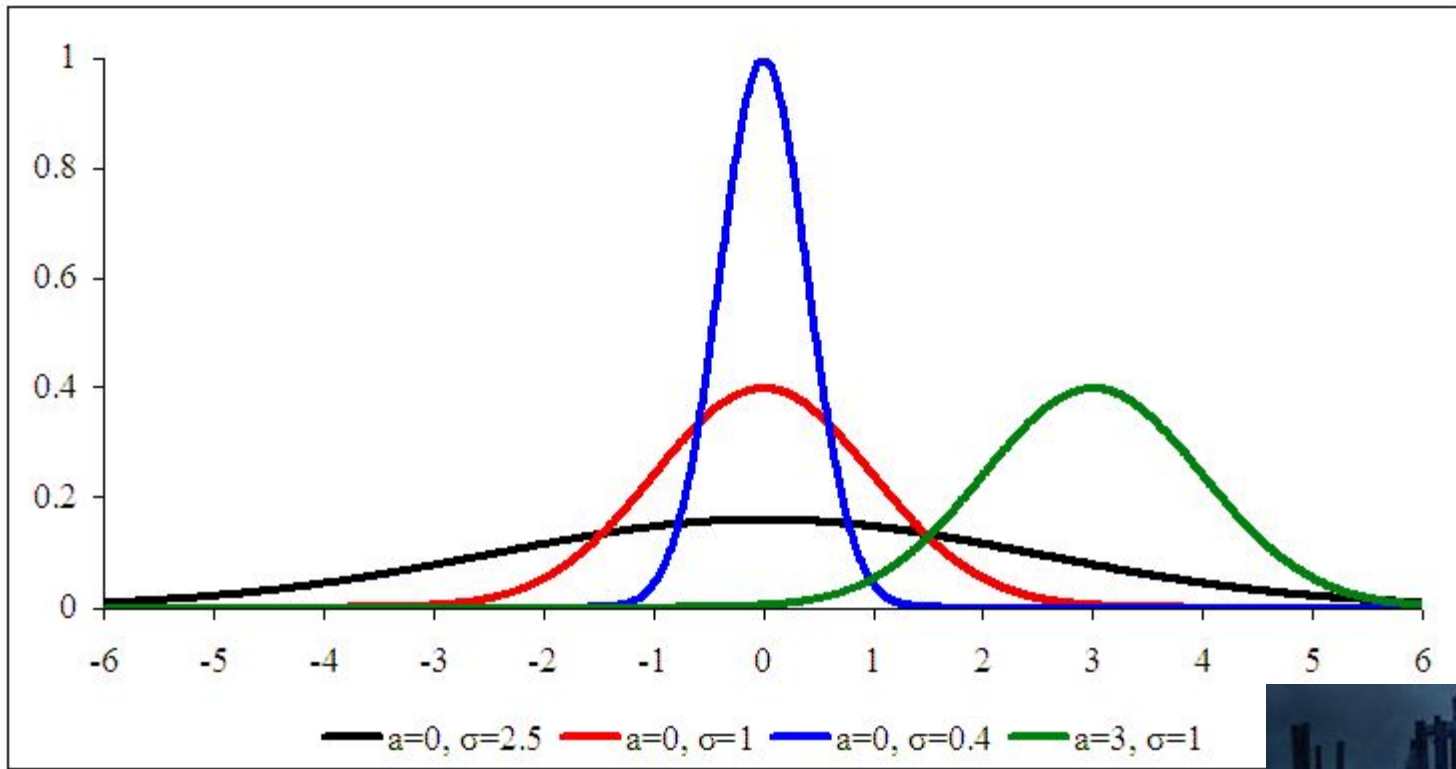
Ok, that's good enough, but
where were the genes?

Грегор Мендель и большая удача





3 billion nucleotides, 3 million meaningful changes, 0.4% diseases



Молекулярные исследования

Looking at genes – ~95% of heritability is missing

NEWS FEATURE PERSONAL GENOMES

REPORT BY IAN MCKELVIE 2008



The case of the missing heritability

When scientists opened up the human genome, they expected to find the genetic components of common traits and diseases. But they were nowhere to be seen. **Brendan Maher** shines a light on six places where the missing loot could be stashed away.

Генетический эффект

∞

Большой

5.0

Умеренный

1.5

Слабый

1.2

1.0

0.001

0.005

0.05

0.5

Мутации

Редкая

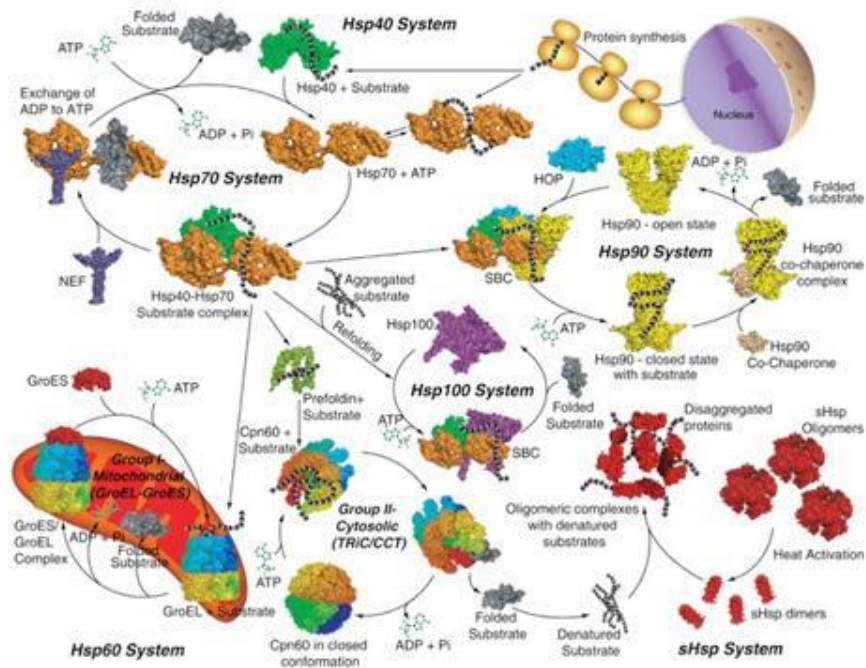
Низкая частота

Частая

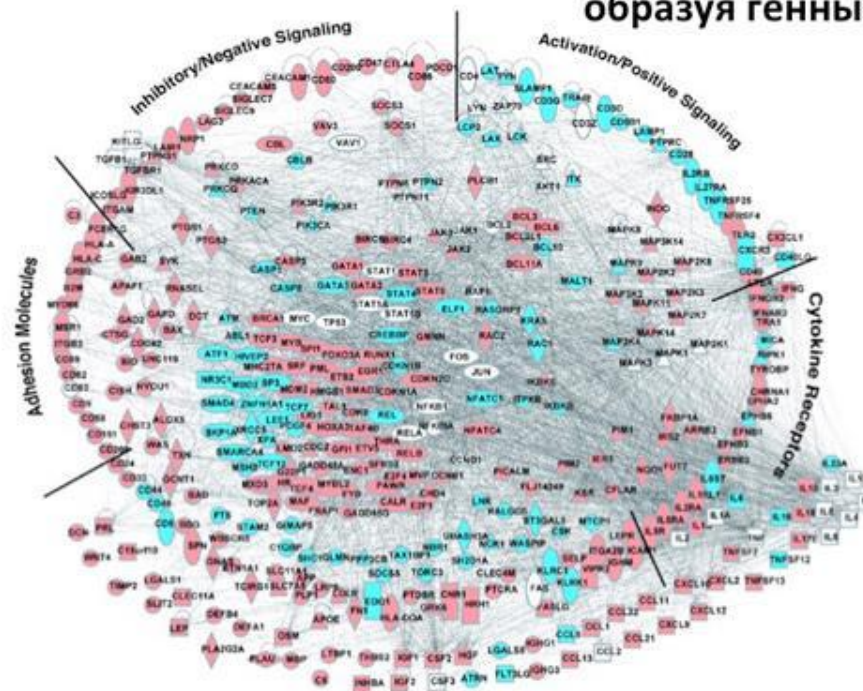
Частота аллелей



Белков очень много и они очень разные



Они определяют миллионы взаимодействий, образуя генные сети...



Polygenic scores

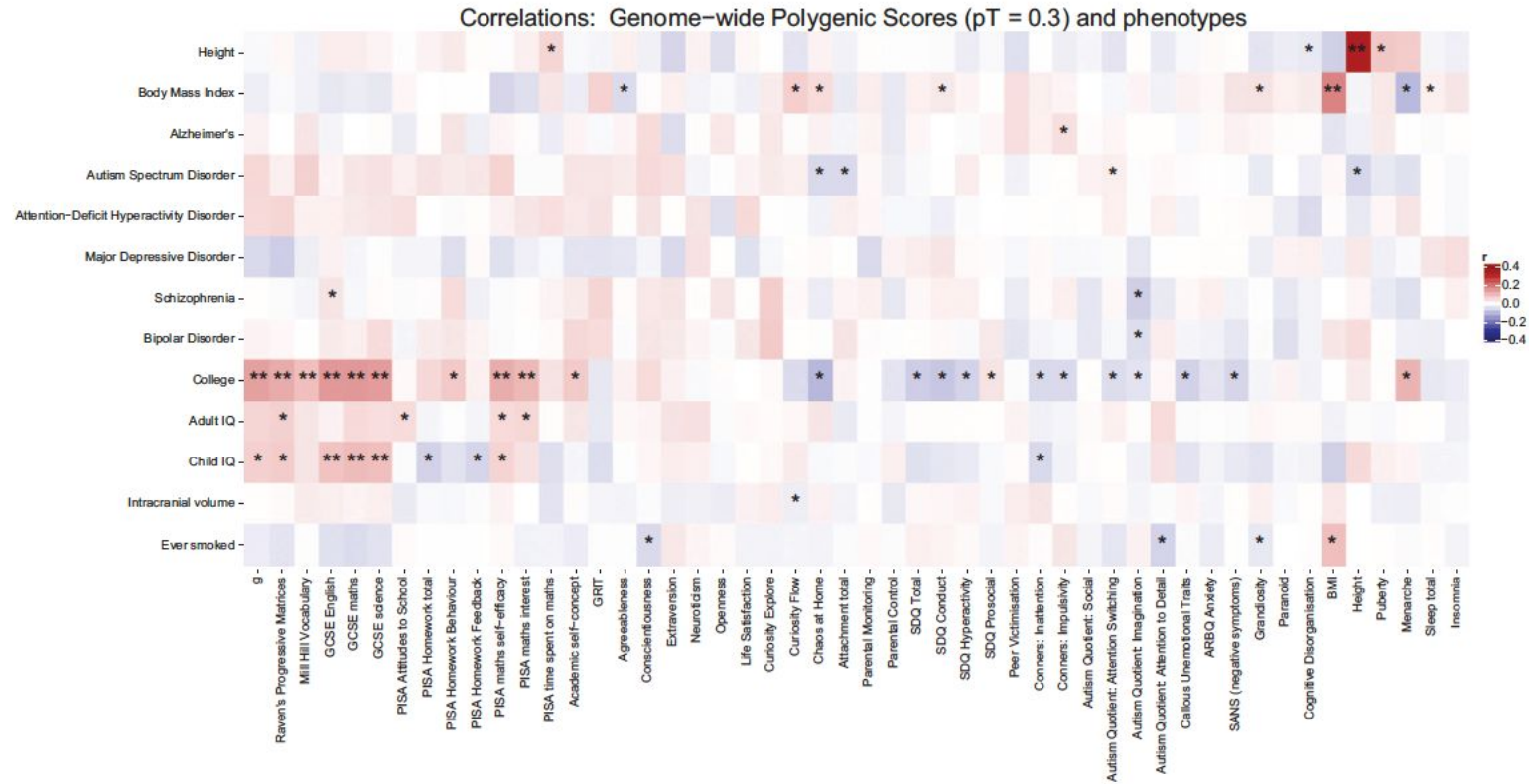


Figure 1. Correlations between 13 genome-wide polygenic scores and 50 traits from the behavioral phenome. These results are based on GPS constructed using a GWAS P -value threshold (P_T) = 0.30; results for $P_T = 0.10$ and 0.05 (Supplementary Figures 1a and b and Supplementary Table 3). P -values that pass Nyholt-Sidak correction (see Supplementary Methods 1) are indicated with two asterisks, whereas those reaching nominal significance (thus suggestive evidence) are shown with a single asterisk.

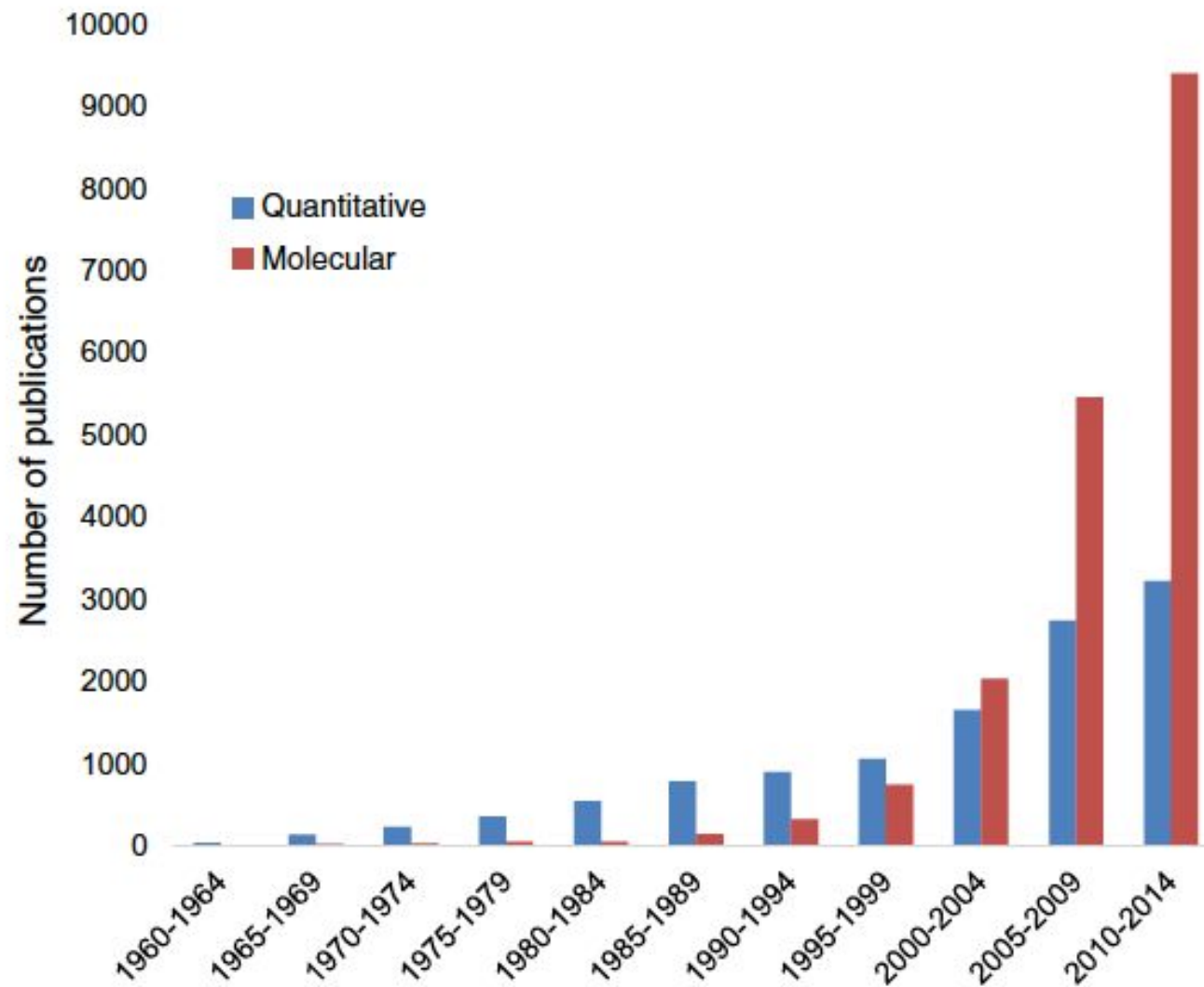
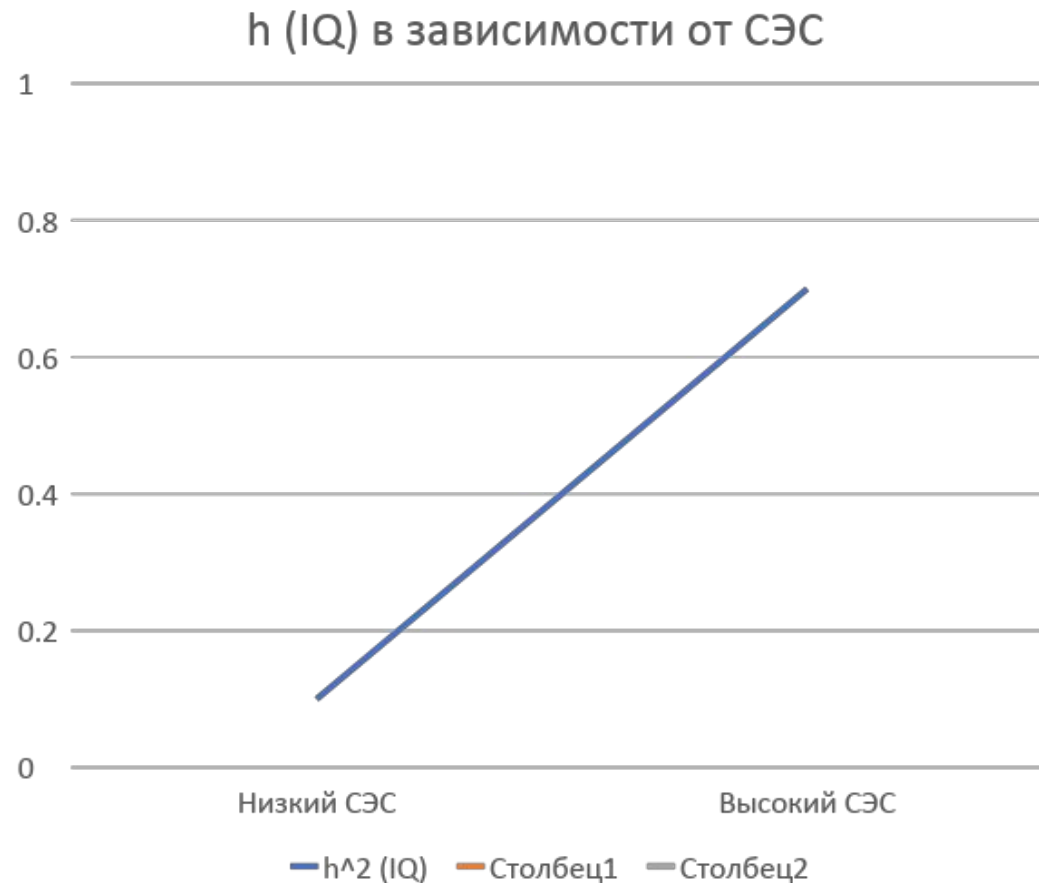


Fig. 2 Number of human behavioral genetic papers by lustrum since 1960, comparing quantitative and molecular genetic research

Why does it all matter?

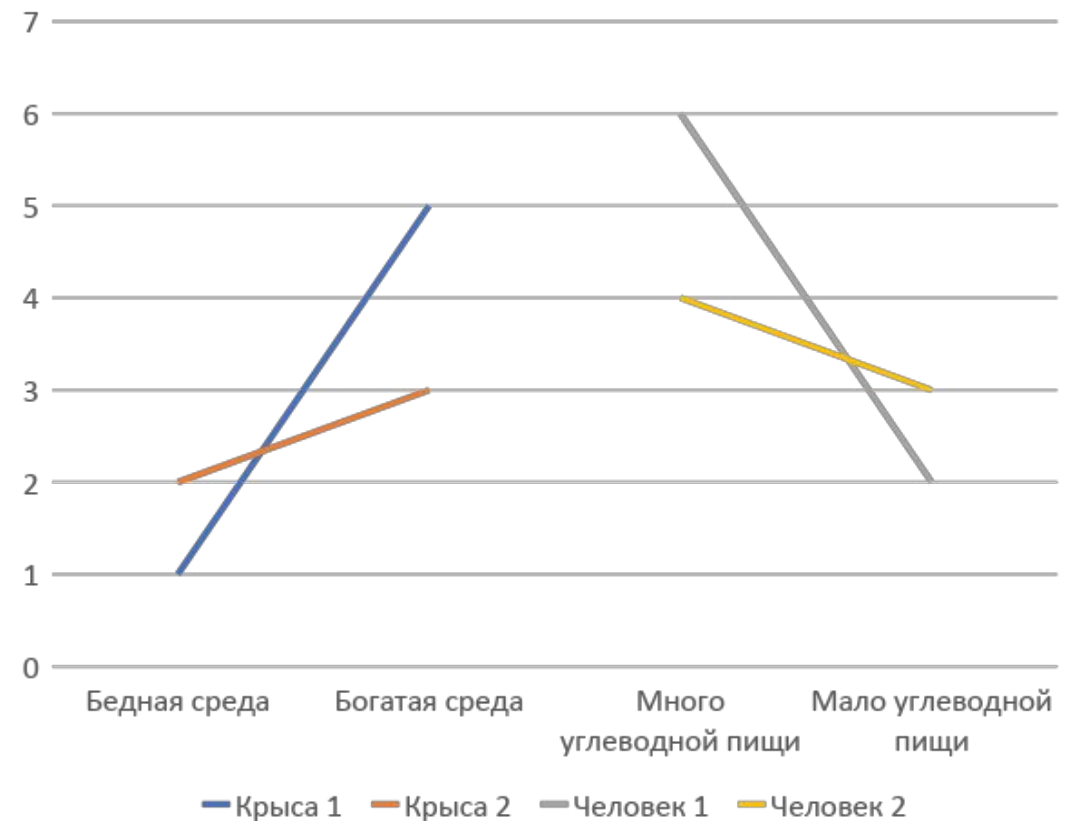
Every unhappy family is unhappy in its own way

- Вариабельность факторов среды, влияющих на IQ в семьях с низким СЭС, примерно в 5 раз выше, чем в семьях с высоким СЭС.
- Иначе говоря, семьи с низким СЭС отличаются между собой в 5 раз больше, чем семьи с высоким.



Why?

- Because it is not the trait itself that is inherited, but rather the borders defining it's maximum variation
- Rats' intelligence
- Fatness



- Genes make some things easier (see Rutter & autism, neurojurisprudence, gay rights),
- Yet genes do not determine our destiny or what we are. They rather install the borders and filters,
- In the end, it is you who determine the environment that determines how the genes determine who you are.
- And that is the point of the third factor.



Enough for today.
Questions?