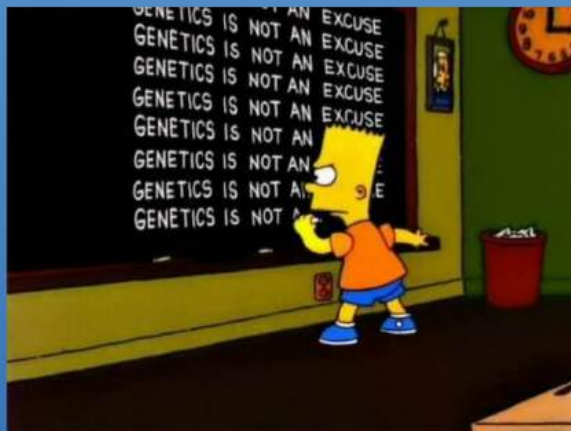


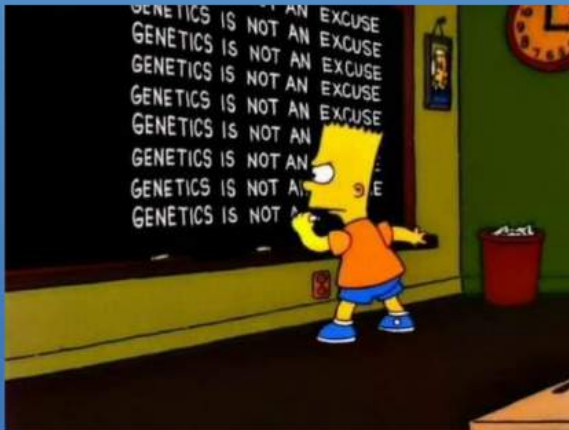
# The Human Conscience

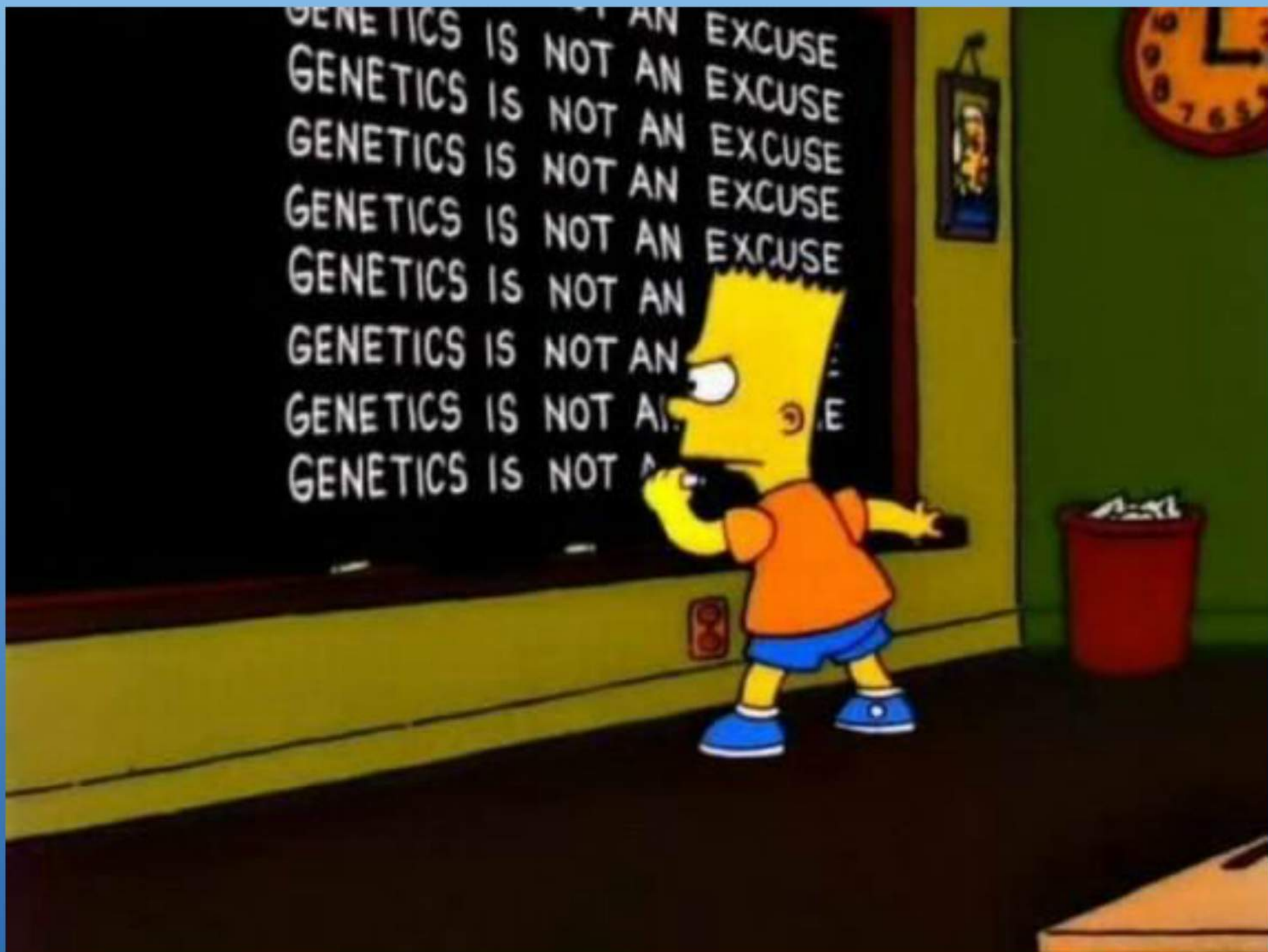
## Part 2: The Evolution of Morality

Rev. Charles St-Onge

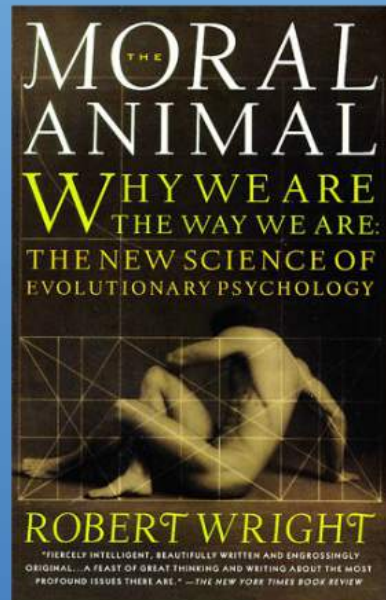


Rev. Charles St-Onge





# Did Our Conscience Evolve?



Darwin's ideas were so "vast, and so threatening to man's lofty selfview, that the implications for human behavior were either set aside or ridiculed." (Wright 1998:151)

# Charles Darwin and Conscience

I fully subscribe to the judgement of those writers who maintain that of all the differences between man and the lower animal, the moral sense of conscience is by far the most important....It is the most noble of all the attributes of man.

Charles Darwin  
English Naturalist

QUOTEHD.COM

## My Amazing Basketball Skills Die With Me

Darwin did not understand that acquired attributes could not be passed on to offspring.

## Cooperate to Graduate

He also saw the conflict between his ideas and the cooperation, rather than competition, among many humans - and animals.

## Together, We Can!

The key was sympathy. It was the original emotion, and came about from:

- The desire for praise
- Help others to help yourself (reciprocal altruism)
- Value in working together (group selection)



"No one who has attended to the breeding of domestic animals will doubt that [caring for the imbecile, maimed, sick and poor] must be highly injurious to the race of man." (Darwin, Descent of Man, 168-169).



Neo-Darwinists have argued that this quote is incomplete, and that Darwin praised human social virtue later on: "Nor could we check our sympathy, if so urged by hard reason, without deterioration in the noblest part of our nature" (Descent, 169).



Yet the passage ends with Darwin (Descent, 169) opining that for the sake of sympathy we "must bear without complaining the undoubtedly bad effects of the weak surviving and propagating their kind."



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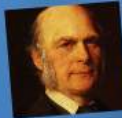


# Early Darwinists



- Recognized the need to reconcile human morality with "survival of the fittest"

## Francis Galton (1822-1911)



- Father of eugenics, and
  - Nazism
  - Planned Parenthood
- Started "twin studies"
- Believed nature trumped nurture, in the end



## Julian Huxley (1887-1975)



- Thomas Huxley's grandson (Darwin's Bulldog), Aldous' brother (Brave New World)
- Kept Darwinism alive when it was being questioned

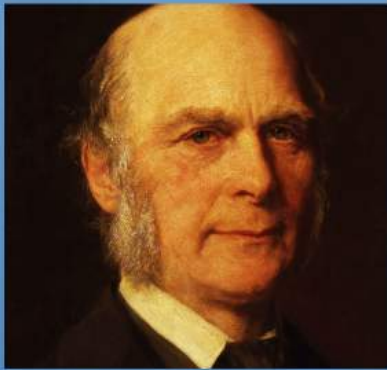
Evolution selects the species that has the most control over the environment, and internal complexity. Evidence?

*“If there is no  
god — and  
there isn't —  
then we made  
up morality.  
And I'm very  
impressed.”*

- Jennifer Michael Hecht



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This light flashes every 15 seconds

Every 15 seconds \$100 of your money goes for the care of persons with bad heredity such as the insane feeble-minded, criminals & other defectives

**Some people are born to be a burden on the rest.**

This light flashes every 16 seconds

Every 16 seconds a person is born in the United States.



Fitter Families  
CONTEST

EASTERN STATES EXPOSITION

This light flashes every 7½ minutes

Every 7½ minutes a high grade person is born in the United States, will have ability to do creative work & be fit for leadership. About 4% of all Americans come within this class

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# Neo-Darwinism

Explained 1) how variations arise (genetic mutations) and 2) how they are passed on (DNA)

- mid 20th Century, most believed morality was learned, not inherited
  - Mead and Freud promoted this
  - Watson and Skinner did as well
- late 20th, the situation reversed
  - morality is inherited
- now, 50/50 split being acknowledged

Cosima Herter,  
Orphan Black Science Consultant



"Our genes do not define who we are, and while certain genes may indeed be present, they may or may not be expressed depending on a whole spectrum of environmental and biological circumstances. The reductionism of either 'nature' or 'nurture' is far from adequate to explain sexuality."

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# How Conscience Might Work

## A Morality Gene?



**genotype:** set of DNA instructions

**phenotype:** observable traits and characteristics

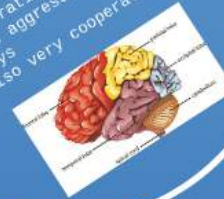
- "candidate gene" research
- some genes can set us up for "addictions," for example
- "joy" centers can "reward" certain types of behavior, and punish others
- "Needle in a haystack"

## Chemical Systems

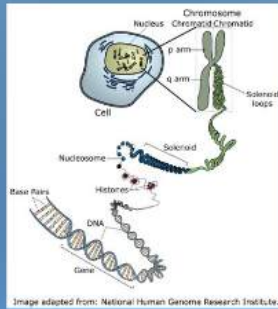
- Serotonergic systems
  - connected to anxiety, depression, and aggression
- Oxytocin levels
  - parental and mate attachment
- Pheromones
  - despite hearing about these, little research evidence
- Hormones (testosterone)
  - Not yet conclusively linked to aggression

## Animal Research

- Chimpanzees
  - Notoriously territorial, violent, warlike
- Bonobos
  - Cooperative, empathetic, less aggressive
- Monkeys
  - Also very cooperative



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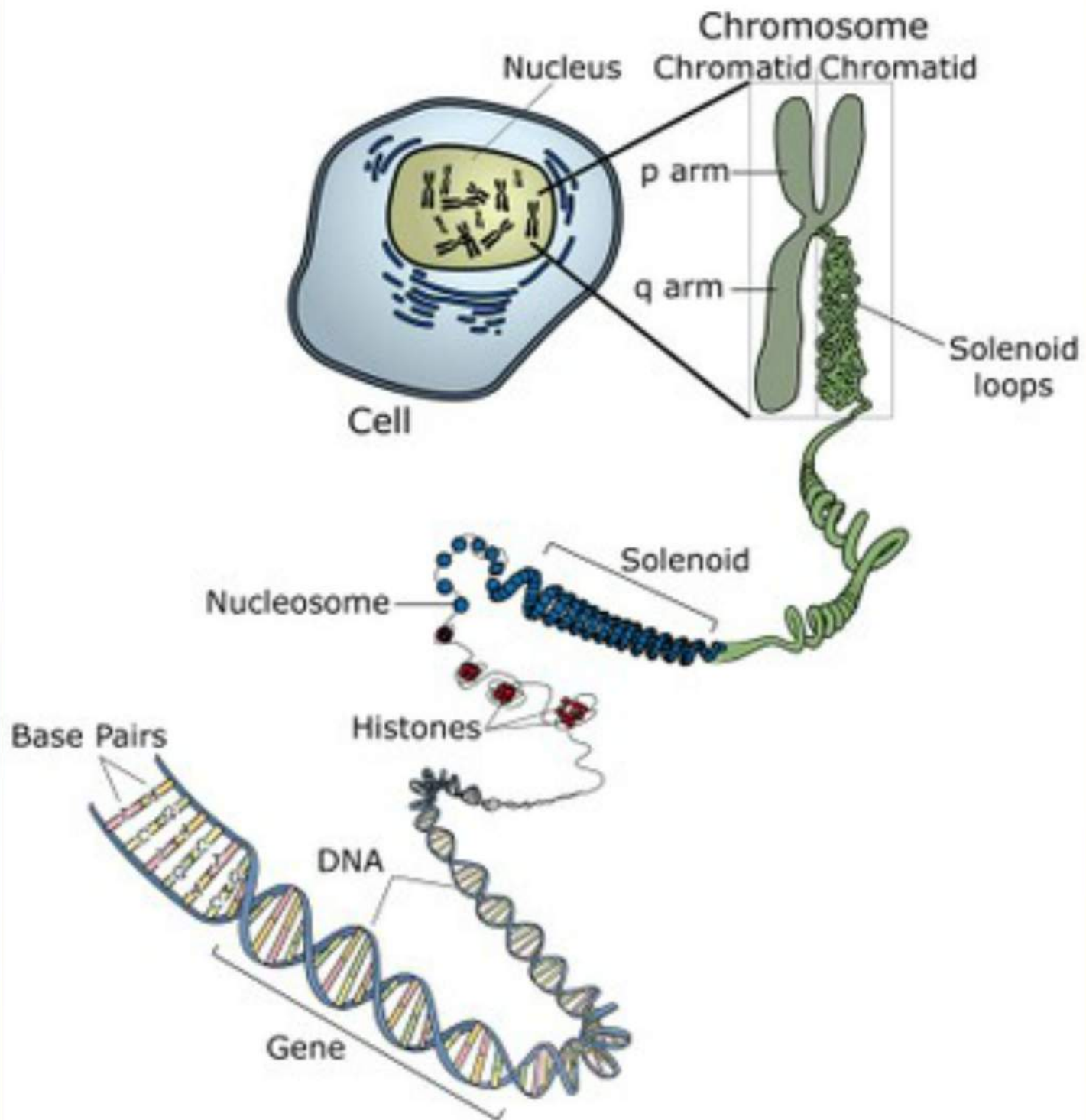


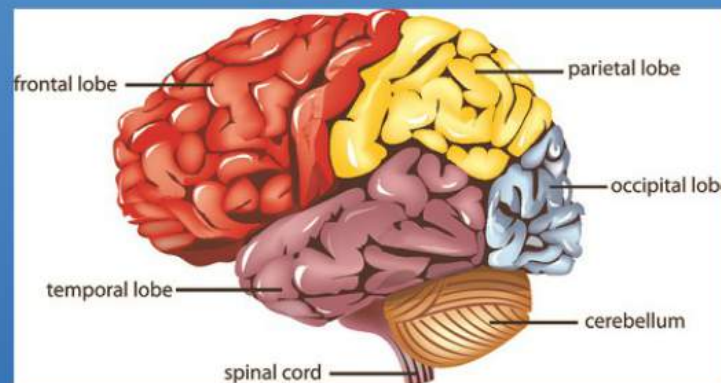
Image adapted from: National Human Genome Research Institute.

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# The Origin of Conscience

Evolution involves survival,  
while morality requires sacrifice

## Kinship Selection

Review: 'Hamilton's Rule'.

- $r$  = degree of genetic relatedness
- $b$  = benefit (in reproductive terms), to related individual
- $c$  = cost (in reproductive terms) to altruist
- Altruism will occur when:
  - $c(\text{cost to you}) < (r)b$  (benefit to kin)

"No one will sacrifice his life for one person, but will for two brothers, four half-brothers, or eight 1st cousins."

## Group Selection

"Green Beard Hypothesis"



We accidentally help people outside our own group, which helps them survive, because they seem like kin. Networked reciprocity.

## Reciprocal Altruism

What about morality among non-relatives?

I sacrifice for you now, you sacrifice for me later, thus my genes have a better chance at survival- Robert Trivers Rule

Game Theory - resolutions to the Prisoner's Dilemma, or to the Snowdrift Dilemma

	A	A
B	10, 10	0, 10
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B DEFECT	8 YEARS? 8 YEARS?	20 YEARS? FREE!
B COOP- ERATE	FREE! 20 YEARS?	6 MONTHS! 6 MONTHS!

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Dawkins and Dennett, 1996

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