



PSYCHOLOGY

WELCOME TO PSYC 110

brotip #515

if the worst that can
happen is someone
saying, "no," it's worth
a try.

brotips|tumblr


PSYC 110 (General Psychology)

Module 2:


Evolutionary Psychology



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▼ Course Information

 [PSYC 110 \(Johanis\) Spring 2025 Syllabus](#)

 [PSYC 110 \(Johanis\) Spring 2025 Instructor Profiles + Contacts](#)

 [InQuizitive: How to Use InQuizitive](#)
10 pts

 [Instructor Office Hour Sign-Up](#) 

 [How to view Friday Quiz feedback](#) 

Our TAs have written effortful feedback for each answer, so you know whether you got it correct or incorrect, and why 😊

Use this to prepare for the QuizTerm and Final Exam!

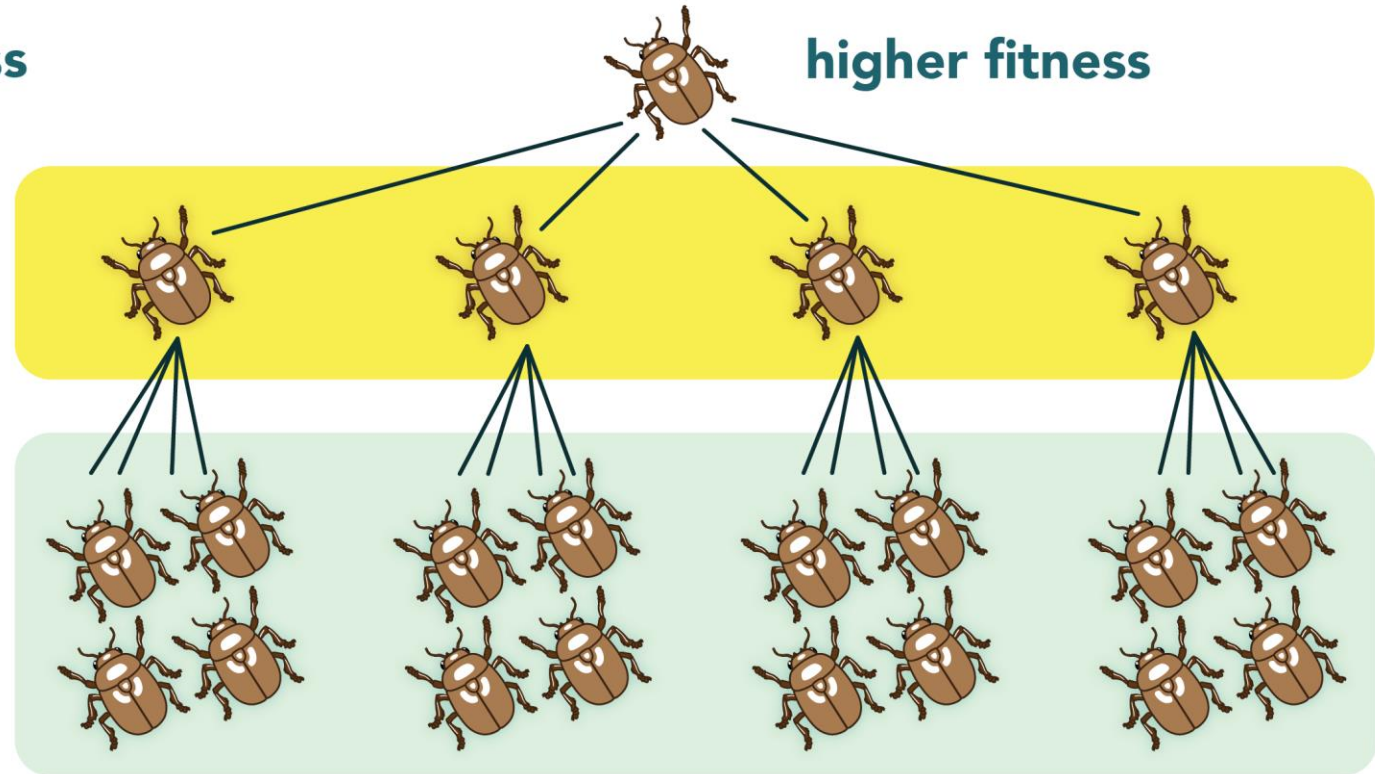
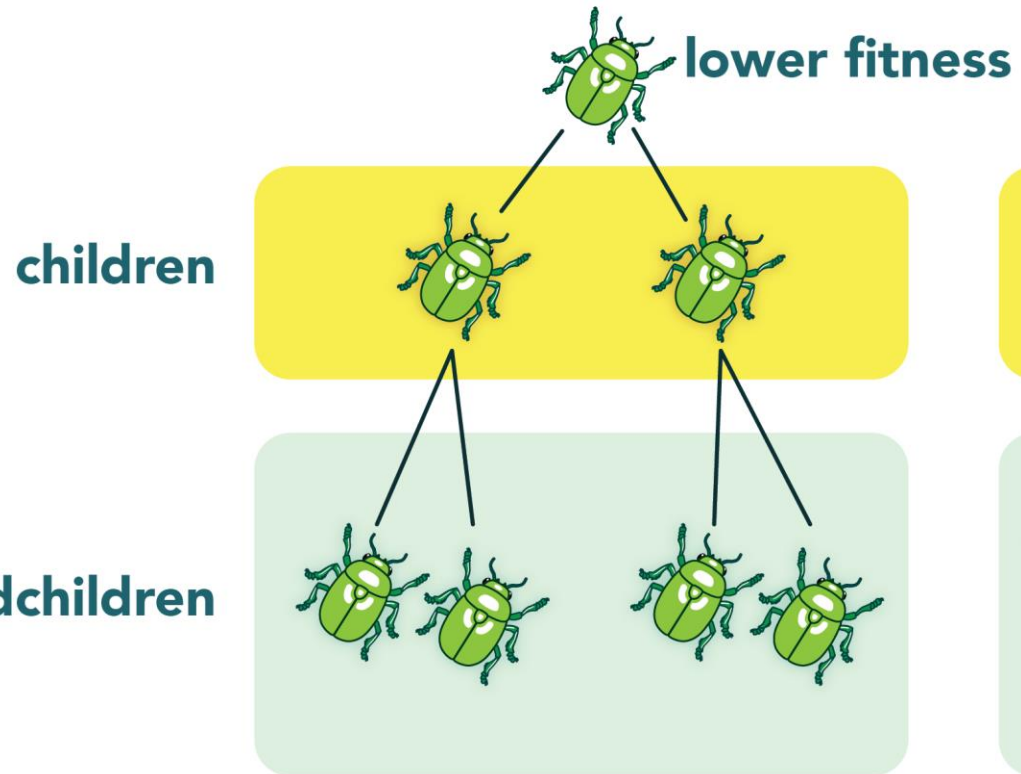
THE PLAN

INCLUSIVE FITNESS

**SEXUAL SELECTION AND
SEX DIFFERENCES**

**PSYCHOLOGICAL
ADAPTATIONS**

Fitness = Reproductive Success





Fitness can be indirectly influenced



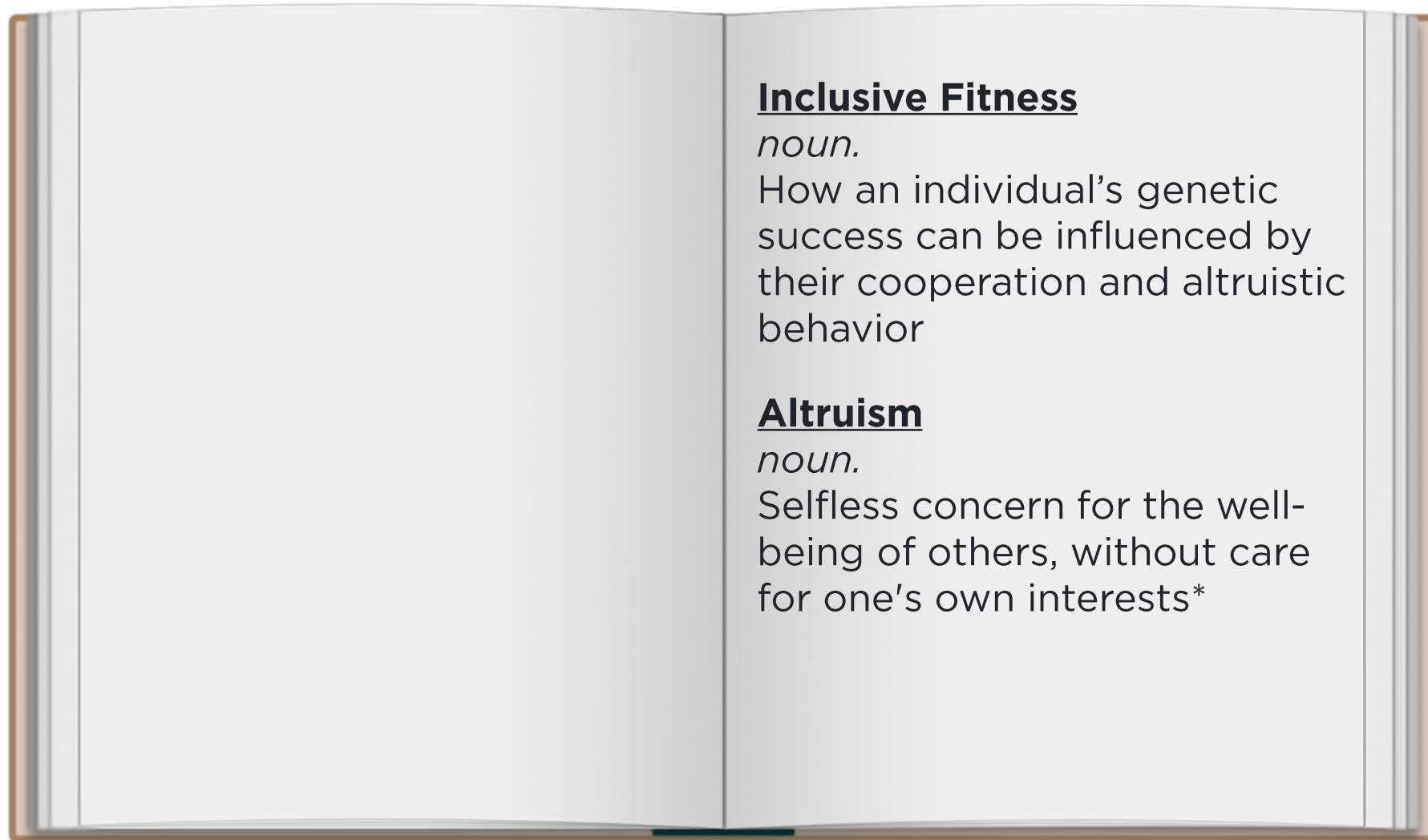
A meerkat will make an alarm call whenever they detect a danger to their group

An alarm call makes them more vulnerable to predators individually, but warns the group and allows them to escape

Why would an animal put themselves at risk for the good of the group?



Fitness can be indirectly influenced



*Whether true altruism exists is up for debate, but for now, let's go with it

Indirect Fitness



Helping a genetic relative also increases the success of your genetics (e.g., a sibling shares 50% of your DNA)

Reciprocal Altruism



Helping others increases their likelihood they'll help you back

Inclusive Fitness is modelled by Hamilton's Rule

Probability that actor and recipient share genes

Reproductive cost to the actor

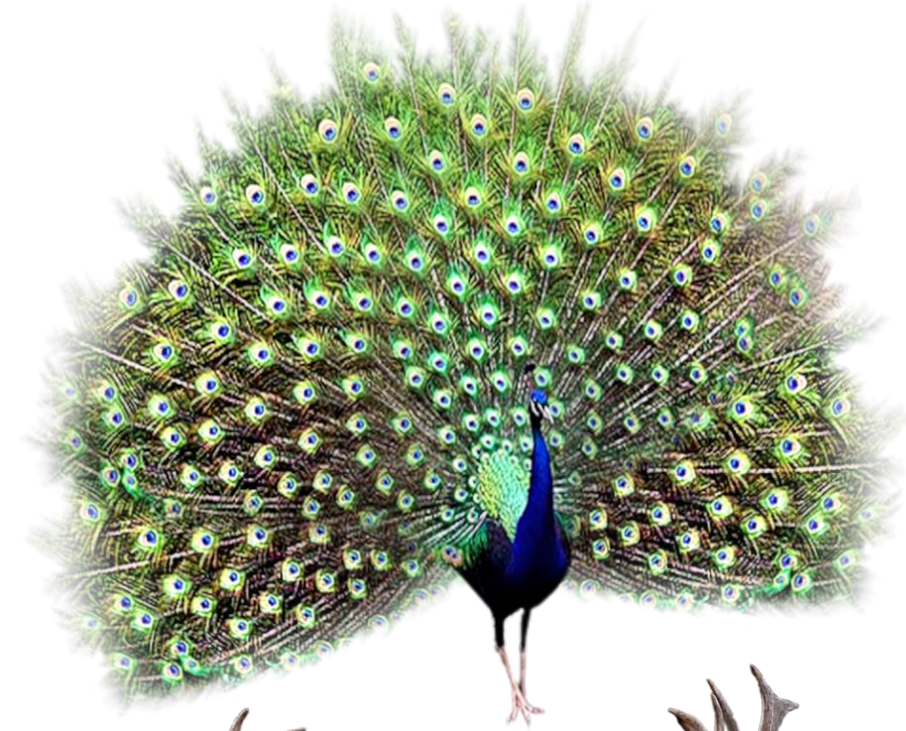
$$rB > C$$

Reproductive benefit to the recipient

If the benefit (multiplied by the genetic similarity) outweighs the cost, we will be altruistic



Is reproductive success always a function of survival?

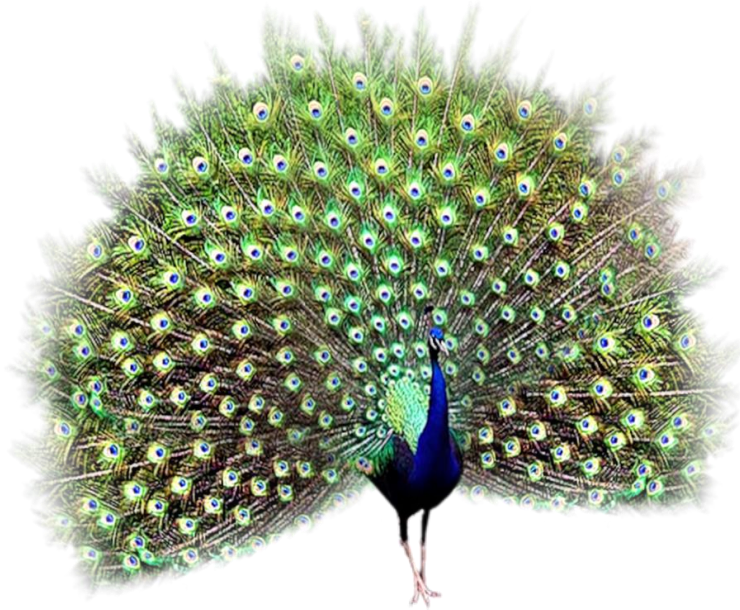


A peacock's tail and a deer's antlers both put them at a high risk to be spotted by predators



Why would an animal naturally put themselves at risk like this?

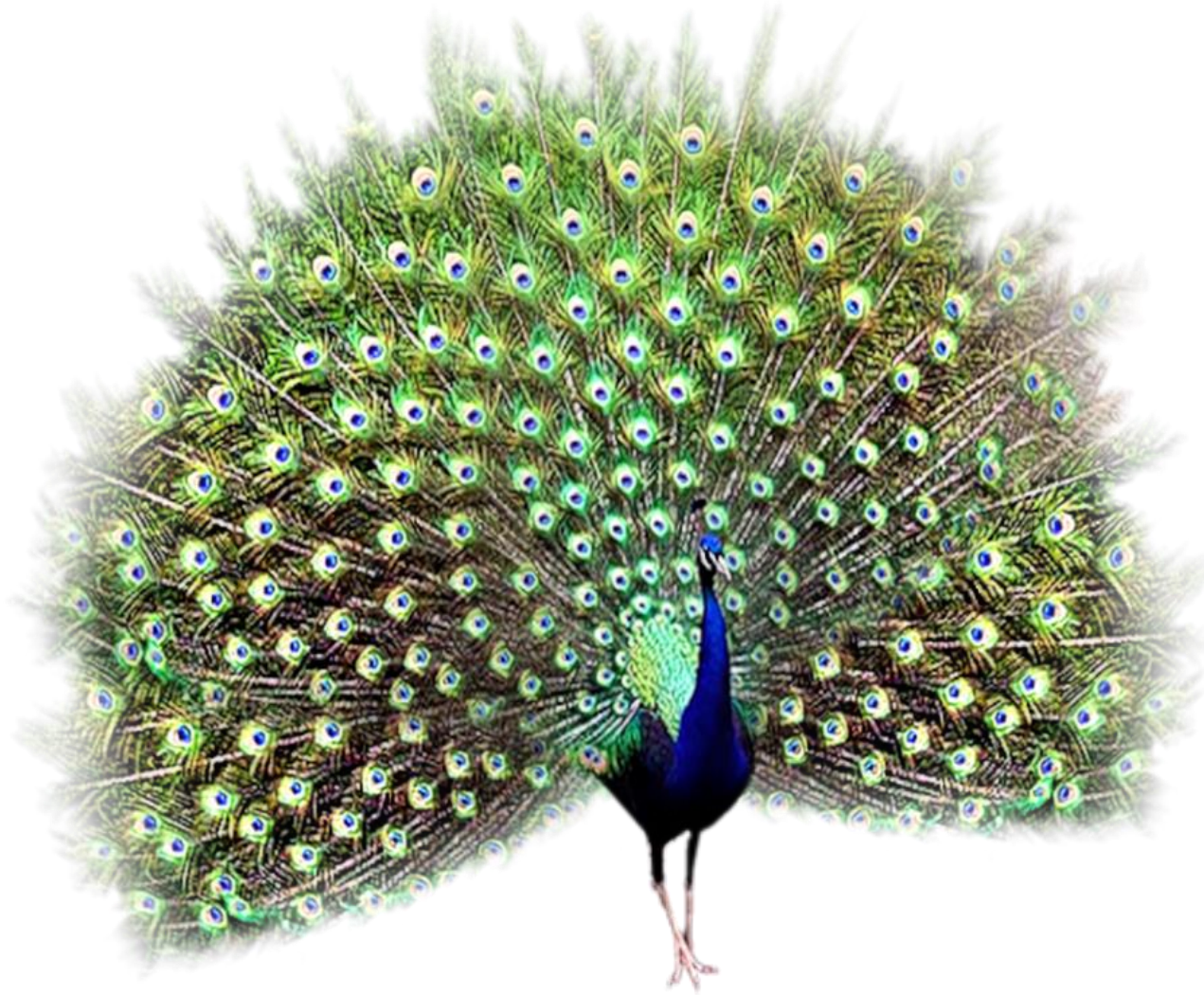
Two forms of sexual selection:



Display Feature
(Female's Choice)



Weapon
(Success in Combat)



Display Feature
(Female's Choice)

A peacock's tail:

- Energetically expensive to produce
- Easily spotted by predators
- Makes it difficult to escape from predators
- Increases risk of dying

BUT:

- Contributes to fitness via increased chance of mating by:
 - Indicating health
 - Indicating resource gathering (food)



Ladies love the rack



Weapon
(Success in Combat)

- ALSO energetically expensive
- ALSO easily spotted by predators
- ALSO makes it difficult to escape
- ALSO increases risk of dying from, well, mortal combat

BUT

- Contributes to fitness by:
 - Establishing dominance over sexual competitors
 - Protecting from danger
 - Indicating health
 - Indicating ability to gather resources (food, territory)

Sexually selected traits are often easily identified

Differs between the sexes



← Most applicable to humans*

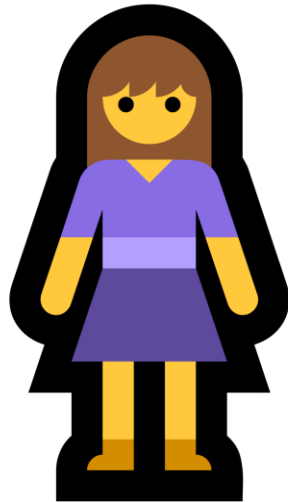
Specific to breeding season



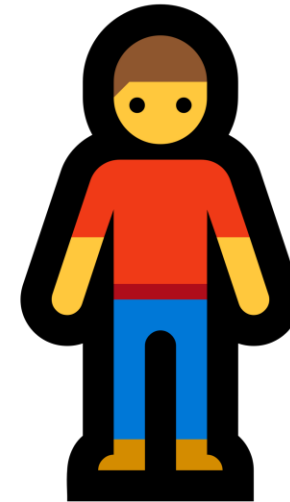
*Although humans breed year-round, some argue our breeding “season” is winter (think: “Cuffing Season”)

GENERALLY...

Females seek to find one good mate



Males seek as many mates as possible



Are these mating strategies relevant and effective today?



Females are “Choosy” when it comes to mates



Sperm
Male Haploid Cells

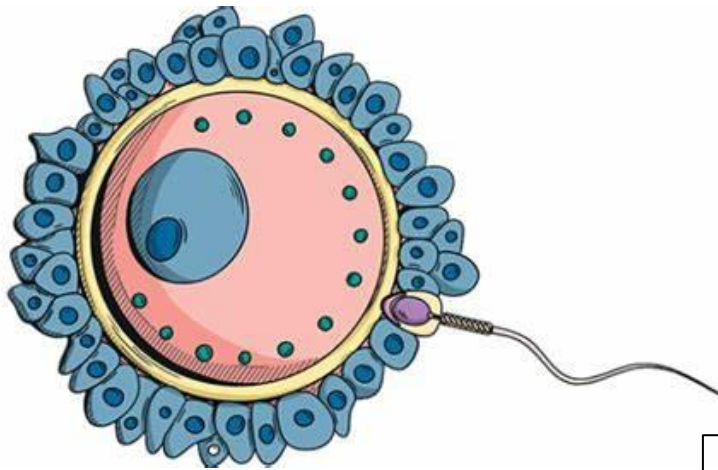


Ova (Eggs)
Female Haploid Cells

A sexual encounter is inherently more risky for a female

Evolutionarily speaking, if a given sexual encounter leads to pregnancy...

**PLAYER:
MALE**



**PLAYER:
FEMALE**

**Find another
fertile woman**



**Stay for a bit,
then run**



GENERALLY...

Men	Women
<ul style="list-style-type: none">• Chivalry – protecting vulnerable people	<ul style="list-style-type: none">• Nurturance, kindness, caring helpfulness
<ul style="list-style-type: none">• Heroic behaviours – saving others from risk	<ul style="list-style-type: none">• Tend to show higher empathy
<ul style="list-style-type: none">• High representation in occupations with physical risk (e.g., firefighters, military, law enforcement)	<ul style="list-style-type: none">• Putting needs of others (e.g., family) before their own• High representation in service occupations (e.g., nurses, social workers, administrative assistants)



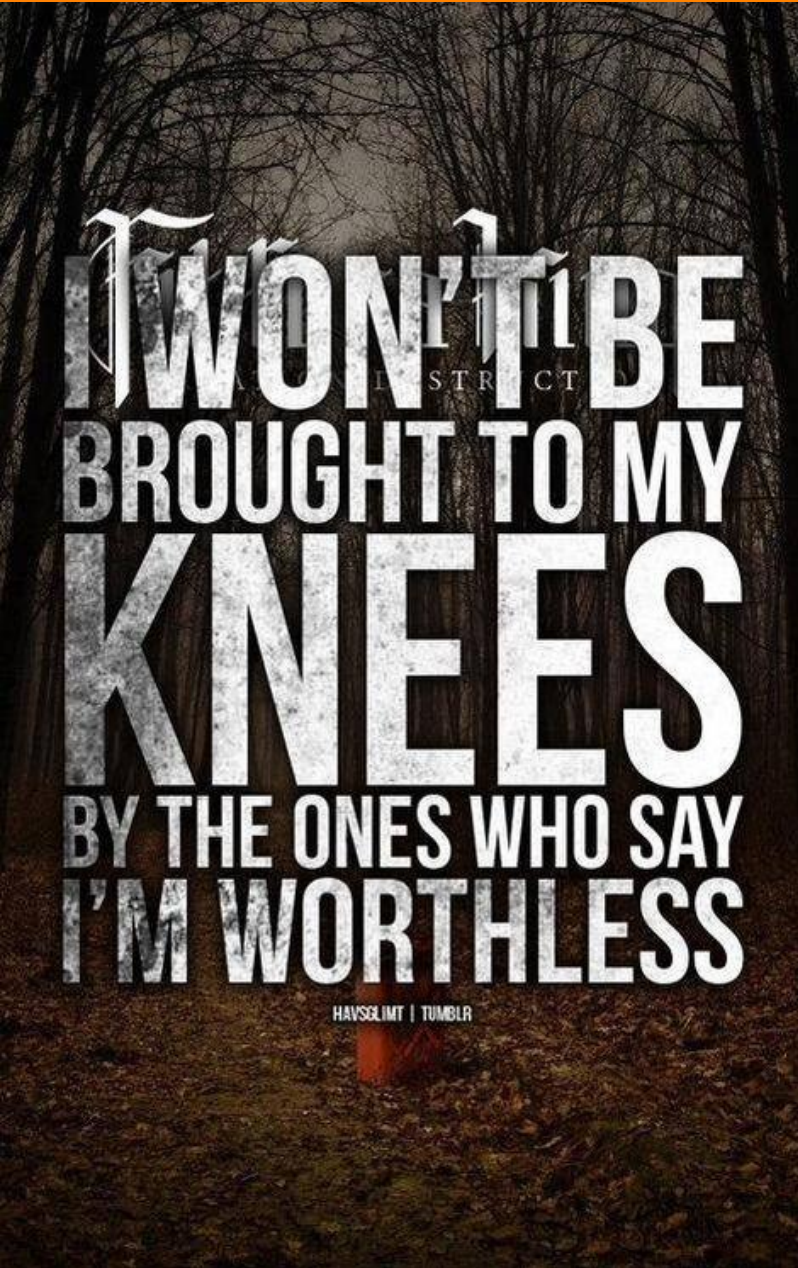
Male and female humans have differential mate preferences

GENERALLY...

Women	Men
<u>Paternal Capabilities</u>	<u>Maternal Capabilities</u>
Physical Health/Fitness (indicates good genes)	Physical Attractiveness (indicates good genes and ability to bear children)
Intelligence (in some way that gains resources)	Loyalty (likeliness to cheat while male is away gathering resources)
Chivalry (protecting vulnerable people)	Nurturance (kindness, caring helpfulness)
Heroic behaviors (saving others from risk)	Altruism (putting the needs of the family before their own)



...can you
think of any
more?



For y'all:

Reflection Journal 2 is due **Feb 9**

Friday Quiz 2 opens on **Friday at 12am**