

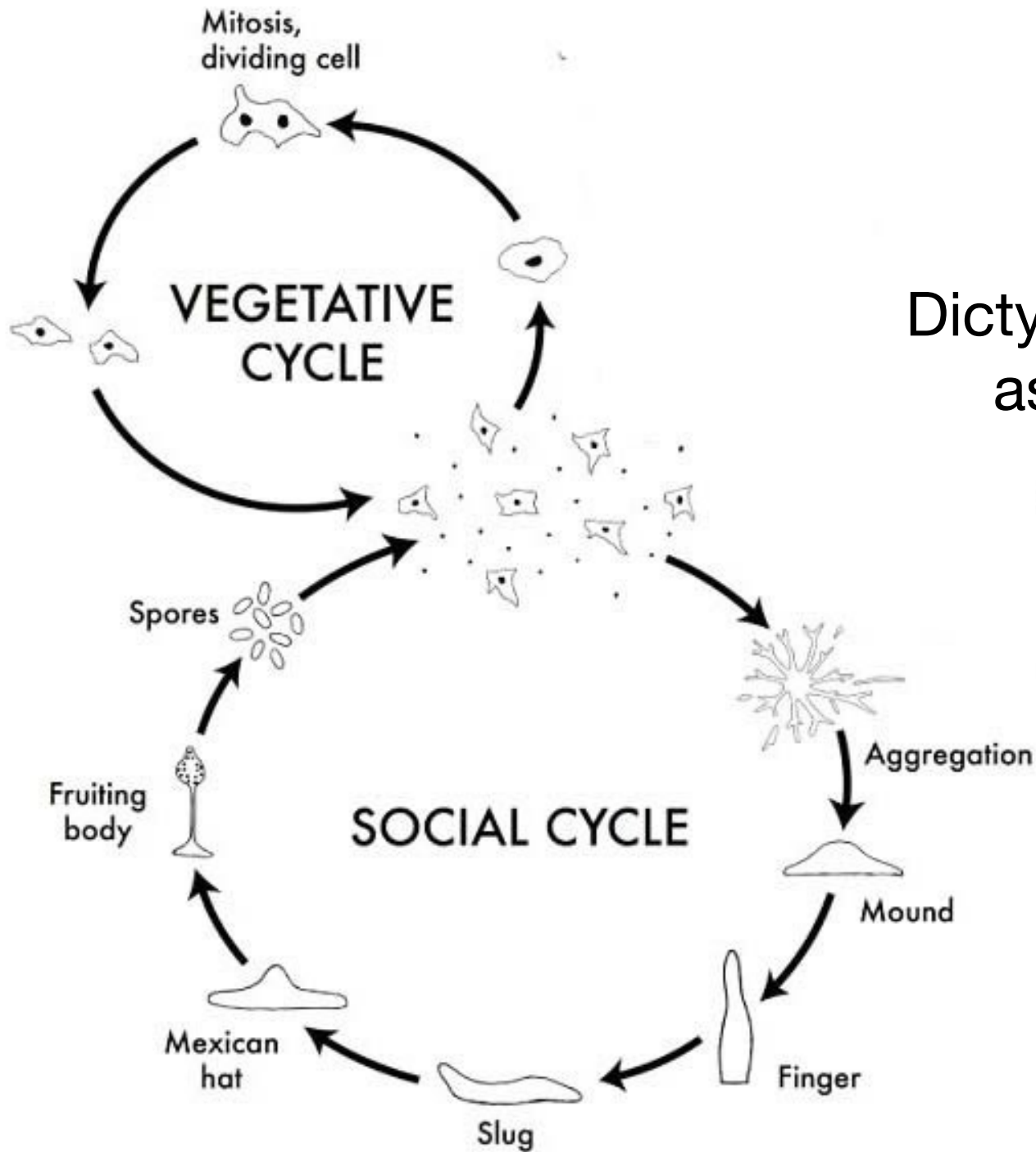


review sessions

comments or questions before we begin?

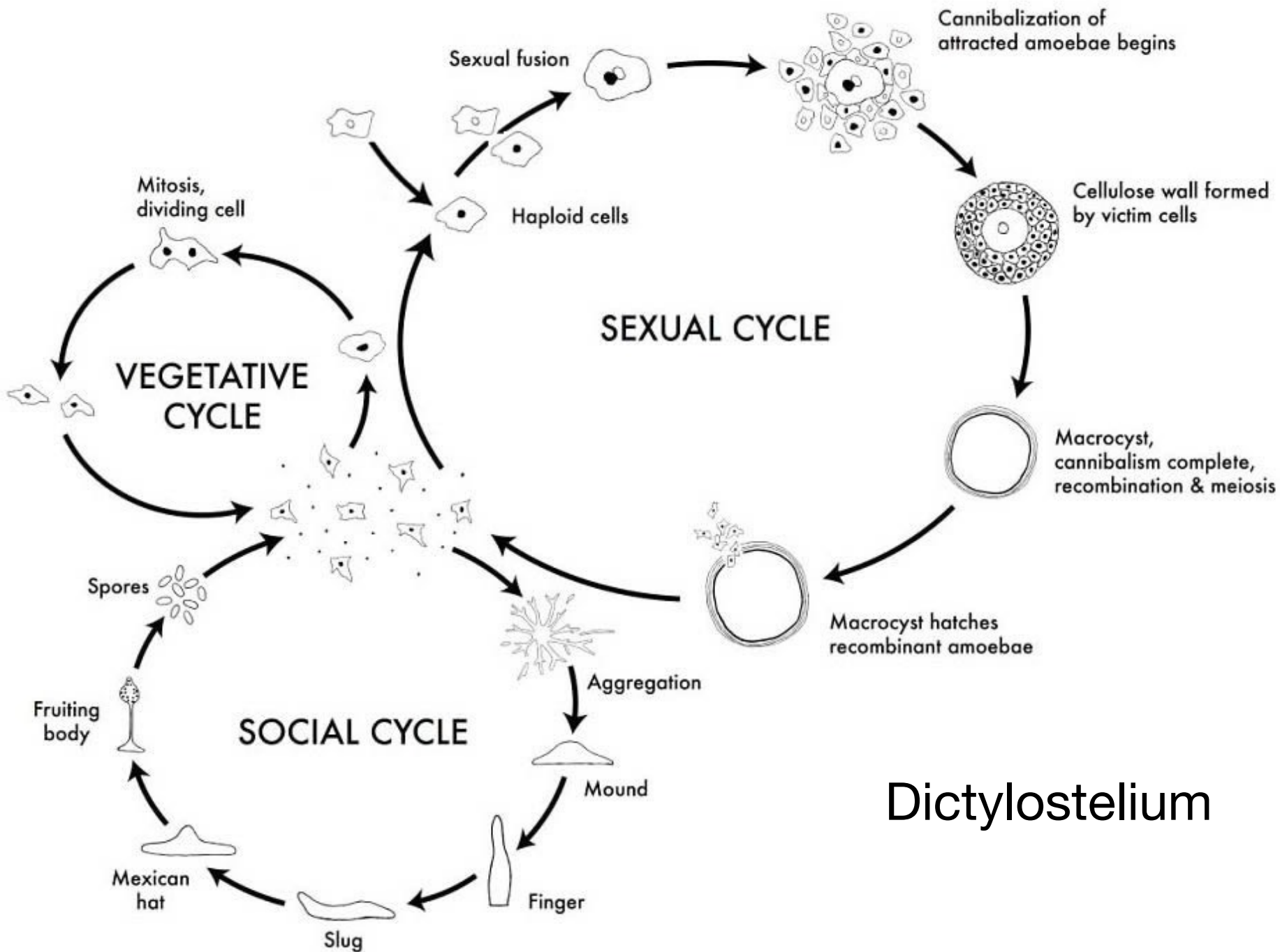
How might defense against social cheaters occur in more complex (and larger societies)?

Answers more appropriate for discussion in a political science course



Dictylostelium
asexual

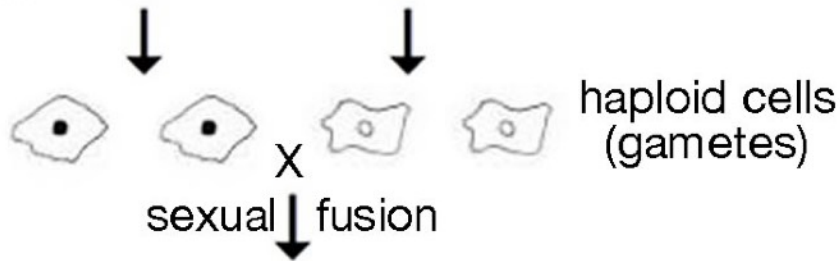
simple sexual reproduction
(mating types)



Dictyostelium

haploid
state

one copy of each gene



haploid cells
(gametes)

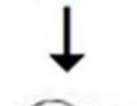
sexual fusion



diploid cell

two copies of each gene

diploid
state

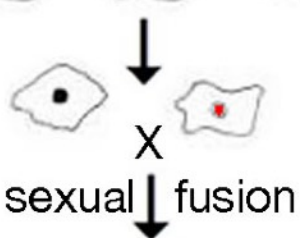


meiosis (allele shuffling)



haploid cells
(gametes)

one copy of each gene



diploid cell

two copies of each gene

Mating types versus male/female

what defines male and female (biologically)?

basis : differences in gene expression

SEX changing in (clown) fish

Sex redefined

The idea of two sexes is simplistic. Biologists now think there is a wider spectrum than that.

Claire Ainsworth

What is and what drives sexual dimorphism?

What are the cost and benefit factors in
sexual reproduction

What factors, in addition to gamete size, contribute to the differences in reproductive cost between females and males?



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Describe the roles of sexual dimorphism in terms of sexual selection, rather than in terms of reproductive physiology.

display behavior - mate selection: [bowerbird](#)

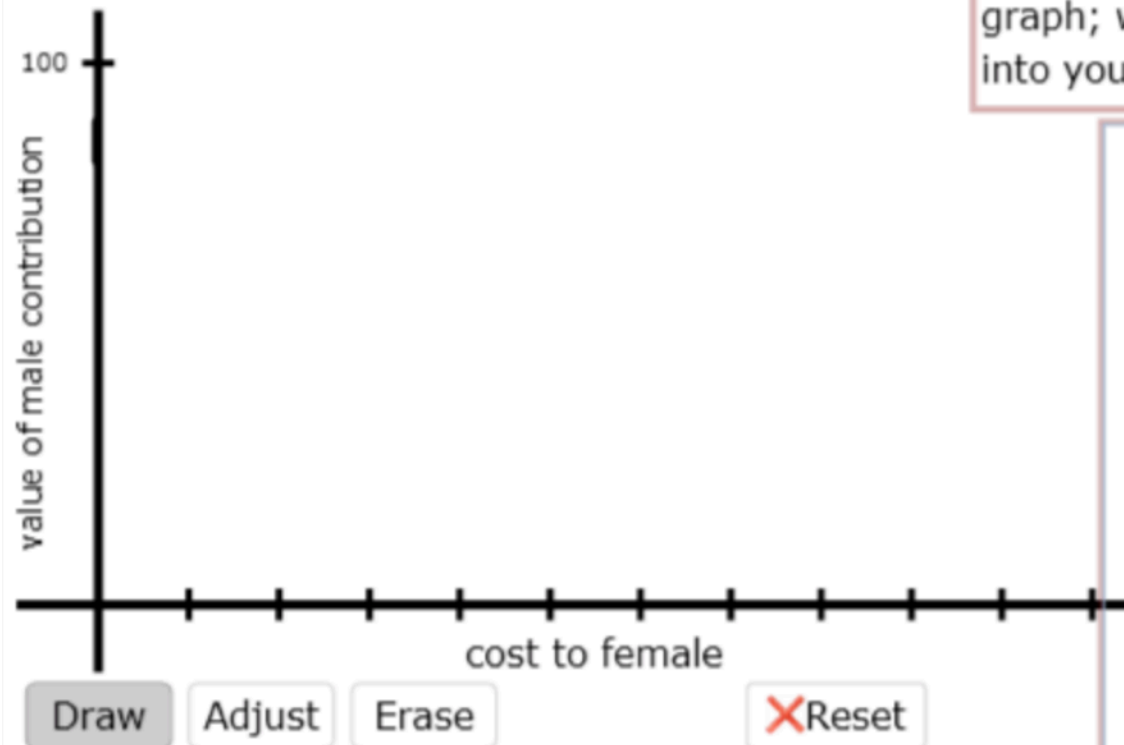
discuss: How do cooperative social behaviors influence reproductive interactions / selection?

We can think about sexual selection as influenced by the differences in the costs of reproduction to one sex versus the benefits from selecting a "better" mate. We will focus here on females; typically the costs of reproduction are higher for females, after all they produce larger, more expensive gametes.

Make a graph of the relationship between the cost of reproduction and the value of male traits.



explain the logic of your graph; what factors went into you thinking?



Answering questions: What is the question asking?

How would you answer it scientifically?

- 63. Explain how it is possible that individuals of different sexes can be in conflict, reproductively.
- 64. Explain how it is possible that a parent's interests can conflict with the interests of its offspring?
- 65. Why do the different sexes often display different traits?
- 66. If the two sexes appear phenotypically identical, what might you conclude (at least tentatively) about their reproductive behaviors?



What factors would encourage monogamy and suppress promiscuity in a sexual species? What factors would have the opposite effect?

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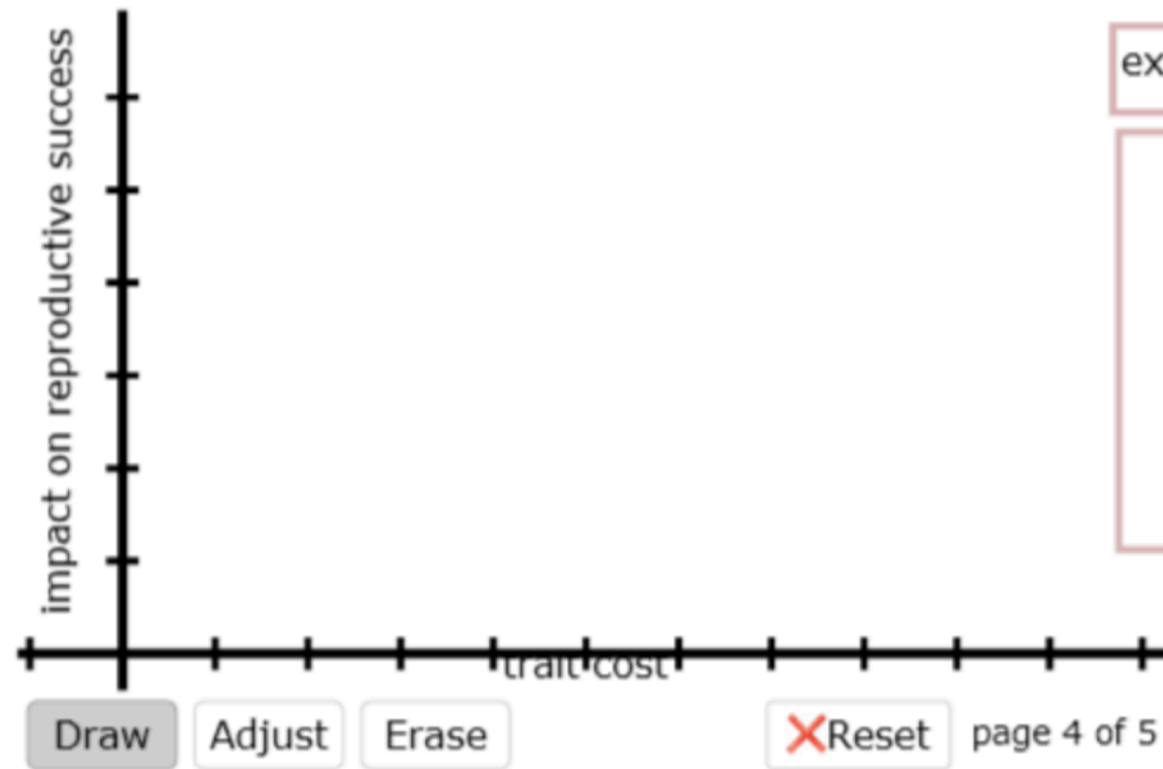
How does modern technological society impact the sexual and social behavior of humans?

Given that this might be a sensitive subject, rest assured, you will never be identified in in-class discussions

nuptial gifts in spiders

What is “cheating” in a sexual context?

Draw a graph of the relationship between the cost of a trait used primarily in the context of sexual selection and its benefit, in terms of reproductive success.



explain your assumptions and logic.

what limits the run-away exaggeration of a trait?



Is run-a-way selection possible?
(what stops it from happening)

Friday.
29 Sept

REVIEW for midterm #1

[previous midterm](#)

**Monday
2 Oct**

first midterm exam

exam answers