

9.916

Ingroups and Outgroups

Today's Lecture

One mind thinking about another:

- stable
- universal

Social relationships:

- dynamic
- co-dependent
- context-bound

Social relationships depend on a continuous trade-off between competition and cooperation

- (1) Today: Between-group competition, within-group cooperation
- (2) Aggression & Dominance: Within group competition
- (3) Mating & Parenting: Within group cooperation

Today's Lecture

One mind thinking about another:

- stable
- universal

Social relationships:

- dynamic
- co-dependent
- context-bound

Social relationships depend on a continuous trade-off between competition and cooperation

What is a social group?

Why does group living evolve?

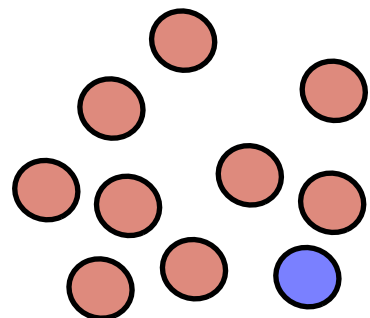
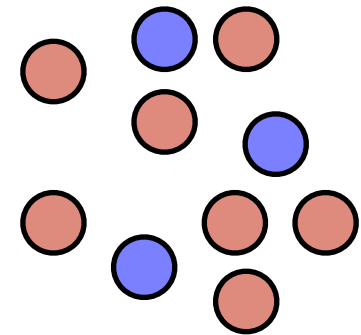
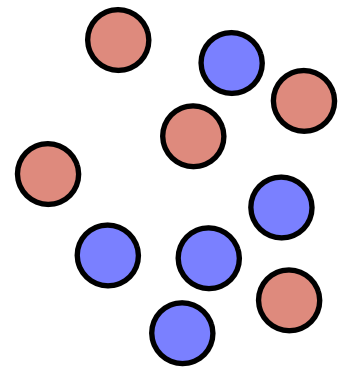
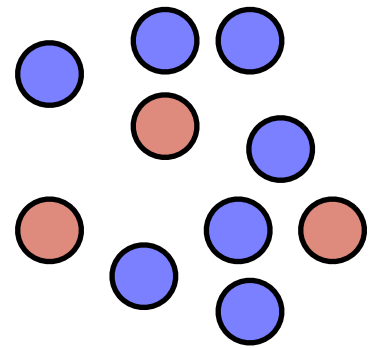
Why feel hostility towards other groups?

Ethology

Psychology

Economics

Living in Groups

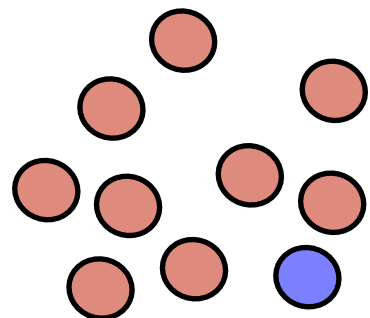
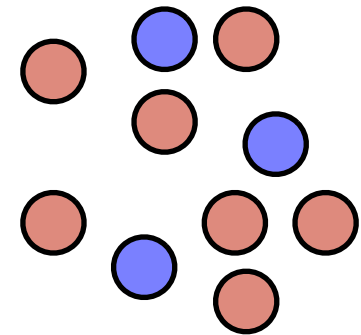
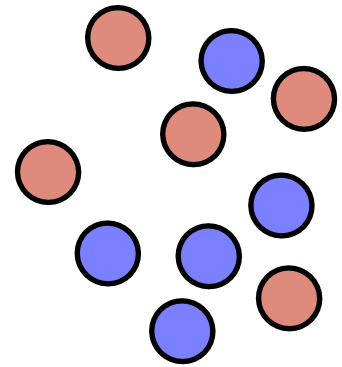
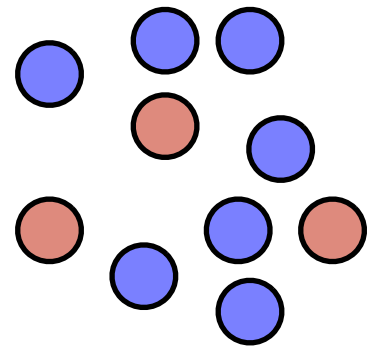


what is a “social group”?

- stable association of conspecifics
excluding mates & parent-child pairs
- division / coordination of labor

NB social psychological usage == category
e.g. firemen, homeless, black businessmen

Living in Groups



what is a “social group”?

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why does group living evolve?

Costs:

- tolerate competitors
- sometimes, altruism

Living in Groups

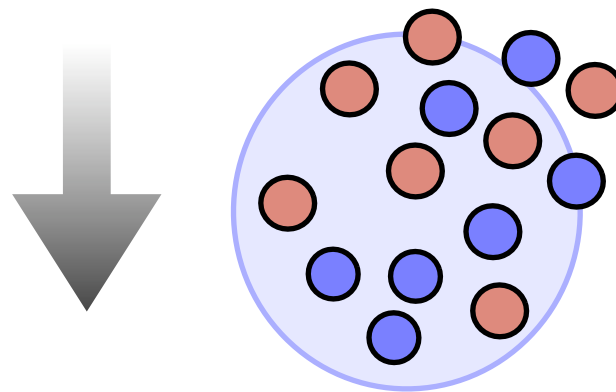
favouring groups:

benefits to whole group ~ proportion coordination.
e.g. warfare (decrease likelihood of loss, slaughter),
large prey (increase food supply to all),
variance reduction: pool risk (avoid starvation),
pool information.

favouring individualism:

costs of altruism
e.g. opportunity cost, extra risk

individual
altruists



groups with
many altruists

Living in Groups

Intergroup Public Goods Game

- each person gets an endowment
- each person privately decides whether to contribute or defect
- group with majority of contributions shares whole prize
- tie splits the prize in half
- loser gets nothing

The dilemma

Group benefits most when everyone contributes

Individual benefits most when others make up the majority

Living in Groups

favouring groups:

benefits to whole group ~ proportion coordination.

favouring individualism:

costs of altruism

2 solutions:

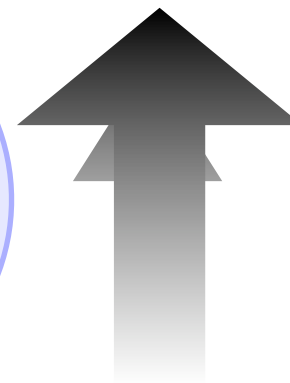
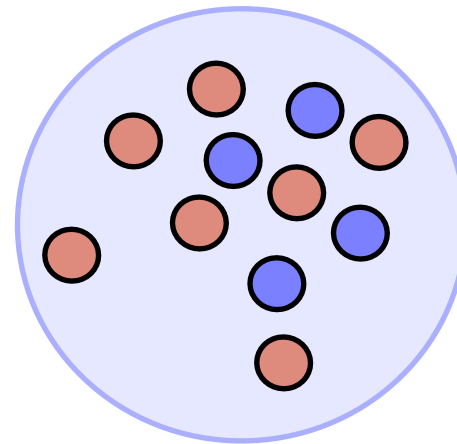
- minimize relative
cost to individuals

e.g. kinship?

- maximize relative
benefit to groups

e.g. rare resources

individual
altruists



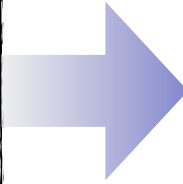
groups with
many altruists

Path to sociality

Insect eusociality:

~2% species

>60% insect biomass



hard to reach
very successful

Precondition 1: persistent, defensible resource

e.g. aculeate wasps: persistent nests
vs parasitoid wasps: lay eggs in prey

Precondition 2: division of labor in forced groups

e.g. *Lasioglossum* bees, in forced pairs, divide guarding

Step 1: progressive provisioning

feed larva successively, with “prepared” food
often requires opening and resealing cells

Step 2: daughters stay, help raise next generation

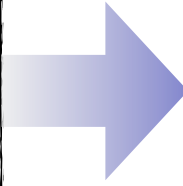
e.g. sweat bee *Halictus sexcinctus*: polymorphism determines
cooperative provisioning of nest

Path to sociality

Insect eusociality:

~2% species

>60% insect biomass



hard to reach
very successful

depend on high relatedness?
e.g. haplodiploidy

BUT new evidence:

- (1) common in diplodiplod species
uncommon in parthenogenetic species
- (2) ingroup recognition by odor
acquired by imprinting in first 12 hours
not correlated with relatedness

Living in Groups

favouring groups:

benefits to whole group ~ proportion coordination.

favouring individualism:

costs of altruism

2 solutions:

- minimize relative cost to individuals

e.g. kinship

- maximize relative benefit to groups

e.g. rare resources, war

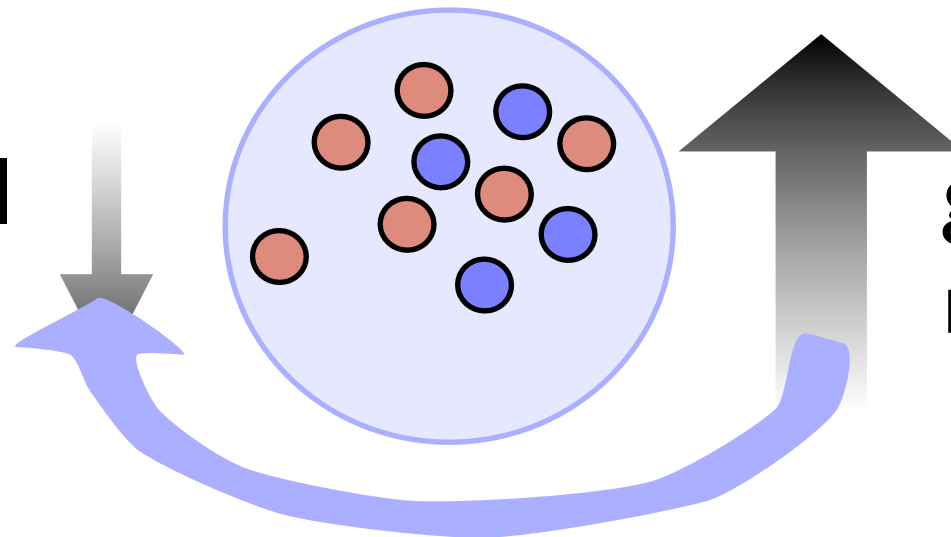
solidarity norms

e.g. patriotism,
commitment

leveling norms

e.g. equality,
monogamy

individual altruists



groups with many altruists

Living in Groups

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solidarity norms

e.g. patriotism,
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Costly signalling:

e.g. learning “giving charity” influenced by
model donation, not by verbal statements

permanent signals of group membership:
e.g. visible scars, piercings

Living in Groups

What is a “social group”?

- stable association of conspecifics
excluding mates & parent-child pairs
- division / coordination of labor

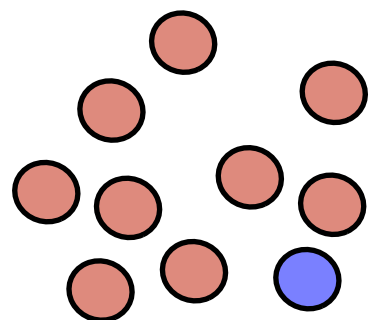
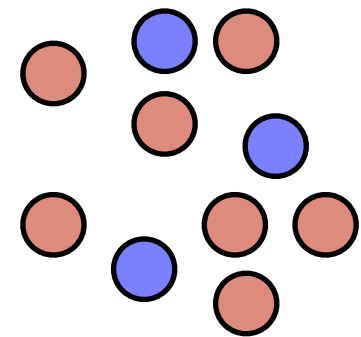
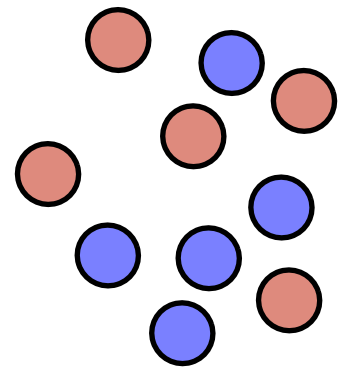
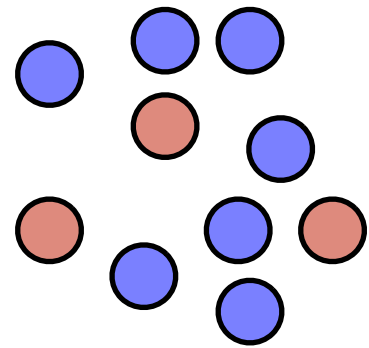
Why does group living evolve?

Costs:

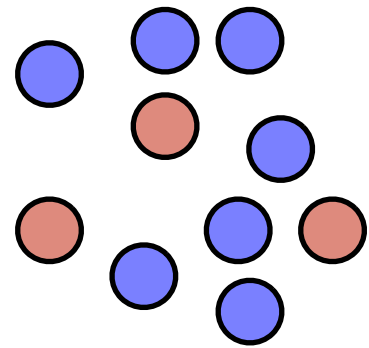
- tolerate competitors
- sometimes, altruism

Ingroup benefits

- Direct benefits of group living
- Commitment: altruists benefit each other
- Reduced costs: levelling norms

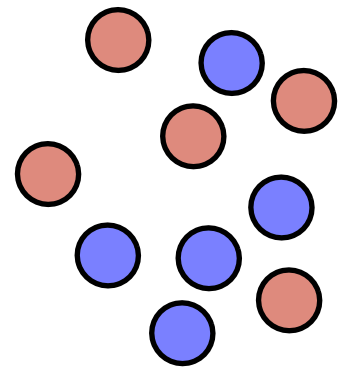


Living in Groups



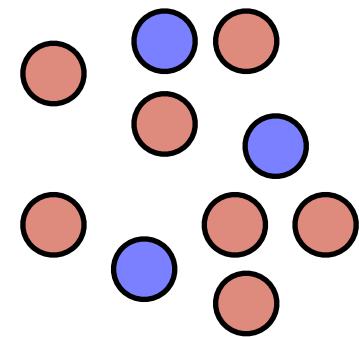
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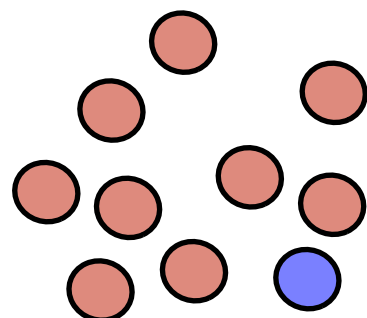
Why does group living evolve?

Why feel hostility to other groups?



Potential “super-group”:

- trading partners
 - mates (genetic diversity)
-
- Between group competition



Between group competition

Intergroup Public Goods Game

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- each person privately decides whether to contribute or defect
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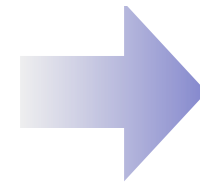
Some results:

- more cooperation if other group equal in size & wealth
- more cooperation with conversation, commitments
- (less cooperation with larger groups)

Between group competition

Robber's Cave

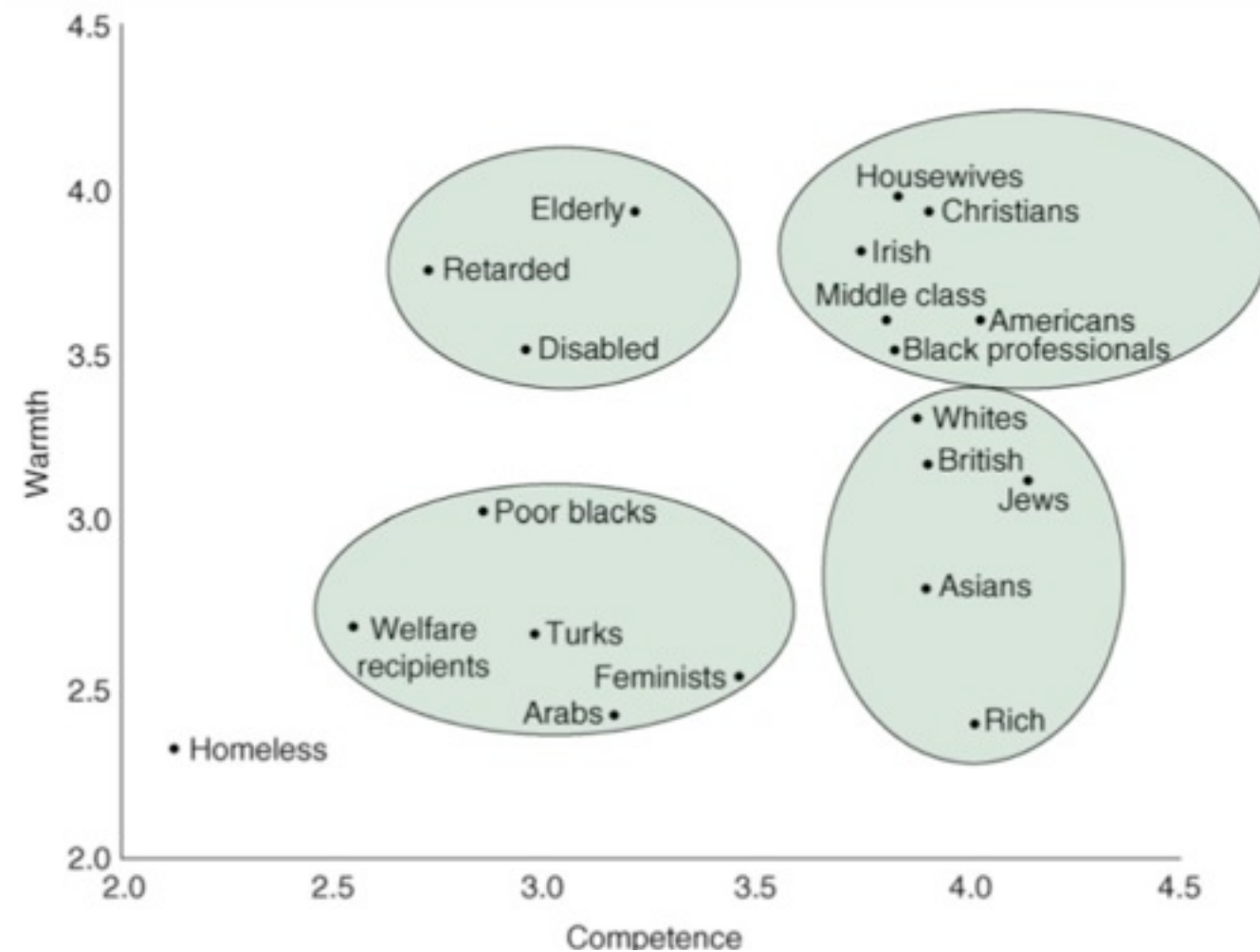
- Rattlers & Eagles
- 11 twelve-year-old boys
- friction raising:
 - competition for territory
 - direct competition in sports
- terminated early



ingroup: cohesion & helping
outgroup: insults & threats

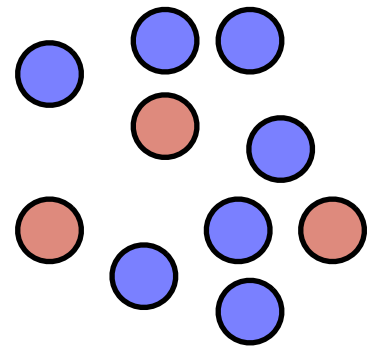
Competitive goals
High competence
Low warmth

- targets of envy
- passive association/ active harm
- schadenfreude



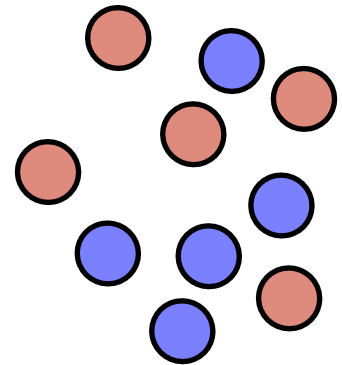
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Living in Groups



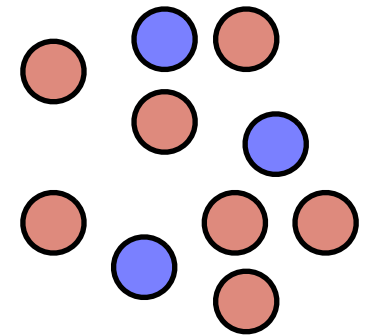
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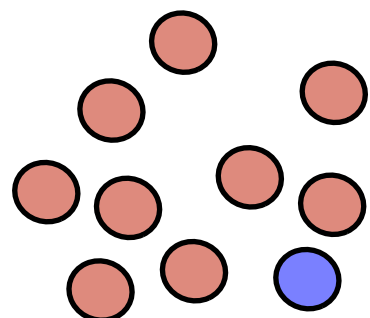
Why feel hostility to other groups?



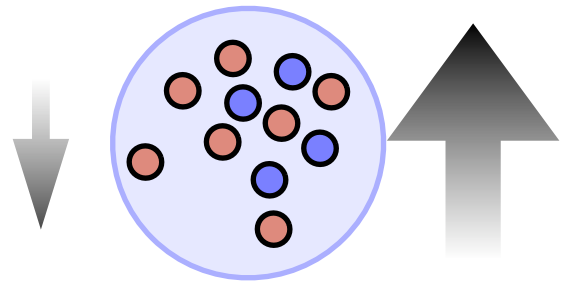
Potential “super-group”:

- trading partners
- mates (genetic diversity)

- Between group competition
- Direct intergroup hostility



War



maximize relative benefit to groups with more altruists

War:

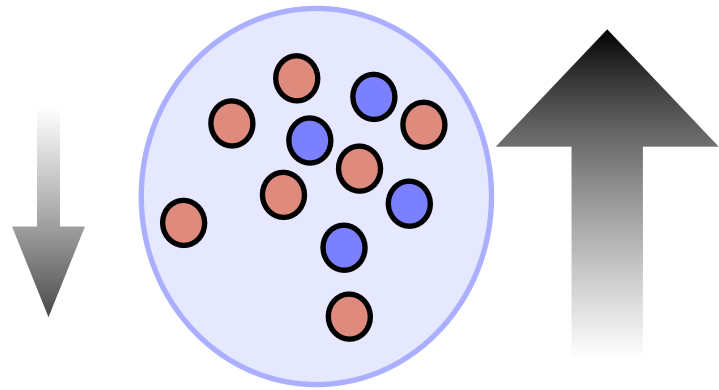
- high costs to whole group of losing war
 - ~ 4% mortality / generation, including civilians
- win more wars with more parochial altruists

tolerant of outsiders
selfish towards everyone
no wars

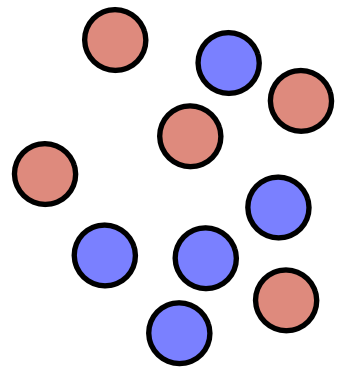
hostile to outsiders
altruistic to ingroup
many wars

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Living in Groups

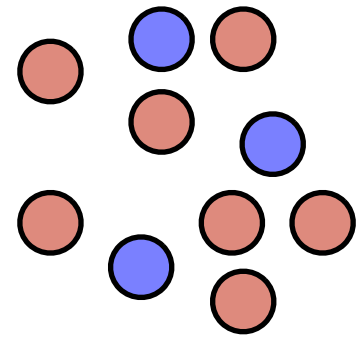


cultural groups
cultural transmission
flexible boundaries



Minimal groups

arbitrary, trivial groups → ingroup favoritism

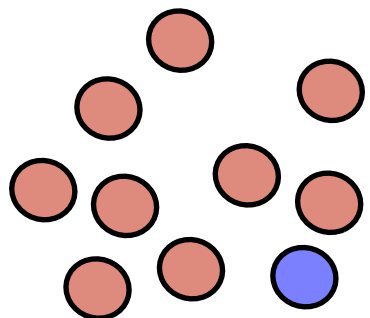


Repairing groups

“superordinate” goals and identities

e.g. Robber’s Cave

Contact Theory



***What is the role of intergroup hostility?
How are group boundaries fixed & recognised?
How can intergroup hostilities be reduced?***

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9.916 Special Topics: Social Animals
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