

Exercise C1, 10/29/04

Multimodal Group Work: Competition and Cooperation

This and the next take-home exercises involve multiple modes, i.e., field work, reading, writing, and presentation. This one (C1) is on competition and cooperation and the next one (C2) will be on animal and human societies.

Note: You are not expected to spend an enormous amount of time. Plan and execute the exercise carefully so that it would fit within the time you have for this exercise.

This exercise involves the following three components, as well as informal presentation.

1. Field Work

Observe real-life examples of competition, cooperation, and other types of social behaviors (possibly of humans and/or animals). Try to identify several examples so that you can analyze and explain (i) extreme forms of competition, (ii) extreme forms of cooperation, and (iii) the differences/similarities between the two [Content Goals 5ab].

2. Reading

Read the paper which your group chose. Some part of the reading may be technical. Focus on the main points of the reading, and try to understand how those points are supported. [Optional: Examine the paper with respect to the research-paper organization introduced/used in this course. See how references are listed and cited.]

3. Report [one submission per group]

Write a concise, free-formatted report including the following:

- Description of the field work (including the explanation of extreme forms of competition and cooperation as well as their differences/similarities)
- Main points of the reading
- Analysis of the connection between the field work and the reading
- Description of “the most general winning strategy” which all of your group members can agree on (in a sense, this is the common research question for this exercise)
- Possible connection to family values [Content Goal 3a]

Be prepared to explain and discuss the content of your report in a way the other groups can understand and benefit from it (no need to prepare a formal presentation, though).

Instructions/Notes:

1. Follow the general take-home exercise guidelines (as in previous modules).□

Survey: Time spent between classes: _____

Supplemental Information

Reading available for this exercise

- The following chapter is in Rosenau, Pauline Vaillancourt. 2003. *The competition paradigm: America's romance with conflict, contest, and commerce*. Rowman & Littlefield Publishers.
 - Chapter 1 “Introducing the Competition Paradigm”
- The following chapters are in Hammerstein, Peter ed. 2003. *Genetic and cultural evolution of cooperation*. MIT Press. [available in the library]
 - Chapter 3 “Cooperation without Counting: The Puzzle of Friendship” by Joan Silk
 - Chapter 4 “Is Strong Reciprocity a Maladaptation? On the Evolutionary Foundations of Human Altruism” by Ernst Fehr and Joseph Henrich
 - Chapter 5 “Why Is Reciprocity So Rare in Social Animals? A Protestant Appeal” by Peter Hammerstein
 - Chapter 22 “Origins of Human Cooperation” by Samuel Bowles and Herbert Gintis

Glossary (check other resources for more details)

- **Natural selection:** Individuals that are best-fit to the environment tend to survive to spread their genetic characters.
- **Kin selection:** Cooperation on generic relatedness
- **Mutualism:** Benefit directly from the partner's actions
- **Altruism:** Sacrifice oneself in favor of others [pure forms are rarely observed; here are some variants (or strategies) with different degrees/forms of altruism]
 - **Strong reciprocity:** Sacrifice resources (i) for those who are being kind *and* (ii) to punish who are being unkind (even without knowing the benefit of doing these)
 - **Reciprocal altruism:** Altruism based on the expectation of some return from the recipient of the benefit
 - **Indirect reciprocity:** Altruism based on the expectation of some return possibly from a third party (not necessarily directly from the recipient of the benefit)
 - **Tit-for-Tat:** Generally cooperate, but defect only after the partner does so (also see class slides)
- **Hawk-Dove game:** Evolution game with the following scenario. Hawks always fight to injure or kill their opponents, even with the risk of injury to themselves. Doves never engage in fights. These two strategies are chosen to represent the two possible extremes that we may see in nature.
- **Nash equilibrium:** A state where no change in game strategies would benefit the players
- **Bounded rationality:** Idea that humans are partially, but not completely rational
- **Phylogeny:** Evolutionary development
- **Phenotype:** Observable characteristics of an individual (combination of genetic makeup and environmental effects; cf. **genotype:** genetic makeup)
- **Ethnography:** Precise descriptive study (sociology/anthropology)

Sample on-line resources

Note: We will be more careful about using on-line information for the rest of the semester [Performance Goal 4a].

- http://en.wikipedia.org/wiki/Main_Page (very extensive on-line encyclopedia, which is still being expanded by the users)
- <http://www.google.com> (arguably the best search engine)

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