# ASCI\*4900, Course Outline: Fall 2016

## General Information

**Course Title: Topics in Arts & Science Research – Implications of Darwinism**

**Course Description:**

When it was proposed, Darwin’s theory of evolution by natural selection provoked a strong reaction from many corners and for many reasons, not the least of which was because it suggested that humans evolved from ape-like ancestors. Today, evolution is the bedrock of modern biology, and it has radically changed our view of our world, ourselves, and what it means to be human. By demonstrating a shared ancestry with other animals, this means that many principles that apply to non-humans will apply to humans also. For good or for ill, the theory of evolution by natural selection continues to have far-reaching implications that extend far beyond biology alone, including into such areas as psychology, economics, anthropology, sociology, and even the arts. In this course, we will examine some of these implications of Darwinism in a student-led discussion format on topics of the students’ choice.

**Credit Weight: 0.5**

**Academic Department (or campus): Bachelor of Arts & Sciences**

**Semester Offering: Fall 2016**

**Class Schedule and Location: Tuesdays 11:30-2:20 Mackinnon 211**

## Instructor Information

Instructor Name & Location: Pat Barclay, Mackinnon 3009 (Mack extension)

Instructor Email: [barclayp@uoguelph.ca](mailto:barclayp@uoguelph.ca)

Office hours: Drop-in Tues 3PM-4PM & Wed 10AM-11AM in 3009 Mackinnon, no appt needed, Additional office hours available by appointment (incl. Skype or phone)

## GTA Information

GTA Name: none

GTA Email: N/A

GTA office location and office hours: N/A

## Course Content

### Specific Learning Outcomes:

Please refer to the [University of Guelph’s Learning Outcomes](http://www.uoguelph.ca/vpacademic/avpa/outcomes/) for elaboration:

1.1 Critical & Creative Thinking: Inquiry/Analysis

1.3 Critical & Creative Thinking: Creativity

1.4 Critical & Creative Thinking: Depth and Breadth of Understanding

4.1 Communicating: Oral Communication

4.2 Communicating: Written Communication

4.3 Communicating: Reading Comprehension

4.4 Communicating: Integrative Communication

5.1 Professional & Ethical Behaviour: Teamwork

5.4 Professional & Ethical Behaviour: Personal Organization / Time Management

### Lecture Content:

The course will be a student-led discussion-based examination of how Darwinism applies to different areas. As such, the specific topics will be chosen by students (see list of potential topics below). Students will pick a topic, and as individuals or in small groups they will be responsible for leading the discussion on that topic. The order of topics depends on which ones are selected and the schedules of the discussion leaders. See schedule of topics.

### Labs: None

### Seminars: None (beyond the weekly meeting time)

### Course Assignments and Tests:

| **Assignment or Test** | **Due Date** | **Contribution to Final Mark (%)** | **Learning Outcomes Assessed** |
| --- | --- | --- | --- |
| **Participation** | **In-class** | **10%** | **1.1, 4.1, 4.4** |
| **Submitting Questions** | **24h before each class** | **10%** | **1.1, 1.3, 4.3, 5.4** |
| **Test on “Toolbox”** | **Tues Oct. 4th in class** | **10%** | **1.4, 4.2** |
| **Group leading of the discussion** | **TBD: Depends on group** | **30% (10% pre-class handout, 15% leading discussion, 5% post-class handout)** | **1.3, 1.4, 4.1, 4.2, 4.3, 4.4, 5.1,** |
| **Logbooks** | **Tues Oct 18 (class 4 log)**  **Tues Oct 25 (class 5 log)**  **Tues Nov 1 (class 6 log)**  **Tues Nov 8 (class 7 log)**  The above due in class  **Plus: Mon Dec 5th 5PM (classes 8-12, due in my office)** | **40% (best 8 out of 9)** | **1.1, 1.3, 1.4, 4.2, 4.3, 4.4, 5.4** |

Additional Notes:

Class Participation (10%): This is intended to be a student-led discussion course, so students are expected to contribute to class discussions in a positive manner. These points are awarded based on whether your comments and questions advance the discussion; you need to do more than just be present in class or to make comments that monopolize the conversation or are distracting. You will likely disagree with each other and with me on some issues, and this is fine, but everyone is expected to treat each other with respect and to present (and take) such disagreements in a constructive manner.

Submitting Discussion Points (10%): Students should prepare for the discussion by generating points or questions to add to the discussion of the topics. Each week, students should briefly submit their two best discussion points (10%). These can be questions for the class, brief points about the readings or the topics raised, or anything else that will add to the discussion. These should be brief: one sentence each or point form is often fine; a paragraph is usually far too long. These will be graded on quality. Please submit them to the Dropbox on Courselink 24 hours before class (i.e. by 11:30AM on Mon).

Test on the “Toolbox” Classes (1-3) on Tues. Oct 4th (10%):The better that everyone understands the background knowledge, the more that everyone will get from the discussion later in the course. The first week clarifies several misconceptions, week 2 (The Selfish Gene) introduces the theoretical perspective, and week 3 (The Agile Gene) covers how nature & nurture interact (rather than being in opposition) and why they **must** interact with each other. To ensure that you have read the material and understand the ideas, you will be tested on this material.

Developing and Sharing Expertise on One Topic (30% total): Students will get the chance to lead one week’s discussion as part of small group. You will choose one topic and do extra reading and research on this topic to become an “expert” on the topic. In addition to leading discussion during that week, your group will send two short handouts to the class: one summarizing your findings to send before the discussion, and one after class summarizing some of the key points raised in class. This is worth a total of 30%, which includes:

* 10% for preparing a handout with extra information about the week’s topic. This is based on the additional readings you have done and is designed to share the most relevant findings with the class. These handouts will typically be between one and five pages (laid out in whatever manner best conveys the information). This is to be e-mailed to the class 24h before class (i.e. the same time that they’re submitting discussion Q’s). Grades are assigned based on quality and depth of information, as well as clarity of presentation. Please read other groups’ handouts before the discussion.
* 15% for leading the discussion for the week. This is NOT a formal presentation – you will be “first among peers”. You will have done additional readings to become the “experts” for the topics you’re leading, and you should generate questions and topics to discuss to keep the discussion going. You should also moderate the discussion to keep it from getting sidetracked. Group exercises can be used here if relevant. You will be in charge of the topic – it’s your show!
* 5% for a one page handout to be given to other class members after class as a summary of the *new* major points raised and *new* arguments presented in class (i.e. do not just summarize what you already gave them). This is due two days after your presentation so that others can use it as a reference.

It is strongly recommended that you meet with me in the week before you lead. The best time is Tuesday after class.

Logbooks (40% total): You will be asked to keep a journal of thoughts & reflections on the ideas and issues discussed in each class, with one journal entry for each class. This has to be more than just a summary or description of the readings and discussion: this is your opportunity to critically examine the issues in greater depth and convey your independent thoughts and creativity. You have considerable rein as to what to include. Suggestions include your reflections & evaluations of the material, connections to other issues raised, and extensions, criticisms, or applications of the issues. For example, one strategy is to critically evaluate the authors’ argument(s) in light of what was discussed in class, their strengths and weaknesses, and then present your own conclusions and (most importantly) the reasons for those conclusions. See the handout “How to Write a Log” (posted on Courselink). Any strategy is fine: you earn grades for how well you execute your strategy and back up your points. Make sure that you back up your points by explaining the how and why, for example *how* something works and *why* a point is important. This log must demonstrate not only that you have done the readings *and* attended class, but that you have been actively intellectually engaged in both, and that you understand the reasons for accepting or rejecting a particular viewpoint. It is your responsibility to be clear about what you are contributing: if it is not clear that you have said anything beyond banalities, you will be graded accordingly. You are free to agree or disagree with any point that I or anyone else have raised, but make sure to argue your case. You are actively encouraged to draw from any discipline, course, or theoretical perspective. It is recommended that you do your journal entry for each class shortly after class while the topics and discussion are still fresh in your mind and the prevent last-minute rushes. Do not worry if your thoughts or opinions change over the course of the semester – this is part of learning. You are encouraged to discuss ideas with others to sharpen your arguments – this is collaborative learning. However, you may not collaborate on the actual writing of the logs. To this end, I recommend differentiating your log entry from others’ logs.

To allow for me to provide feedback, please limit each entry to three double-spaced pages per week’s entry, give or take half a page. Focus on quality rather than quantity – a concise and well-presented short entry is better than a padded and verbose long one. Aim for four pages per week, trim to three. The due dates (& which week is submitted) are as follows: **Tues Oct 18th** (for class 4 log), **Tues Oct 25th** (for class 5 log), **Tues Nov 1st** (class 6 log), & **Tues Nov 8th** (class 7 log), all in class. Logs for classes 8-12 are due Monday **Dec 5th at 5PM** in my office. **Each week is worth 5%, and I will take your best 8 out of 9 entries**.

There is a **late penalty of 10%/day**. For late submissions, I will calculate date submitted based on your Courselink submission (*not* by drop-off at my office). You are welcome to submit early.

Format for logs (weeks 4-12): 3 pages per week, double-spaced, 12 point Times New Roman font (to give everyone equal space). Printing both sides of the page is preferred but not necessary. Please include a cover page so I can grade them without knowing whose it is… your name & ID should only be on the cover page. You must also submit a back-up on Courselink (you will not be graded down if this is late or absent, but it is your responsibility to be able to prove on-time submission of any week’s log in the event of mishaps; the Courselink back-up copy does this.)

### Final examination date and time: None. The final logbooks take the place of a final exam.

## Course Resources

### Required Texts:

Dawkins, R. (1976/2006). The Selfish Gene. Oxford, UK: Oxford Paperbacks. You can use any edition other than the original 1976 version.

Ridley, M. (2003). The Agile Gene*.* Toronto: HarperCollins.

In addition to readings from The Selfish Gene and The Agile Gene, there will also be required readings each week to correspond to each topic (see schedule of topics). These are posted on Courselink. I have made suggestions below, but the exact readings will depend upon which topics are chosen and may be subject to change by the groups leading the discussion (in consultation with me). You will need to do the readings before class to be an active participant in the discussion.

### Other Resources:

I have placed The Selfish Gene and The Agile Gene on reserve at the library. The other required readings are posted on Courselink.

## Course Policies

### Grading Policies

Discussion points must be submitted on Courselink 24 hours before each class (i.e., 11:30AM Mondays), not including the first class. Late submissions of discussion points will not be accepted. Logbooks are due in class on **Tues Oct 18th** (for class 4 log), **Tues Oct 25th** (for class 5 log), **Tues Nov 1st** (class 6 log), & **Tues Nov 8th** (class 7 log), all in class. Logs for classes 8-12 are due Monday **Dec 5th at 5PM** in my office. Each week is worth 5%, and I will take your best 8 out of 9 entries. Late logbooks will be penalized at 10% per day. Participation in class is based on quality and frequency of speaking, with emphasis on the former. If you are sick or need to miss a class, let me know as soon as possible. Unexcused absences result in a zero grade for participation in that class. Late group documents (pre-class handout, post-class handout) will be penalized at 10% per day. If you miss your group’s presentation date, you will need documentation; consult with me as to the best way forward if this happens.

We will use peer-evaluation for group projects: each group member will privately divide 100 points among all group members according to each person’s contribution to the group’s products. If there is some agreement that some people have contributed much more or less than other group members, then those people’s grades for the group project will be adjusted up or down accordingly. However, the rest of group’s grades will be unaffected; this allows people to reward strong contributors without harming their own grade, and prevents them from penalizing others to try and increase their own grade.

Regrades: I will gladly entertain requests for a regrade on either your logs or on the test, but your request must be put in writing. I will regrade the whole thing (e.g. whole test, multiple logs submitted together), and the new grade stands whether it is higher or lower than the original. Please see the following for details:

I am happy to discuss our comments or grades with you. Please feel free to come by office hours or arrange a time to meet. During this meeting, we can discuss the ideas, clarify what the comments meant, and give tips for improvement. However, I will not change any grades during the actual meeting... only in response to a written justification. If you do disagree with your grade, or feel that I have grossly misinterpreted something you have written, I will gladly entertain requests for a re-grading. To request a regrade, the reasons for your request (and your argument as to why you deserve a higher grade) *must* be clearly spelled out in writing and submitted along with the test/logs. This takes the emotion out of the process and makes it so that the grade is assigned based on what is actually written. To request a re-grade, submit in writing a re-grade request along with the graded log and a fresh unmarked copy of your log (which I will read first to form a new opinion).

A word of caution: I re-grade the entire assignment (e.g. the whole test or both logs in a submission) rather than just a specific section of your choice, and the new total grade will hold. This could cause your grade to go up or down or stay the same, depending on whether the second reading (and consideration of your rationale) is more or less favourable than the first. As such, I would advise against using this option to “dig” for extra points unless you legitimately feel that you have been misinterpreted or unjustly graded. I am open to the possibility having made a mistake – we are all human – but we must all accept the possibility that the mistake could have worked against you or in your favour. If you **do** legitimately feel that you have been misinterpreted or that I missed your point or graded it too harshly, then by all means submit your rationale for a regrade.

Because I will re-grade the whole assignment, you will want to look at *all* the sections: it is possible that you have been graded too hard on one section but too easy on another (e.g. a misinterpretation that gives you the benefit of the doubt). These misinterpretations for and against you should balance out on average, and if they do then you would receive the grade you actually deserve (but for different components than expected). By requesting a re-grade, you would be arguing that overall you have been misinterpreted for the worse more often than you have been misinterpreted for the better, such that you deserve a higher grade overall. You can’t just pick the sections that worked against you; you have to look at all of them. By requesting a re-grade, you are saying that your overall grade is lower than you deserve, and I will be the final arbiter of what you actually deserve as an overall grade. As such, you may want to talk to me about your overall score in order to get an overall assessment on **all** sections (not just the ones where you disagree with the grade). I have certainly agreed with some re-grade requests in the past, and if you have a legitimate complaint overall then I will probably agree with you. At the same time, I am merely asking that you recognize the possibility that you actually deserve a lower grade overall because some sections of the assignment were graded higher than they should have been. As such, resubmitting will give you the overall grade you deserve… whether this is higher or lower than the original.

Before submitting a regrade request, please consider the following. When grading, I approach each paper with the expectation that it will be average. Grades advance or drop depending on both content and style; for an A-/A-/A+, the paper must impress me with exceptional thoughtfulness, reasoning, and presentation. “A” papers involves hard (but rewarding) work! A solid “B” is a mark of achievement which reflects critical reasoning and/or thorough research and solid writing skills. Please refer to Chapter VIII of the Undergraduate Calendar for descriptions of what constitutes an A, B, C, D, & E.

[Undergraduate Grading Procedures](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-grds-proc.shtml)

### Course Policy on Group Work:

The group project (pre-class handout, leading discussion, post-class handout) is expected to be a collaboration between group members. If your group has difficulties, please try to work them out yourselves first. If you have difficulty doing so, then please consult me after you attempted to work them out yourselves.

For your logbooks, you are encouraged to discuss ideas with others to sharpen your arguments – this is collaborative learning. However, you may not collaborate on the actual writing of the logs. To this end, I recommend differentiating your log entry from others’ logs.

### Course Policy regarding use of electronic devices and recording of lectures:

Because we want students to feel free to voice their opinions and raise questions on challenging topics, electronic recording of classes is expressly forbidden without consent of the instructor. When recordings are permitted they are solely for the use of the authorized student and may not be reproduced, or transmitted to others, without the express written consent of the instructor.

## University Policies

### Academic Consideration

When you find yourself unable to meet an in-course requirement because of illness or compassionate reasons, please advise the course instructor in writing, with your name, id#, and e-mail contact. See the academic calendar for information on regulations and procedures for

Academic Consideration:

[Academic Consideration, Appeals and Petitions](http://www.uoguelph.ca/registrar/calendars/undergraduate/current/c08/c08-ac.shtml)

### Academic Misconduct

The University of Guelph is committed to upholding the highest standards of academic integrity and it is the responsibility of all members of the University community, faculty, staff, and students to be aware of what constitutes academic misconduct and to do as much as possible to prevent academic offences from occurring.

University of Guelph students have the responsibility of abiding by the University's policy on academic misconduct regardless of their location of study; faculty, staff and students have the responsibility of supporting an environment that discourages misconduct. Students need to remain aware that instructors have access to and the right to use electronic and other means of detection. Please note: Whether or not a student intended to commit academic misconduct is not relevant for a finding of guilt. Hurried or careless submission of assignments does not excuse students from responsibility for verifying the academic integrity of their work before submitting it. Students who are in any doubt as to whether an action on their part could be construed as an academic offence should consult with a faculty member or faculty advisor.

The Academic Misconduct Policy is detailed in the Undergraduate Calendar:

[Academic Misconduct Policy](https://www.uoguelph.ca/registrar/calendars/undergraduate/2014-2015/c08/c08-amisconduct.shtml)

### Accessibility

The University of Guelph is committed to creating a barrier-free environment. Providing services for students is a shared responsibility among students, faculty and administrators. This relationship is based on respect of individual rights, the dignity of the individual and the University community's shared commitment to an open and supportive learning environment. Students requiring service or accommodation, whether due to an identified, ongoing disability or a short-term disability should contact the [Student Accessibility Services](https://www.uoguelph.ca/csd/) as soon as possible.

For more information, contact SAS at 519-824-4120 ext. 54335 or email csdexams@uoguelph.ca or the [Student Accessibility Services Website](https://www.uoguelph.ca/csd/)

### Course Evaluation Information

Please refer to the [Course and Instructor Evaluation Website](https://courseeval.uoguelph.ca/ceval_CEC.php) **.**

### Drop date

The last date to drop one-semester courses, without academic penalty, is Fri. Nov. 4th. For regulations and procedures for Dropping Courses, see the [Schedule of Dates in the Academic Calendar](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/c03/index.shtml).

[Current Undergraduate Calendar](https://www.uoguelph.ca/registrar/calendars/undergraduate/current/)

## Additional Course Information

## Course Schedule

The first three weeks are more instructional and will be led by me – these are the “toolbox” weeks. After mastering basic concepts, we will branch out by applying this knowledge to other topics. I will cover weeks 4 & 12; weeks 5-11 will be on topics chosen and led by students.

Class 1 Sept 13th (Toolbox): Misunderstandings of Darwinism. What is it actually, and what do people think it is?

Noonan, K. M. (1987). Evolution: a primer for psychologists. In C. Crawford, M. Smith, & D. Krebs (Eds.) Sociobiology and Psychology: Ideas, Issues, and Applications, pp. 31-60. Hillsdale, NJ: Lawrence Erlbaum Associates.

Gregory, T. R. (2009). Understanding natural selection: essential concepts and common misunderstandings. Evolution: Education and Outreach, 2, 156-175.

Class 2 Sept 20th (Toolbox): A Gene’s-Eye Perspective: Are we simply vehicles for the propagation of our DNA? How does this viewpoint change how we view ourselves?

R. Dawkins (1976) The Selfish Gene, Ch. 1-6 (108 pages)

Class 3 Sept 27th (Toolbox): Genes and Environments: Is the “Nature vs. Nurture” debate productive or a false dichotomy? What should we focus on? How do genes & environments interact? How does development work?

Ridley, M. (2003) The Agile Gene: How Nature Turns on Nature, pp. 1-150 (Prologue + Ch. 1-5).

### Class 4 Oct 4th: Test on Toolbox Weeks

Topic for Discussion (after test): Human and Non-Humans: Are we different from other animals, and if so, how? What does it mean to be human?

National Geographic (1996) The New Chimpanzees (film) [On reserve on VHS at library]

Sapolsky, R. (2009). Talk: The Uniqueness of Humans. Video available at: <http://www.ted.com/talks/lang/eng/robert_sapolsky_the_uniqueness_of_humans.html>

### No Class on Oct 11th: Fall Break. Classes rescheduled to *Thurs* Dec 1st

### Classes 5-11 Oct 18th-Nov 29th: Student-led Topics

Readings will depend on the particular topics chosen, and will be assigned by each group.

Please note that there is no class on Oct 11th, so class number and week number won’t line up perfectly.

### Class 12 *Thurs* Dec 1st: Final Topic (chosen by me) & Wrap-Up.

Reading TBA (someone please e-mail me if I haven’t posted this by week 8)

Please note that this is on a Thursday instead of a Tuesday due to the registrar’s schedule.

## List of Topics

There are many topics that we could cover in this course, and some will be of more interest to students than others. Students are welcome to propose additional topics, but these must be cleared with me as soon as possible – if you happen to read this before the semester starts then e-mail me your suggestion.

The readings with each topic are suggestions to give you an idea of where we might go with the discussions. They are not set in stone, and are subject to change. Each week’s group leaders are free to assign a different reading if they find something they think is more suitable, but this must be cleared with me well in advance (at least a week and preferably 2+) so that others have time to read the new assigned reading.

### Potential topics include (feel free to e-mail with additional suggestions):

The readings given are suggestions and are subject to change by the leading group.

1. Cooperation: Does natural selection mean that selfishness will always evolve?

R. Dawkins (1976) Nice guys finish first. Ch. 12 of The Selfish Gene, pp. 202-233. Oxford, UK: Oxford University Press.

Vogel, G. (2004). The evolution of the Golden Rule. Science, 303, 1128-1131.

Note: this section may be combined with the section on morality

2. Morality: Should evolution guide our moral systems? Why or why not? Can evolution say anything about what we are likely to perceive as being moral?

Krebs, D. L. (1998). The evolution of moral behaviors. In. C. Crawford & D. L. Krebs (Eds.) Handbook of Evolutionary Psychology: Ideas, Issues, and Applications, 337-368. Mahwah, NJ: Lawrence Erlbaum Associates.

Note: This section may be combined with the section on cooperation

3. Misuses of Evolution: Social Darwinism, Eugenics, and Scientific Racism

READING TO BE CHOSEN BY GROUP MEMBERS (I have some suggestions)

4. Darwinian Medicine: For all the future doctors (and patients!) out there…

Nesse, R. M., & Williams, G. C. (1998). Evolution and the origins of disease. Scientific American, 29(5), 86-93.

Zimmer, C. (2000). A precise horror. Ch. 4 from Parasite Rex: Inside the Bizarre World of Nature’s Most Dangerous Creatures. New York, NY: Touchstone.

Note: parasitism may be sufficiently “juicy” to warrant its own section if students desire

5. Rationality: Are humans rational? Why do we do what we do, & do we self-deceive?

Todd, P. (2001). Fast and frugal heuristics for environmentally bounded minds. In G. Gigerenzer & R. Selten (Eds.) Bounded Rationality: The Adaptive Toolbox, pp. 51-70. Boston, MA: MIT Press.

6. Human Nature: Does human nature even exist? If so, does it resemble Noble Savages or Lord of the Flies?

Boehm, C. (1999). The hominoid political spectrum. Ch. 6 of Hierarchy in the Forest: The Evolution of Egalitarian Behavior, pp. 125-148. Cambridge, MA: Harvard University Press.

7. Cultural Evolution: How does culture evolve and why?

Henrich, J., & McElreath, R. (2003). The evolution of cultural evolution. Evolutionary Anthropology, 12, 123-135.

Diamond, J. (1997). Farmer Power. Ch. 4 of Guns, Germs, and Steel. New York, NY: Norton.

Note: this topic may be combined with memes.

8. Memes: Viruses of the Mind: Do our ideas belong to us or to themselves?

R. Dawkins (1976) The Selfish Gene, Ch. 11 “Memes: The New Replicators”

D. Dennett (2002) TED talk on “Dangerous memes” <http://www.ted.com/talks/dan_dennett_on_dangerous_memes.html>

Note: this topic may be combined with culture.

9. Free Will and Determinism: Does evolution mean that free will is an illusion? What implications does this have? - READING TO BE CHOSEN BY GROUP MEMBERS

10. Art and Aesthetics: Can evolution tell us what we will prefer? Does this devalue art?

G. Miller (2000) The Mating Mind, Ch. 8 (Arts of Seduction);

Whitfield, J. (2006). Textual selection. Nature, 439, 388-389.

Optional: Salmon, C., & Symons, D. Warrior Lovers: Erotic Fiction, Evolution and Female Sexuality. London, UK: Weidenfeld & Nicolson.

11. Evolution and Consumerism: How does evolution affect market behaviour?

Miller, G. (2009). Ch. 1-2 of Spent: Sex, Evolution, and Consumer Behavior. New York, NY: Viking.

Griskevicius, V., Cantú, S. M., & Van Vugt, M. (2012). The evolutionary bases for sustainable behavior: implications for marketing, policy, and social entrepreneurship. Journal of Public Policy and Marketing, 31(1), 115-128.

12. Darwin and God: What does evolution have to say about religion and vice versa?

R. Sosis (2004) “The adaptive value of religious ritual”, American Scientist, 92, 91

Decision in Kitzmiller vs. Dover Area School District (Intelligent Design Debate)

13. Sustainability and/or Overpopulation: Are we doomed? Can we continue to grow indefinitely? What would happen with unlimited reproduction?

Hardin (1969) “The Tragedy of the Commons” Science, 162, 1243;

Kurt Vonnegut’s short story: *2BR02B*, from *Bagombo Snuff Box*

M. Ridley (1996) The Origins of Virtue Ch. 11. (Ecology as Religion);

14. Male-Female Relations: To what extent is the “Battle of the Sexes” really a battle?

Dawkins, R. (1976) Battle of the Sexes. Ch. 8 of The Selfish Gene

Wilson, M., & Daly, M. (1992). The man who mistook his wife for a chattel. In Barkow et al. (Eds.) The Adapted Mind: Evolutionary Psychology and the Generation of Culture, pp. 289-322. New York: Oxford University Press.

15. Law: What implications does evolution have for our legal systems?

Jones, O. D. (2005). Evolutionary Psychology and the law. In D. Buss (Ed.) Handbook of Evolutionary Psychology, pp. 953-974. Hoboken, NJ: John Wiley & Sons.

16. Politics & Political Systems: What implications does evolution have for politics?

TBA

17. Individuality: What constitutes an individual? When can a group be an individual?

Review Dawkins (1976) Ch. 1-4 of The Selfish Gene

Seeley, T., Visscher, P. K., & Passino, K. M. (2006). Group decision making in honey bee swarms. American Scientist, *94*, 220-229.

Marshall, J. A. R., Franks, N. R. (2009). Quick guides: Colony-level cognition. Current Biology, 19(10), R395-R396.