BIO358 | Biology & Human Social & Sexual Behavior
Summer 2019 Extended Session 1
May 28th – July 19th
This course satisfies the DEC Category H
Implications of Science
SBU Curriculum Category ESI and STAS
Evaluate and Synthesize Researched Information
Understand Relationships between Science or Technology and the Arts, Humanities, or Social Sciences

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This course is fast paced and comprehensive with the content and workload expected of an Upper Division University Course. Strong time management skills are required. Your critical thinking skills will be sharpened throughout the course!
Stony Brook University, SUNY, and Non-Matriculated Students are Welcome!

BIO 358 in the summer is administered entirely online except for:
Two required in-person exam sessions consisting of:
Exam 1 (Tuesday, June 18th from 6:30 to 8:15 PM) & Exam 2 (Tuesday, July 16th from 6:30 to 9:00 PM)
Exams are given on our West Campus at 100 Nichols Rd. Stonybrook, NY
(Register for Section 30)
Or at our Manhattan location at the SUNY School of Optometry at 33 West 42nd St.
NY, NY (Register for Section 60)
OR
Throughout the United States via approved Remote Test Center Sites (Register for Section 30).
Anyone wishing to schedule a remote test center exam should contact Prof. Souza for approval of the site prior to June 2nd.
See https://ncta.memberclicks.net/find-a-cctc-participant for potential sites near you.
Fees for remote test centers are the responsibility of the student and are paid to the test center directly.

COURSE DESCRIPTION:
We will explore, together, a powerful parsimonious and generalizable theory of human evolutionary origins that apparently succeeds in uniting the natural and social sciences. This theoretical view has come to be called “social coercion theory”. Unlike all theories that have gone before, social coercion theory gives us a complete, testable picture of how and why humans evolved to be such a radically new kind of animal within the process of natural selection. This theoretical command, in turn, provides unexpected new insights into many, diverse facets of human life. For example, we will learn why we have such expanded and sophisticated communication beyond the capabilities of other animals; why humans have been able to transform the planet as the dominant species we are; and why we approach life with such a strong ethical sense. This approach also gives us a theory of human social behavior and its logic.
of unprecedented power. This understanding of our behavior gives us deep insight into our history and, more importantly, our present condition. You are poised to join the next generation of community problem solvers. Achieving a new understanding of the present represents novel power over the human future. In overview, this course provides a unique level of insight into what it means to be human and how we might each take more humane command of our common global destiny.

Recommended Course Pre/co-requisites:
U3 or U4 (Junior or Senior) standing, and one of the following: BIO 101, BIO 115, BIO 201, BIO 202, or BIO 203 or equivalent

OVERALL COURSE OBJECTIVES:
There are two major objectives of this course:

1. Explore and understand a powerful evolutionary theory of the origin of human uniqueness, referred to as social coercion theory. Covered are the implications of this theory for our biological and social properties, our history, current economics, politics, and all the diverse empirical evidence used in testing this theoretical view. The scientific implications are profound, not only for our unique properties as biological creatures, but also for the human present and future. Social coercion theory allows us to unite the social and natural sciences into a single, coherent whole.

2. Engage students of all disciplines in the process of scientific critical thought – learn to reinterpret existing empirical evidence depending on a theoretical framework. Learn to subject all interpretations to skeptical, informed public questioning (social doubt).
   Learn when and how prior theories are displaced by those that are more parsimonious, have more predictive power, and are more generalizable.
   In pursuit of this second objective, via online discussions, you will be asked to think critically and debate varying interpretations of the empirical evidence based on theory and in relation to the science being brought to your attention.
   You will be asked to fully understand the claims of the specific theory we will explore and the evidence presented. You will find that you are sometimes called on to reinterpret some insights and evidence you have learned previously from other perspectives and in other courses. This exploration and reinterpretation will enrich and expand your understanding of humans – our origins, properties and history – while enhancing your understanding of how science works by adding your potential contributions to it. This course will give engaged students new insights of both personal and global relevance.

COURSE LEARNING OBJECTIVES:
This course meets the learning objectives for DEC H Requirements and SBU Curriculum Categories ESI and STAS

Students should expect to emerge from this course understanding the following:
1. How natural selection works to build bodies, minds, and behaviors of individual organisms, including humans
2. How to approach scientific problems through the tools of the natural sciences, including how complexity emerges from hierarchically nested combinatoriality and the application of effective reductionist explanation
3. How to apply falsification (and falsifiability) as one of the foundational tools of scientific theory building/testing
4. How to put differing theoretical views in competition with each other using the requirements of fecundity, parsimony, and generalizability
5. Understand the ubiquitous conflict of interest problem pervading the Malthusian world of biological individuals.
6. Understand how humans “unintentionally” evolved capacities leading to our unprecedented management of the conflict of interest problem resulting, in turn, in our uniquely large-scale non-kin social cooperation – thereby arriving at the social coercion theory of human uniqueness
7. Understand how to study the emergence of humans as a unique species of animal 1.8 million years ago, including how to analyze the fossil record and evidence from paleontology and archeology
8. Understand our different evolved life history design and sexual behavior when compared to non-human animals
9. Be able to distinguish between proximate and ultimate causation in evolved behaviors as we look at social behavior emerging from our biology
10. Understand the relationship between empirical correlation and the arrival at causal theory
11. Evaluating alternative models for the evolution human uniqueness including language-first, bipedalism-first, and large brain-first hypotheses
12. Understand how a powerful theory of history emerges from social coercion theory, including practically important predictions about the importance of democratized social systems and the pathology of hierarchical social systems
13. Understand the ultimate causal basis of the dramatic, but sporadic increases in human adaptive sophistication and the potential for future taming of this process on behalf of humane, pan-global human welfare.
14. Understand how a biological evolutionary understanding can unite the social and natural sciences in ways that can provide insight into improving human welfare.

Students will research and read scholarly articles and discuss and debate differing point of views as they hone the skills of group work, scientific thought, and professional written presentation of their work through discussion board requirements.

**COURSE REQUIREMENTS:**

**Attendance and Make Up Policy:**
- This is an asynchronous online course with specific coursework due dates as detailed in the course schedule. There are also 2 in-person live exams (See Page 1 above) - Policy for late work: This course grading has built in flexibility; therefore, no make-ups for any part of the grading are required or permitted.
- This course grading drops one equiz grade; therefore, no late submissions or make-ups are permitted.

**Textbook Requirements:**
1. **4-month DIGITAL EDUPAK subscription** produced by Rothman Media, Inc. and distributed through Streaming Tutors, Inc.
   a. May be purchased online from the publisher directly at [http://www.streamingtutors.com](http://www.streamingtutors.com)
   b. Broadband or DSL Internet access is required to use the digital EDUPAK.

**PLEASE NOTE:** Prior used copies of this digital textbook will not work and are not supported. Do not buy a used copy. **BE SURE TO READ THE TECHNICAL REQUIREMENTS UNDER THE TEXTBOOK BUTTON ON BLACKBOARD BEFORE PURCHASING.**

The textbook contains digitized lectures given and prepared by Professors Bingham and Souza, animations, a full glossary, study questions, and various other interactive assets.

2. **Written Text:** Bingham, P.M. & Souza, J. (2009). *Death from a Distance and the Birth of a Humane Universe: Human Evolution, Behavior, History and Your Future*

   **Purchase options:**
   a. Hard copy text – can be purchased directly from Amazon.com for @ $25.99

   Book website at [www.deathfromadistance.com](http://www.deathfromadistance.com)
3. THE ADDITIONAL OPTIONAL READINGS BELOW ARE PROVIDED AS PDFS THROUGH THE BLACKBOARD SYSTEM AND ARE RECOMMENDED READING

Note: These are copyrighted materials and should not be copied or disbursed outside of this class.

1. Overview of theories of human evolution, properties and history:

2. Human kin-selected behavior
Chapters from *Homicide* (1988) Daly and Wilson

3. Human sexuality
Chapters from *Sperm Wars* (1996) Robin Baker

4. Non-human animal culture


6. In addition, an extensive reading list will be provided to allow students to explore individual interests beyond the immediate scope of the course.
Available at DemarcoBio358Readinglist.xls (27.5 Kb) on the Blackboard site

**COURSE GRADING:**

The course will be graded on a curve. The total possible points for the course are 1000. Out of the first TWO items below (Exam 1 or the total of your best six equiz scores), we will drop your lowest TOTAL score. The final exam and the DISCUSSION BOARD totals may NOT be dropped.

**BECAUSE OF THESE OPTIONS TO DROP AN ITEM, THERE WILL BE NO MAKEUPS FOR THE FIRST EXAM AND NO MAKEUPS for ANY EQUIZ.** There are 7 equizzes, and we drop the lowest score counting 6 scores so if you miss one, that is the one that will be dropped. WE STRONGLY ADVISE YOU TO PARTICIPATE IN ALL SECTIONS OF GRADING SO YOU MAINTAIN YOUR OPTION TO HAVE YOUR LOWEST SCORE DROPPED. This grading provides built in flexibility, so no additional flexibility is offered.

*The details of the four elements listed above are as follows*
Out of Items 1 and 2, the lowest grade will be dropped

1. **Exam 1** – Tues., June 18th 6:30 – 8:15PM (Week 4) (West Campus, Manhattan campus or pre-arranged remote test center)
   Topics 1-10: multiple choice – 30 questions (potential 300 points, approx. 30% of your grade).

2. **Equizzes**- Grades for your best 6 open book equizzes given through the Blackboard site under each week’s assignment. Each quiz consists of 10 questions (Possible 300 points - approx. 30% of your grade). Each Equiz may be submitted only once. (We drop the lowest equiz score of the 7 assigned, counting the best 6 scores)
   Each equiz contains 10 questions and each question is worth 5 points for a possible total of 50 points per quiz.
   These quizzes are designed to help you test your understanding of the unfolding course material each week. Moreover, these quiz questions and the feedback provided will be valuable study aids for the examinations.

Each week, on Wednesday (starting in Week 1, May 29th), the equiz will be available through the following Sunday at midnight on the course Blackboard site under EQUIZZES.
(See schedule on ASSIGNMENTS within Blackboard.) Each quiz will be based on that week’s lectures and assignments. Detailed feedback on the equiz will be available the following week after everyone has completed the quiz.

The two items below may NOT be dropped.

3. **Exam 2** – Tues, July 16th 6:30 – 9:00PM (Week 8) (West Campus, Manhattan campus or pre-arranged remote test center)
Topics 11-24: multiple choice - 40 questions (400 points - 40% of grade).

4. **Discussion Posts:** THERE ARE 6 DISCUSSION POSTS DUE on Blackboard. Each post is worth 50 points EACH – POSSIBLE 300 POINTS (30% of grade). There are NO dropped posts and no late posts are accepted so be sure to time manage well during the week.

Posts are due WEDNESDAY each week at midnight EST (end of the day.) and cover the material from the PRIOR week.

See the discussion board grading rubric for all grading criteria for all discussion posts.
Examples of commendable, satisfactory, and poor posts will be available through the Blackboard site under Course Information along with the rubric to assist in guiding you.

This section of the course is where most students enjoy the critical thinking work and the relevance to the larger scientific enterprise and the world around you. However, be sure all posts are your own work. They will be checked through Safe Assign for potential plagiarism. Please be sure to reference all outside sources appropriately and correctly according to any accepted academic style. Please see the Academic Honesty portion of this syllabus.

Student discussion and engagement in the course material is a valuable tool both for you and for us as instructors.

**OBJECTIVES** of the group discussions are as follows:
- To give you an opportunity to utilize critical thought and to learn to interpret empirical evidence based on theory.
- To give you an opportunity to debate each other regarding varying interpretations
- To give you a forum to utilize the scientific method – and of achieving mastery and personal ownership of a body of knowledge. You will have the opportunity herein to sharpen your scientific and intellectual-critical skills.

**ALL DISCUSSION POSTS will be entered into plagiarism check software and all suspicious posts will be turned over to Academic Judiciary and may result in an F for the course.**

We hope you will enjoy the discussions and post more than the required amount to engage in the learning process. Previous students have told us they learned a tremendous amount by engaging the course material in this format.

**RULES OF THE GAME FOR DISCUSSIONS**
Please be aware that the information provided by other students in your group is not necessarily correct information. The purpose of discussion groups is to give you the chance to clarify your understanding and sharpen your intellectual skills. Authoritative factual information for EXAM purposes comes from lecture, the textbook, lecture Power Points, and faculty responses to discussions, which will be provided the week after your discussion with your colleagues is over. This is important to remember when studying for exams.
The following behaviors during Group Discussion are unacceptable and will result in your being excluded from Discussion Group and forfeiting that portion of your grade that week.

- Using abusive, disrespectful or foul language.
- Using sexually suggestive language (either explicit or implicit) that could be perceived as offensive or harassing.
- Threatening others.
- Insulting others or denigrating the opinions of others. Of course, you may respectfully, even strongly, disagree or challenge the opinions of others; but, we attack positions, NEVER individuals in scientific debate.
- If any inappropriate behavior of the sort listed above should occur, the offender will be issued one and only one warning. A second offense will be grounds for excluding the offender from Discussion Group and forfeiting all his/her credit for this course requirement.
- Plagiarism of any sort – either copied work from other sources or from other student’s posts – will not be tolerated. There is zero tolerance for plagiarism of any sort. All quoted material must reference the source. Discussion posts should be in your own words. If any quotes are used they must be in quotes and referenced appropriately. Also see our Academic Honesty statement at the end of this syllabus.
- Any academic dishonesty will be reported to the Academic Judiciary and can result in an F in the course.

OFFICE HOURS AND CONTACT INFORMATION:

E-mails: joanne.souza@stonybrook.edu paul.bingham@stonybrook.edu

1. A virtual office hours will be available for this course where students may wish to converse directly with the instructors by appointment through video conference and or/phone conversations. Headsets and a microphone will be needed. A webcam is nice, but not required. Email to set up an appointment and for instructions.
2. There will be an Administrative Questions Forum under the Discussion Group button on the Blackboard site where students may ask administrative questions of the instructors. If you have a question, chances are many of your colleagues may have the same question. The instructors will answer these questions within 48 hours of posting.
3. There will be a Content Questions Forum where you may ask any content related questions. Either faculty or you teaching assistants will respond within 24-48 hours.
4. You may also email to make an appointment for a telephone conference or an on campus meeting with the instructors, if applicable.
5. For confidential matters, please feel free to contact us via email at the above email address or to set up an appointment via video conference or telephone.

Americans with Disabilities Act:

Americans with Disabilities Act/Student Accessibility Support Center Statement:
If you have a physical, psychological, medical or learning disability that may impact your course work, please contact Student Accessibility Support Center, ECC (Educational Communications Center) Building, Room 128, (631) 632-6748. They will determine with you what accommodations, If any, are necessary and appropriate. All information and documentation is confidential.
https://www.stonybrook.edu/commcms/studentaffairs/sasc/current_students/accommodation.php

Students who require assistance during emergency evacuation are encouraged to discuss their needs with their professors and Student Accessibility Support Center. For procedures and information go to the following website:
Academic Integrity:
Each student must pursue his or her academic goals honestly and be personally accountable for all submitted work. Representing another person's work as your own is always wrong. Faculty is required to report any suspected instances of academic dishonesty to the Academic Judiciary. Faculty in the Health Sciences Center (School of Health Technology & Management, Nursing, Social Welfare, Dental Medicine) and School of Medicine are required to follow their school-specific procedures. For more comprehensive information on academic integrity, including categories of academic dishonesty please refer to the academic judiciary website at: https://www.stonybrook.edu/commcms/academic_integrity/

Critical Incident Management:
Stony Brook University expects students to respect the rights, privileges, and property of other people. Faculty are required to report to the Office of University Community Standards any disruptive behavior that interrupts their ability to teach, compromises the safety of the learning environment, or inhibits students' ability to learn. Faculty in the HSC Schools and the School of Medicine are required to follow their school-specific procedures. Further information about most academic matters can be found in the Undergraduate Bulletin, the Undergraduate Class Schedule, and the Faculty-Employee Handbook.

Course Content:
Course material accessed from Blackboard, SB Connect, SB Capture or a Stony Brook Course website is for the exclusive use of students who are currently enrolled in the course. Content from these systems cannot be reused or distributed without written permission of the instructor and/or the copyright holder. Duplication of materials protected by copyright, without permission of the copyright holder is a violation of the Federal copyright law, as well as a violation of Stony Brook's Academic Integrity and Student Conduct Codes http://www.stonybrook.edu/uaa/academicjudiciary/policies.shtml (you may have to copy and paste the address in a browser).
BIO358 Online
Course Schedule

(Each TOPIC is an ~one hour lecture video available online through the digital EDUPAK website. Italicized entries are readings from the hardcopy textbook Death from a Distance and the Birth of a Humane Universe that correlate with the video material)

WEEK 1: Tues., May 28th – Sun., June 2nd
See Assignment 1 on Blackboard
Equiz 1 (Topics 1-3) available Wed. May 29th, Due Sunday, June 2nd
Discussion Post 1 (Introduction & Exam Location post): Due Wed. May 29th

1. Orientation and Academic Integrity Videos – REQUIRED

2. [TOPIC 1A & B]: Introduction to Human Uniqueness and Social Coercion Theory
   Death from a Distance and the Birth of a Humane Universe (DfaD): Introduction (pg. ix-xvii; Kindle Location No. 232-415), Chapter 1 (pg. 1-17; Kindle Location No. 415-725)

3. [TOPIC 2A & B]: We know what life is – a particular case of chemistry.
   DfaD: Chapter 2 (pg. 18-34; Kindle Location No. 725-1041)

4. [TOPIC 3A & B]: Evolving genes and the animals they build
   DfaD: Chapter 2 (pg. 18-34; Kindle Location No. 725-1041)

WEEK 2: Mon., June 3rd – Sun., June 9th
See Assignment 2 on Blackboard
Equiz 2 (Topics 4-7) available Wed. June 5th, Due Sunday June 9th
Discussion Post 2 (Topics 1-3): Due Wed. June 5th

1. [TOPIC 4A & B]: How and how fast does natural selection work in sexual animals
   DfaD: Chapter 2 (pg. 18-34), Second Interlude (pg. 240-243)
   Kindle Location No. 725-1041, 4551-4594

2. [TOPIC 5A & B]: How natural selection produces animal cooperation
   DfaD: Chapter 3 (pg. 35-60 and 65-66)
   Kindle Location No.1041-1516 and 1594-1621
   Watch Topic 5 Supplement Video on SteamingTutors: Genetic Relatedness is not Genetic Identity

3. [TOPIC 6A & B]: Kin-selected behaviors in humans.
   DfaD: Chapter 4 (pg. 67-90; Kindle Location No.1621-2075)

4. [TOPIC 7A & B]: Kinship-independent social cooperation – the fundamental, unique human adaptation.
   DfaD: Chapter 5 (pg. 91-119; Kindle Location No. 2075-2621)

WEEK 3: June 10th – June 16th
See Assignment 3 on Blackboard
Equiz 3 (Topics 8-10) available Wed. June 12th, Due Sun. June 16th
Discussion Post 3 (Topics 4-7): Due Wed. June 12th

5. [TOPIC 8A & B]: How and when we became human – fossil record 1
   DfaD: Chapter 7 (pg. 147-201 and 203-204)
   Kindle Location No. 3069-3865 and 3880-3934
1. **[TOPIC 9A & B]**: How and when we became human – fossil record 2  
   *DfAD: Chapter 7 (pg. 147-201 and 203-204)*  
   Kindle Location No. 3069-3865 and 3880-3934

2. **[TOPIC 10A & B]**: The human village and life history evolution  
   *DfAD: Chapter 6 (pg. 120-146; Kindle Location No. 2621-3069)*  
   Watch Topic 10 Supplement Video on StreamingTutors: More on Babyhood

   **WEEK 4: June 17th – June 23rd**  
   See Assignment 4 on Blackboard  
   NO DISCUSSION POST DUE

   **EXAM 1: Tues., June 18th – 6:30-8:15 PM Covers Topics 1-10**

3. **[TOPIC 11A & B]**: Sexuality in the human village 1  
   *DfAD: First Interlude (pg. 205-208; Kindle Loc. No. 3934-3988),*  
   *Chapter 8 (pg. 209-239; Kindle Loc. No.3988-4551)*

4. **[TOPIC 12A & B]**: Sexuality in the human village 2  
   *DfAD: Chapter 8 (pg. 209-239; Kindle Location No. 3988-4551)*

5. **[TOPIC 13A & B]**: Human language – cooperation and information exchange – I.  
   *DfAD: Chapter 9 (pg. 244-276; Kindle Location No. 4594-5173)*

   **WEEK 5: June 24th – June 30th**  
   See Assignment 5 on Blackboard  
   Equiz 5 (Topics 14-16) available Wed. June 26th, Due Sunday June 30th  
   Discussion Post 4 (Topics 11-13): Due Wednesday, June 26th

6. **[TOPIC 14A & B]**: Human language – cooperation and information exchange- II  
   *DfAD: Chapter 9 (pg. 244-276; Kindle Location No. 4594-5173)*

   *DfAD: Chapter 3 (pg. 61-65; Kindle Loc. No. 1515-1549),*  
   *Chapter 10 (pg. 277-320; Kindle Loc. No.5173-5944)*

   **WEEK 6: July 1st – July 7th**  
   See Assignment 6 on Blackboard  
   Equiz 6 available Wed. July 3rd, Due Sun. July 7th  
   Discussion Post 5 (Topics 14-16): Due. Wed. July 3rd

8. **[TOPIC 17A & B]**: Introduction to the powerful new theory of history that emerges from social coercion theory  
   *DfAD: Chapter 7 (pg. 201-202; Kindle Loc. No. 3880-3911),*  
   *Third Interlude (pg. 321-328; Kindle Loc. No. 5944-6063),*  
   *Chapter 11 (pg. 329-331; Kindle Loc. No. 6063-6109)*

9. **[TOPIC 18A & B]**: The behaviorally modern human revolution as an historical process  
   *DfAD: Chapter 11 (pg. 329-359; Kindle Location No. 6063-6578)*

10. **[TOPIC 19A & B]**: The bow and the Neolithic (“agricultural”) revolutions  
    *DfAD: Chapter 12 (pg. 360-379 and 385-392)*  
    Kindle Location No. 6578-6908 and 6990-7109
4. **[TOPIC 20A & B]:** Body armor, shock weaponry and the rise of the archaic state  
   *DfaD* Chapter 13 (pg. 414-433; Kindle Loc. No. 7494-7819)

**WEEK 7: July 8th – July 14th**  
See Assignment 7 on Blackboard  
Equiz 7 available Wed. July 10th, Due Sun. July 14th  
Discussion Post 6 (Topics 17-20): Due. Wed. July 10th

1. **[TOPIC 21A & B]:** Democratization, hierarchy and social psychology  
   *DfaD* Chapter 10 (pgs. 303-306; 309-319)  
   Kindle Location No. 5647-5695; 5752-5932)

2. **[TOPIC 22A & B]:** Gunpowder and the emergence of the modern state  
   *DfaD*: Chapter 14 (pg. 473-502; Kindle Location No. 8539-9063)

3. **[TOPIC 23]:** Aircraft, missiles and the pan-global human coalition  
   *DfaD*: Chapter 15 (pg. 503-536; Kindle Loc. No. 9063-9702),  
   Chapter 16 (pg. 539-562; Kindle Loc. No. 9737-10115),  
   Chapter 17 (pg. 563-582; Kindle Loc. No. 10115-10445)

3. **[TOPIC 24]:** Final considerations-The contemporary world and a humane future.  
   *DfaD*: Fifth Interlude (pg. 537-539; Kindle Loc. No. 9702-9737),  
   Chapter 17 (pg. 582-616; Kindle Loc. No. 10115-11034),  
   Postscript (pg. 617-623; Kindle Loc. No. 11034-11149)

**WEEK 8: July 15th – July 19th**  
See Assignment 8 on Blackboard

*EXAM 2: Tuesday, July 16th 6:30 - 9:00 PM (West Campus, Manhattan campus or previously scheduled remote center)*  
*Covers Topics 11-24*