

PSY 471: Nature / Nurture

Fall 2019: Mondays & Wednesdays, 11:00am–12:20pm, LSP 130

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Office Hours: Tuesdays from 10:00–11:30 & Wednesdays from 1:30–3:00 (or by appointment)

Course Description

One of the most enduring disputes in the field of psychology concerns the degree to which psychological traits are learned or innate. Are genes or socialization responsible for heightened rates of aggression in men? How do biological and environmental factors interact to produce language? Is culture an evolved adaptation? Does it make any sense at all to partition the causes of thinking and behavior into “nature” and “nurture” – or is this a wholly false dichotomy? Throughout this course, we will draw upon cutting-edge research to evaluate a range of theoretical perspectives on the interplay of nature and nurture. We will also discuss the myriad sociopolitical ramifications of this fundamental debate.

Course Objectives

By the end of the semester (provided regular attendance, active participation in class discussions, assiduous completion of all assignments, and adherence to all other class policies), you will attain and cultivate the skills needed to achieve the following objectives:

- **Understand** a range of perspectives on the contributions of nature and nurture to shaping psychology.
- **Evaluate** empirical evidence to formulate a stance on the validity of conflicting theoretical perspectives.
- **Synthesize** material by bridging theory and data to construct holistic and innovative arguments.
- **Apply** a broad theoretical framework to a specific psychological phenomenon of interest.
- **Communicate** ideas by honing your abilities to confidently converse about psychological literature.

Course Requirements and Grading

You will be assessed by your performance on the following assignments, detailed below (1,000 points total):

Paper Preparation	Final Paper	Thoughtful Participation	Reading Reflections	Midterm Exam	Final Exam	Topic Workshops
75 pts.	350 pts.	200 pts.	15 pts. (x 10)	75 pts.	100 pts.	25 pts. (x 2)

Letter grades will be assigned as follows (decimals will be rounded to the nearest whole number):

A 93–100	A- 90–92	B+ 87–89	B 83–86	B- 80–82	C+ 77–79
C 73–76	C- 70–72	D+ 67–69	D 63–66	D- 60–62	F 0–59

N.B.: *You are not your grade.* Your grade reflects an assessment of your mastery of course material; it is not an assessment of your worth as a human being.

Important Dates

Sept. 4	Sept. 11	Sept. 25	Oct. 18	Nov. 8	Nov. 15	Nov. 25	Dec. 15
Last day to add classes	Last day to drop classes	Last day to elect P/NP option	Paper outline due	Peer reviews due	Paper draft due	Last day to withdraw (with record)	Final paper due

Term Paper

The ubiquity of the nature/nurture debate is a testament to its relevance to nearly all psychological phenomena. For your primary class assignment, you will have the opportunity to apply the course materials to a topic of your choice in a paper that you will work on throughout the duration of the semester. You have many options for the content and format of your paper, but you will be required to adhere to the following overarching requirements:

- 1) You must synthesize information from both theoretical and empirical articles, including the assigned readings and papers/books that you find on your own. You should aim to include at least 15 sources.
- 2) Your paper should be submitted electronically to Canvas as a Word document. You are responsible for ensuring that you successfully upload a correct and readable document by the deadline (December 15th).
- 3) You should follow APA style guidelines and submit a final paper of approximately 4,500 ($\pm 1,000$) words.

Possible topics include (but are not limited to!) the following:

Language	Gender identity	Religiosity	Mood disorders	Folk biology
Extraversion	Theory of mind	Social learning	Visual cognition	Political ideology
Implicit bias	Autism	Numerical cognition	Prosociality	Stress and anxiety
Intelligence	Motor skills	Food preferences	Sexual desires	Schizophrenia

Options for formats include (but are not limited to!) the following:

1) Grant proposal: Propose a line of research that addresses an unanswered question about the influences of nature and nurture on your chosen phenomenon. Motivate your hypothesis with the existing research literature, and then describe a methodology for testing your hypothesis. Finally, motivate the theoretical and practical importance of funding your research proposal.

2) Literature review: Take a stand on how nature and nurture should best be understood as contributing to your chosen phenomenon, and review the relevant research literature to evaluate the degree to which existing evidence supports (and has been interpreted to support) your position.

3) Policy brief: Identify an existing policy (e.g., affirmative action, educational standards) that is directly or indirectly influenced by assumptions about your chosen phenomenon. Make an argument to a legislator or an agency, explaining how current scientific understanding of nature and nurture provides grounds for altering the current policy and providing recommendations for a modified policy.

You will receive two grades on your paper. The primary grade (350 points) will be an assessment of the final product that you submit at the end of the semester. The other grade (75 points) will be a measure of the progress you make on your paper throughout the semester, which will not be linked to the quality of the paper itself, but will instead be earned by working steadily and adhering to the following steps along the way:

- 1) Share a Google Doc on which you continuously record your insights throughout the semester.
 - a. You should read a minimum of 1–2 papers per week on your chosen topic and note what you have learned by creating an annotated bibliography, summarizing the readings, drafting paragraphs for your paper, or whatever other method is most helpful to you. You should aim to add at least 250 words to your Google Doc each week.
 - b. Obtain feedback at least once per month by meeting with me and/or “assigning” me to answer a question on your Google Doc (this can be done by adding “+jrottman@fandm.edu” to a comment). I will also periodically check on your Doc to ensure that you are making steady progress.
- 2) By October 18th: Upload a tentative thesis statement and carefully considered outline to Canvas.
- 3) By November 8th: Provide evidence or a written statement that you have received substantive feedback from at least one classmate and that you have provided substantive feedback to at least one classmate.
- 4) By November 15th: Upload a polished draft to Canvas.

Thoughtful Participation

The success of this course depends heavily on your contributions to our class discussions. Also, as research has convincingly shown¹, you will learn more effectively by actively participating in these discussions. You are expected to come to class prepared to discuss all of the readings critically and creatively, by making intelligent claims, raising objections, and asking thought-provoking questions that range from specific critiques of a particular methodology to big-picture applications of a body of findings. To give everybody an equal opportunity to receive full credit, I may sometimes refrain from calling on frequent participators. I will also frequently institute random cold calling, but I will typically provide you time to prepare for this by giving you time for free writing or pair sharing. Side conversations during class are strongly discouraged and will result in penalties on your participation grade. Please respect a diversity of opinions and questions, and aim to contribute constructively and considerately.

You are expected to bring all assigned readings with you, and it will often be helpful to bring relevant readings from previous classes, as well as any notes you have taken. Printing out your weekly Reading Reflection (see below) will also help you to contribute to discussions. Because consistent attendance is necessary for you to have the opportunity to participate in class, frequent absences will negatively impact your participation grade.

Your participation grade will primarily reflect the quality – rather than quantity – of your in-class comments, including how well you respond to classmates and actively encourage their participation. An excellent grade will be earned by reliably participating in thoughtful ways that reveal intellectual acuity and a deep engagement with the material; by always displaying preparation, having thought critically about all assigned readings and formulated discussion questions before class; by respectfully listening to others and generously responding to their contributions, thus approaching discussion as a collaborative activity; and by making sophisticated connections that consistently elevate the level of discussion.

Reading Reflections

By 2:00pm on each Sunday before class (from September 1st through December 1st and with the exception of the two exam/holiday weeks), you will be required to write a 300-word (±150 words) reflection on the assigned readings. Each of these reflections will be worth 15 points. Your highest 10 responses will be counted toward your grade; you may therefore replace your two lowest scores (or take two “free passes”). Any reflections submitted between 2:00pm and midnight will receive 50% credit; after this time, no credit will be granted.

Possible content includes raising questions about particularly confusing aspects of the readings, remarking on applications to your life or the lives of others, noting contradictions or agreements between different readings, suggesting potential follow-up research, or critiquing methods or conclusions in the readings. You may also tie the readings to your chosen paper topic, such that you are able to reuse elements of these reflections in your final paper. At the end of your reflection, you should pose at least one open-ended discussion question for the class. Because these reflections are somewhat brief, it is crucial that you do not include irrelevant details, that you do not spend too much time summarizing, and that each sentence demonstrates thoughtfulness. The purpose of these reflections is threefold: allowing me to ensure that you complete the readings before each class, allowing me to detect misconceptions of the assigned readings, and allowing you to reflect on and critically interrogate the material before arriving in class.

Typically, I will grade these reflections by the beginning of Mondays’ class. Because of this quick turnaround, I will not be able to provide extensive written feedback on these reflections – but I am very happy to discuss your grades or strategies for improvement at any time. I encourage you to take advantage of this by visiting me in my office.

¹ See, for example, Howard, J. R. (2015). *Discussion in the college classroom*. San Francisco, CA: Jossey-Bass.

Midterm and Final Exams

A primary focus of this class will consist in overcoming misunderstandings and gaps in knowledge related to “nature”, “nurture”, and their interaction. Across two exams (consisting of a mixture of multiple-choice, short answer, and essay questions), you will be assessed on your progress in building new perspectives from which to appreciate this complex theoretical landscape. These exams will be open-book and open-note; you may use any non-electronic aids that you would like to bring to class (N.B., this does not mean that you will be able to earn a high grade without studying). You will not be assessed on your memorization of isolated facts, but rather on your ability to synthesize and apply the information that you have learned, which will require a deep understanding of the material. In both exams, you will additionally be assessed on your meta-awareness of how your understanding has changed since the beginning of the semester. The final exam will be cumulative.

Topic Workshops

Twice during the semester, you will lead a 15-minute workshop on an issue related to your final paper topic. Ideally, this workshop should relate to the readings that are assigned for the week, but exceptions may be granted on a case-by-case basis. The purpose of these topic workshops is for you to obtain peer support in collaboratively thinking through a difficult issue that is in some way related to your final paper. The structure is flexible, and you should take use the time in whatever way will be most productive for you. For example, the session could take one of the following forms (although it is not limited to these suggested options):

- 1) Considering various connections between your final paper topic and the week’s assigned readings.
- 2) Talking through a confusing empirical journal article that you have read about your chosen topic.
- 3) Discussing possible strategies for synthesizing or resolving findings across multiple journal articles.
- 4) Soliciting feedback on ways to narrow down a paper topic or ideas for searching for relevant literature.
- 5) Brainstorming study designs that could test a particular theoretical hypothesis in your topic domain.
- 6) Grappling with ways to create bridges between research findings and theoretical perspectives.
- 7) Thinking about how to interpret a set of studies in accordance with a particular theoretical lens.
- 8) Discussing practical implications of particular theoretical perspectives or empirical findings.
- 9) Working through various ideas for the thesis statement or general structure of your paper.
- 10) Obtaining feedback on an outline or a paragraph from a working draft of your paper.

These workshops do not need to take the form of formal presentations, although they can include some initial slides and lecture elements if it is helpful – particularly if you are discussing a paper for which it would be useful to provide a brief exposition.

In order to maximize the effectiveness of your topic workshops, you are required to email me with a short “lesson plan” (or set of several possibilities) at least one week in advance, at which point I will either approve the choice or suggest alternative strategies. You are additionally encouraged to meet with me at least two days in advance of your presentation date to discuss your plans and to resolve any questions you may have.

Opportunities for Extra Credit

You may earn up to 20 extra credit points during the semester through any combination of the options below. Additional bonus opportunities may also arise, providing the potential to earn even more extra credit.

- Each time you email a paragraph-length description of a relevant talk that you attended (e.g., Common Hour), you will earn 3 extra credit points.
- Each time you email a paragraph-length description of a relevant news article, television show, or movie, accompanied by a paragraph detailing the connections to class content, you will earn 2 extra credit points.
- Each time you visit the Writing Center for assistance on a paper, you will earn 2 extra credit points.

Course Policies

Academic Integrity: I take academic honesty **very seriously**. You risk severe consequences by committing acts of plagiarism (i.e., representing someone else's work as your own), cheating, falsification, impersonating, or other similar offenses, including facilitating another student in committing an act of academic dishonesty. Penalties for these offenses will be assessed on a case-by-case basis, and may include receiving a failing grade or expulsion from F&M. Please refer to the College Catalog for additional details.

Grading Policies: Given the nature of the class assignments, late submissions are generally not possible. You will lose 10% of your grade on your final paper for every day it is late, and your Paper Preparation grade will be negatively impacted by delays. However, you have a "free gift" that you may use once during the semester: a 48-hour, no-penalty extension on submitting the outline, draft, or final version of your term paper. In extreme cases when unexpected and unavoidable circumstances prevent you from completing an assignment on time, please inform me as soon as possible and I will use my discretion to determine whether to waive or attenuate the late penalty. Makeup exams will be administered without penalty only in extreme circumstances, and only when advance notification (when feasible) has been duly given.

If you receive a grade that is inconsistent with what you believe you should have earned, you have a week to set up an appointment with me to appeal your grade. When scheduling this appointment, you must submit a written statement explaining your case. After one week has passed, all grades will be considered final.

Policy on Electronic Devices: To maximize your success and minimize distractions for you and your classmates, **you may not use ANY electronic devices during class**. Research has indicated this will be likely to enhance your learning.² Exceptions will be granted for students with compelling reasons for using a laptop or other device to take notes (if this is the case, please schedule an appointment to speak with me privately at the beginning of the semester).

Academic Accommodations: I strive to provide an environment that is equitable and conducive to achievement and learning for all students. I invite you to speak with me about your individual learning needs so that we can discuss how this course can accommodate them. Formal academic accommodations are available for students who require them. Please schedule an appointment immediately to discuss any accommodations that have been supported by appropriate documentation and approved by the Office of Student Accessibility Services. All information will be kept confidential.

Communication: Email is the best way to reach me. I will generally respond within 24 hours. I will also be available to talk in my office during the times listed at the top of the syllabus, by appointment, and anytime when my door is open. I strongly encourage you to take advantage of this, particularly in cases when you need further clarity on an assignment or when course material has made you uncomfortable in any way. While mild discomfort is often a positive indication of personal and intellectual growth, please come speak to me immediately if you experience (or anticipate experiencing) more severe forms of distress. If any issues arise that have the potential to interfere with your success in the course, please be in touch with me as soon as possible. I value open communication, and I invite you to be frank with me.

Tips for Success: This class will be intensive. You will be expected to consistently keep up with all of the readings and to assimilate and synthesize a lot of difficult material. This will often require spreading readings across several days preceding each week and re-reading material after classes. **I am here to help you succeed**, and I urge you to come talk to me about concerns or confusions regarding the course material and assignments, or anything that affects your ability to achieve your academic goals. Your classmates can also be great resources; reaching out to them can be a fun and collaborative way to learn. In particular, swapping paper drafts to receive informal peer evaluations is an acceptable and encouraged practice to improve your writing. Additionally, please take advantage of the many other resources that F&M has to offer! The Writing Center can assist you with writing and other academic skills. The College Librarians, particularly Scott Vine, will be able to assist you with finding relevant literature. Finally, a number of resources are available to support your wellbeing, including DipCares, the House Deans, and the Student Wellness Center. If any issues arise that have the potential to interfere with your success in the course, please be in touch with me as soon as possible.

² See, for example, Mueller, P.A., & Oppenheimer, D.M. (2014). The pen is mightier than the keyboard: Advantages of longhand over laptop note taking. *Psychological Science*, 25(6), 1159–1168; Sana, F., Weston, T., & Cepeda, N.J. (2013). Laptop multitasking hinders classroom learning for both users and nearby peers. *Computers & Education*, 62, 24–31.

Semester Schedule

*Components of this schedule are subject to change; please check Canvas regularly for updates.
Please bring hard copies of all required readings to class with you each day.*

Date	Lecture Topic	Reading Assignments (to be completed before each class)
Nature Vs. Nurture		
8/28	The history of “nature” and “nurture”	Course syllabus.
9/2 & 9/4	Characterizing the nature/nurture debate	Prinz, J. J. (2012). <i>Beyond human nature: How culture and experience shape the human mind</i> (pp. 1–14). New York, NY: Norton. Pinker, S. (2002). <i>The blank slate: The modern denial of human nature</i> (pp. vii–xi, 14–26). New York, NY: Penguin.
9/9 & 9/11	Heritability: Prying apart genes and environments	Pinker, S. (2002). <i>The blank slate: The modern denial of human nature</i> (pp. 45–51, 372–399). New York, NY: Penguin. Prinz, J. J. (2012). <i>Beyond human nature: How culture and experience shape the human mind</i> (pp. 17–51). New York, NY: Norton.
9/16 & 9/18	The interaction of nature and nurture	Moffitt, T. E., Caspi, A., & Rutter, M. (2006). Measured gene–environment interactions in psychopathology. <i>Perspectives on Psychological Science</i> , 1(1), 5–27. Moore, D. S. (2018). Gene × Environment interaction: What exactly are we talking about? <i>Research in Developmental Disabilities</i> , 82, 3–9.
9/23 & 9/25	Dissolving the nature/nurture dichotomy	Lewkowicz, D. J. (2011). The biological implausibility of the nature–nurture dichotomy and what it means for the study of infancy. <i>Infancy</i> , 16(4), 331–367. Oyama, S., Griffiths, P. E., & Gray, R. D. (2001). Introduction: What is developmental systems theory? In S. Oyama, P. E. Griffiths, & R. D. Gray (Eds.), <i>Cycles of contingency: Developmental systems and evolution</i> (pp. 1–6). Cambridge, MA: MIT Press.
Innateness & Evolution Vs. Learning & Development		
9/30 & 10/2	Nativism and innateness	Spelke, E. S. (1998). Nativism, empiricism, and the origins of knowledge. <i>Infant Behavior & Development</i> , 21(2), 181–200. Mameli, M., & Bateson, P. (2011). An evaluation of the concept of innateness. <i>Philosophical Transactions of the Royal Society B: Biological Sciences</i> , 366(1563), 436–443.
10/7: No class (Fall Break)		
10/9: MIDTERM EXAM		
10/14 & 10/16	Characterizing learning	Gould, J. L., & Marler, P. (1987). Learning by instinct. <i>Scientific American</i> , 256(1), 74–85. Stahlman, W. D., & Leising, K. J. (2018). The coelacanth still lives: Bringing selection back to the fore in a science of behavior. <i>American Psychologist</i> , 73(7), 918–929.
10/21 & 10/23	Plasticity and resilience	Ellis, B. J., & Boyce, W. T. (2008). Biological sensitivity to context. <i>Current Directions in Psychological Science</i> , 17(3), 183–187. Belsky, J., & Pluess, M. (2009). The nature (and nurture?) of plasticity in early human development. <i>Perspectives on Psychological Science</i> , 4(4), 345–351.
10/28 & 10/30	Adaptationism: Promises and perils	Cosmides, L., & Tooby, J. (1997). Evolutionary psychology: A primer. Retrieved from http://www.cep.ucsb.edu/primer.html Buller, D. J., & Hardcastle, V. G. (2000). Evolutionary psychology, meet developmental neurobiology: Against promiscuous modularity. <i>Brain and Mind</i> , 1, 307–325.

Date	Lecture Topic	Reading Assignments (to be completed before each class)
Biological Inheritance Vs. Cultural Acquisition		
11/4 & 11/6	Defining and studying "culture"	Domínguez Duque, J. F., Turner, R., Lewis, E. D., & Egan, G. (2010). Neuroanthropology: A humanistic science for the study of the culture–brain nexus. <i>Social Cognitive and Affective Neuroscience</i> , 5, 138–147. Buss, D. M. (2001). Human nature and culture: An evolutionary psychological perspective. <i>Journal of Personality</i> , 69(6), 955–978.
11/11 & 11/13	Gene–culture coevolution	Laland, K. N., Odling-Smee, J., & Myles, S. (2010). How culture shaped the human genome: Bringing genetics and the human sciences together. <i>Nature Reviews: Genetics</i> , 11(2), 137–148. Richerson, P. J., & Boyd, R. (2002). Culture is part of human biology: Why the superorganic concept serves the human sciences badly. In M. Goodman and A. S. Moffat (Eds.), <i>Probing human origins</i> (pp. 59–85). Cambridge, MA: AAAS.
11/18 & 11/20	Epigenetic inheritance	Diamond, J. (1999). War babies. In S. J. Ceci & W. M. Williams (Eds.), <i>The nature–nurture debate: The essential readings</i> (pp. 14–22). Malden, MA: Blackwell. Thayer, Z. M., & Non, A. L. (2015). Anthropology meets epigenetics: Current and future directions. <i>American Anthropologist</i> , 117(4), 722–735.
11/25: FINAL EXAM 11/27: No class (Thanksgiving Break)		
12/2 & 12/4	Societal implications	Read any two popular press articles related to nature/nurture.