

PSY 471: Nature / Nurture

Spring 2018: Mondays, 1:30–4:20pm, LSP 130

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Office Hours: Tuesdays from 10:15am–11:15am & Wednesdays from 3:00pm–5:30pm

Course Description

Since its advent, psychology has been embroiled in arguments about 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 psychology into “nature” and “nurture”? 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 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):

Thoughtful Participation	Reading Reflections	Article Presentation	Peer Review	Paper Preparation	Final Paper
200 pts.	20 pts. (x 10)	50 pts. (x 2)	25 pts. (x 2)	100 pts.	350 pts.

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

Important Dates

January 23	January 30	February 13	March 20	April 10	April 16	May 1
Last day to add classes	Last day to drop classes	Last day to elect P/NP option	Paper outline due	Paper draft due	Last day to withdraw (with record)	Final paper due

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, 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 midnight on each Sunday before class, you will be required to write a 500-word (± 150 words) reflection on the assigned readings. Each of these reflections will be worth 20 points. Your highest 10 responses will be counted toward your grade; you may therefore replace your two lowest scores (or take two “free passes”).

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 class. Because of this quick turnaround, I will not typically 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.

Article Presentation

You will give two formal presentations during the semester. For each, you will describe and evaluate an empirical journal article that you have found, which relates to the day's topic. (The article may also relate to your final paper topic, although this is not required.) Each presentation should last for 10–15 minutes.

The purpose of the presentations is for you to lead your classmates in thinking through a concrete example of empirical research that is related in some way to the theoretical aspect of nature/nurture that is being discussed during the class period. This will set the groundwork for a productive discussion about the relationship between data and theory. To this end, each of your presentations should include a brief exposition of your chosen paper, followed by a careful description of the methods and results and a high-level commentary that critically evaluates the authors' interpretation of their findings. You should conclude each presentation by noting open questions that are raised by the data and/or their interpretation, thus creating a broad framework for subsequent discussion.

In order to maximize the effectiveness of your presentations, you are required to submit your chosen article (or a few options) to me at least 10 days in advance, at which point I will either approve the choice or suggest strategies for identifying a replacement article. You are additionally required to meet with me at least 5 days in advance of your presentation date to discuss your plans and to resolve any uncertainties or misconceptions you may have. You are very welcome to confer with me in additional brainstorming sessions as well.

Peer Review

A major component of the research process involves submitting one's work to be assessed by expert colleagues. Nearly all articles that are published in reputable academic journals undergo a rigorous process of peer review. Reviewers are expected to evaluate manuscripts at multiple levels, from basic mechanics (e.g., grammar, clarity) to more essential points (e.g., interpretation of data, novelty of hypotheses, exhaustiveness of literature review). These reviews are essential in leading journal editors to carefully assess the quality of the submitted work in order to make decisions about their publishability.

In order to practice this aspect of research and to provide helpful feedback to your peers (thus also gaining helpful feedback in return!), you will review drafts of two classmates' final papers. Your reviews should be in paragraph form, with a length of approximately 500 words each. These should begin by summarizing the paper under review and noting overall strengths and weaknesses, then turn to providing major suggestions for revision, and conclude by making minor suggestions for improvement.

You can expect to receive each draft between March 26 and April 12. You will then have 10 days to evaluate the two papers and send these back to me. These reviews will be double-blind, meaning that you will not know whose papers you are reviewing, and your identity as a reviewer will also be concealed from the papers' authors.

I will collate each pair of reviews, provide my own assessment along with an executive summary, and then return the full set of comments to each paper's author to provide crucial help in revising the draft for final submission.

Final Paper

The pervasiveness of the nature/nurture debate is a testament to its relevance to just about every psychological phenomenon. For your primary assignment in this course, 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 several 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 both 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.
- 3) You should follow APA style guidelines and submit a final paper of approximately 4,000 (± 750) words.

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

Language	Gender identity	Religiosity	Anxiety disorders	Folk biology
Extraversion	Theory of mind	Social learning	Visual cognition	Political ideology
Implicit bias	Autism	Numerical cognition	Prosociality	Stress
Intelligence	Motor skills	Food preferences	Sexual assault	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 (100 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) Create a Google Doc (shared with me) to 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) Upload a tentative thesis statement and carefully considered outline to Canvas between March 9 and March 20. I will provide comments within 10 days of submission.
- 3) Upload a polished draft to Canvas between March 26 and April 10. You will receive comments from myself and two of your classmates within 15 days of submission.

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 carefully assessed on a case-by-case basis, and may include receiving a failing grade in the course or expulsion from F&M. Please refer to the Franklin & Marshall College Catalog for additional details.

Grading Policies

You will lose 5% of your grade on an assignment for every day it is late. 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 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.

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, **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 speak with me privately at the beginning of the semester).

Academic Accommodations

Please schedule an appointment with me immediately to discuss any accommodations for this course that have been supported by appropriate documentation and approved by the Office of Disability Services. I will keep all information 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 some 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. Your fellow students can also be great resources; reaching out to them can be a fun and collaborative way to learn. In particular, swapping paper drafts with your classmates to receive informal peer evaluations is an acceptable and encouraged practice to improve your writing. Additionally, please feel free to take advantage of the many other resources that F&M has to offer! For example, 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. If English is not your primary language, you can avail yourself of ESOL tutoring by making an appointment via fandmesl.simplybook.me. Finally, Counseling Services can provide support for your wellbeing and offers up to eight free sessions each year. 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)
Unpacking Concepts: Nuances and Misconceptions in the Nature Vs. Nurture Debate		
1/22	A history of “nature” and “nurture”	Course syllabus.
1/29	Characterizing the nature/nurture dichotomy	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.
2/5	Heritability	Turkheimer, E. (2000). Three laws of behavior genetics and what they mean. <i>Current Directions in Psychological Science</i> , 9(5), 160–164. Sober, E. (2001). Separating nature and nurture. In D. Wasserman & R. Wachbroit (Eds.), <i>Genetics and criminal behavior</i> (pp. 47–78). Cambridge, UK: Cambridge University Press.
2/12	Innateness	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. Khalidi, M. A. (2016). Innateness as a natural cognitive kind. <i>Philosophical Psychology</i> , 29(3), 319–333.
2/19	Learning	Gould, J. L., & Marler, P. (1987). Learning by instinct. <i>Scientific American</i> , 256(1), 74–85. Xu, F., & Kushnir, T. (2013). Infants are rational constructivist learners. <i>Current Directions in Psychological Science</i> , 22(1), 28–32.
2/26	Culture	Kitayama, S., & Park, J. (2010). Cultural neuroscience of the self: Understanding the social grounding of the brain. <i>Social Cognitive and Affective Neuroscience</i> , 5(2-3), 111–129. Buss, D. M. (2001). Human nature and culture: An evolutionary psychological perspective. <i>Journal of Personality</i> , 69(6), 955–978.
3/5	Promises and perils of adaptationism	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.
3/12	No class (Spring Break)	
Eschewing “Versus”: The Inextricable Intertwinement of Nature and Nurture		
3/19	Nurture via nature; Nature via nurture	Scarr, S., & McCartney, K. (1983). How people make their own environments: A theory of genotype → environment effects. <i>Child Development</i> , 54(2), 424–435. Thayer, Z. M., & Non, A. L. (2015). Anthropology meets epigenetics: Current and future directions. <i>American Anthropologist</i> , 117(4), 722–735.
3/26	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.
4/2	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.
4/9	Moving beyond “nature” and “nurture”	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. 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.
4/16	Can “nature” and “nurture” be salvaged?	Spelke, E. S. (1998). Nativism, empiricism, and the origins of knowledge. <i>Infant Behavior & Development</i> , 21(2), 181–200. Pinker, S. (2004). Why nature & nurture won’t go away. <i>Daedalus</i> , 133(4), 5–17.
4/23	Societal implications	Read any two popular press articles related to nature/nurture.