The Truth Behind Amnesia (PSY 1335)

Spring 2026 Syllabus

Course Information

Class Location: XXX

Class Time: Wednesdays, 3:00-5:00pm

Course Website: https://canvas.harvard.edu/courses/160620

Instructor: Dr. Anna McCarter (she/her) amccarter@fas.harvard.edu

Open Student Hours: Tuesdays 3-4pm in William James Hall Room 860 or email me to set up a different meeting time (can be via Zoom or in person)

Course Description

In popular books and movies, amnesia is often depicted in dramatic, yet unrealistic ways — whether it's the daily memory loss in *50 First Dates* or the quick recovery of highly specialized skills in *The Bourne Identity* — but these fictional representations often fall short of capturing the true complexity of this condition and how memory works in real life. In this course, we will read neuroscience and cognitive psychology research articles as well as patient reports to explore the real causes, brain damage, and symptoms associated with different types of amnesia. We will discuss what types of memory are intact and impaired in different cases and what these profiles reveal about the underlying neural functioning and the patient's abilities. We will then use this foundational knowledge to critique portrayals of amnesia in books, movies, and television shows and consider how the misconceptions these stories perpetuate can have negative repercussions for science. For the final project, you will write a script or short story that both accurately and compellingly portrays amnesia.

Course Learning Objectives

1) You will be able to explain how memory systems work, both functionally and anatomically.
2) You will be able to infer the likely amnesia symptoms when presented with a cause or area of brain damage. Similarly, you will be able to infer the likely cause or area of brain damage when presented with a set of amnesia symptoms.
3) You will be able to critically evaluate the accuracy of how amnesia is portrayed in books, movies, and television.
4) You will be able to consider where inaccurate media portrayals of amnesia originate from and explain how these inaccurate portrayals lead to misconceptions in public perceptions of the disorder.
5) You will be able to apply what you have learned about amnesia to act as a scientific consultant in ensuring the accuracy of a media portrayal.

Assignments:

In-Class Engagement
You are expected to attend and actively participate in class. Everyone has an important perspective so I hope that we can find ways to make space for everyone to share. Some examples of good levels of engagement include answering a question posed by Dr. McCarter or a classmate, asking a question, attentive listening, taking notes, or participating productively during small group or individual work time. Some examples of poor levels of engagement include arriving late, leaving early, sleeping during class, distracting others, or doing non-class related activities on your devices. Being present and attentive is a big step toward learning. However, I understand that you may not be at your best every day. To allow for that, your lowest participation grade will be dropped.

Discussion Starters
In the schedule at the end of this syllabus you will find a list of resources for each class that includes scientific articles, patient reports, book excerpts, and videos. You are expected to fully read/watch these resources before class and come to class prepared to discuss them. In order to foster in-class discussion, you will submit 2 discussion starters prior to each class. These discussion starters can be questions or interesting ideas to ponder. I encourage you to integrate content from prior weeks when developing your discussion starters. Avoid questions that have an obvious answer. Your discussion starters will be graded on a scale of 1-5: 1 = only one submitted and it lacks depth, 2 = only one submitted but it shows thoughtful consideration of content, 3 = two submitted, but both lack depth, 4 = two submitted, one shows thoughtful consideration of content, 5 = two submitted, both show thoughtful consideration of content. Some examples of good discussion starters: "I was surprised to learn that amnesiacs often have intact procedural memory. How could this ability be used to overcome the lack of other forms of memory?" or "Patient AB who we learned about this week and Patient CK from last week had very similar causes of their amnesia (herpes encephalitis) but have vastly different symptoms. How is this possible and what does it suggest about what brain regions are impacted?" Some examples of discussion starters that lack depth: "All of these patients show very different symptoms. Why?" or "What is inaccurate about the portrayal of Dory in *Finding Nemo*?" You do not have discussion starters due for the first day of class or the last day of class. To give me time to select discussion starters to use in class, they will be due at 9pm on Tuesdays. Your lowest grade for the discussion starters will be dropped.

Character Analysis Papers
For most class sessions, you are assigned a scientific article to introduce you to that week's topic followed by a real case report and a media portrayal. For your character analysis paper, you will use what you learned from the readings and our class discussions to critique the media portrayal, noting what is accurate and inaccurate about it. You are not expected to cover every aspect of the portrayal that is accurate or inaccurate. Instead, you should focus on the topic for that week ensuring that you include logical, scientific reasoning behind your determinations. You should include APA-style references to specific parts of the scientific articles and case reports in your paper. In addition, you are expected to reference our class discussion in your response. The paper

should be 1-2 pages double-spaced. You will only submit character analysis papers for weeks 2-10 and your paper with the lowest grade will be dropped. To give you time to include what we discuss in class, these papers will be due at 9pm on Thursdays. However, I encourage you to start writing your paper before class to ensure that you have enough time to thoughtfully complete it.

Thought Question

By the end of the semester, you will see how amnesia is misconstrued in many ways in movies, television, and books. Where do these misconceptions originate from? For this assignment, you will compose an answer to that question. There is no right answer and there are likely a constellation of causes. Your response should include at least two potential causes of these misconceptions. In your response, explain how you came up with each cause, how that could have led to the misconceptions we see today, and a way that each potential cause could be investigated experimentally. You can draw on previous course materials, class discussions, new scientific articles, and new informal internet sources to develop your answer. You should cite at least three sources in your response, and your response should be 2-3 pages double-spaced. This assignment will foster our discussion in Week 11 about how science, media, and the public interrelate.

Final Project

For your final project, you will pick a movie, show, or book that we did not discuss in class that includes a portrayal of amnesia. You can find a list of potential ideas on Canvas but feel free to propose your own ideas as well. Imagine that the production team has asked for your feedback on the scientific accuracy of the work. You will rewrite one scene of the movie/show or a chapter of the book to accurately portray amnesia. Along with this script or short story, you will submit a reflection in which you explain why you changed what you did from a scientific perspective. Please reach out to Dr. McCarter with any questions that you have about your ideas and plans for this project. I'm happy to help! This assignment is broken down into several steps to provide scaffolding:

1) Portrayal Selections: Everyone will submit their top 3 media portrayals, and you will be assigned one of them, ensuring that nobody is doing the same one. If multiple students select the same media portrayal as their top choice, the student who submitted this assignment earlier will be given that selection, so submit this early!

2) Peer Review: You will provide peer review on one of your classmate's drafts. This draft will include both their script/story and their reflection. You will have specific aspects of their draft that you will comment on.

3) Presentation: During our last class you will lead a brief presentation that includes a short summary of your selected scene/chapter, what is inaccurate about it, and how you have changed it to be scientifically accurate.

4) Script/Story & Reflection: Your completed scene/chapter and reflection paper will be due during finals.

Here is a summary of how each course component will be factored into the total grade:

Course Component	Points Each	Total Points
In-Class Engagement	5 (x 12)	60
Character Analysis Paper	10 (x 8)	80
Discussion Starters	5 (x 10)	50
Thought Question	15	15
Final Project		
Portrayal Selections	5	5
Peer Review	15	15
Presentation	25	25
Script/Story & Reflection	40	40
		290

The following grading scale will be used:

A	93-100%	C	73-76.99%
A-	90-92.99%	C-	70-72.99%
B+	87-89.99%	D+	67-69.99%
B	83-86.99%	D	63-66.99%
B-	80-82.99%	D-	60-62.99%
C+	77-79.99%	E	59.99% and below

Course Policies

Accessibility
I want this course to provide equitable opportunities for learning. If you have a letter from the Disability Access Office (DAO) or have other needs that I can accommodate, please speak with me by the end of the second week of the term to ensure I am able to respond in a timely manner. Should your needs change during the semester, I will be happy to work with you and the DAO to adapt accordingly. All discussions will remain confidential, although DAO may be consulted to discuss appropriate implementation of accommodations.

Late Assignments
If you have extenuating circumstances (family emergency, acute injury/illness) that you believe warrant an extension on an assignment, please email me before the assignment is due to arrange for a potential extension. Please note that extracurricular activities (including sports), job interviews, and travel are not considered extenuating circumstances. If I don't hear from you, there will be a 10% deduction beginning immediately after the time the assignment is due and an additional 10% deduction for each subsequent 24 hours it is late. (For example, if the assignment is due on Sunday at 9:00pm and you submit it on Tuesday at 3:00pm, the maximum you can earn is an 80%.)

Attendance
Please email me (and cc your Resident Dean) at least 1 hour before class if you will need to miss class due to extenuating circumstances and we will figure out a potential makeup plan. Family emergencies and acute injury or illness are considered extenuating circumstances. Extracurricular activities (including sports), job interviews, and travel are not considered extenuating circumstances. If you miss class for unexcused reasons, you will earn a zero for your in-class engagement grade that day. Please note that you must attend at least 75% of all classes to be eligible to pass this course.

Communication
Check your Harvard email and Canvas regularly as any updates will be shared there. I encourage you to email me with any questions that you have that are not addressed here. I'm here to help you! I commit to respond to emails within 24 hours (excluding weekends and holidays). You will get emails from me during standard working hours (9am-5pm Monday-Friday). I am unlikely to respond to emails over the weekend or after 5pm on weekdays. If you send me an email during that time, you can expect a response from me on the next workday. I would love to see you at open student hours. They are a great time to ask questions about the class, cognition more broadly, or anything else you want to talk about! If my posted hours don't work for you, email me to set up another time. Make sure to be courteous in your communication with me and your classmates. We are all deserving of respect and kindness. I strive for a safe, open, and welcoming classroom.

Use of Electronic Devices
During class, please do not use your laptops or other devices except for specific activities when I invite everyone to get out a device. Devices used for accessibility purposes are an exception. Being present and attentive during class is crucial for your learning.

Food & Beverages in Class
I understand that class days can be very busy, and you may not have open time to eat. Given that, you are welcome to eat snacks during class. I just ask that your eating is not disruptive to others (e.g., pungent smell, very crunchy) and is not messy. You are in charge of ensuring that your space is clean before leaving.

Collaboration
Collaboration on the character analysis papers, discussion starters, and thought question is not permitted. During class you will often work with other students on activities. You are encouraged to talk together about the relevant topics in this case. For the final project, you may discuss your chosen topic with your peers. However, you should ensure that the written work you submit for evaluation is the result of your own research and writing and that it reflects your own approach to the topic.

Academic Integrity & Plagiarism
Out of fairness to the vast majority of students who take their education seriously, no form of academic dishonesty will be tolerated. It is expected that all of the assignments you turn in for this course will be your own original work. This means that your work will be free from plagiarism and will be written by you. To avoid committing plagiarism, you must follow two main rules:

- Always cite the source of a finding, idea, or argument that isn't your own, no matter how much rewording you have done.
- Always put the findings, ideas, and arguments you cite into your own words. If a direct quote is absolutely necessary, put the text in quotation marks and include a page number in your citation.

It is important to remember that incorrect citations do not have to be intentional to be considered plagiarism. Plagiarized or improperly cited work will be referred to the Honor Council for review and may result in severe penalties and disciplinary action. Please be careful and reach out to Dr. McCarter with any questions that you have. For your reference, please review the Harvard Student Handbook and the Harvard Guide to Using Sources.

Generative AI
In terms of the use of ChatGPT and other generative AI programs, it is expected that you will not use it for any substantive portions of assignments. The standard used in this class is that if you would not ask your roommate or friend to help with this, you should not ask generative AI. For instance, it is okay to use generative AI (or a roommate/friend) to help you come up with a synonym for a word in your paper or to check it over for grammar mistakes. It is not acceptable to have generative AI (or anyone else) write any portion of your assignments, provide you with a summary of articles, or brainstorm ideas for the project. You are here to learn and if you rely on generative AI to do the work for you, you will not be learning.

Relevant Resources
Academic Resource Center: Offers workshops on academic skills and tutoring
Harvard College Writing Center: Can review your writing assignments
Counseling and Mental Health Services: Offers individual counseling and workshops

Course Schedule

Week 1 – Welcome & Introduction to Amnesia	
January 28th	Read the syllabus and the following chapter before class: • Seamon, J. (2015) Understanding the Reality of Amnesia. In *Memory and movies: What films can teach us about memory* (pp. 149-178). MIT Press. https://doi.org/10.7551/mitpress/10509.001.0001 [Scientific Background. This book is available through the Harvard Library.]
UNIT 1: CAUSES	

Week 2 – Sudden: Head Injury, Stroke, Surgery	
February 3rd	Discussion Starters submitted by 9pm for the following: • Miller, T. D., & Butler, C. R. (2022). Acute-onset amnesia: transient global amnesia and other causes. *Practical Neurology*, *22*(3), 201-208. https://doi.org/10.1136/practneurol-2020-002826 [Scientific Background] • Parker, T. D., Rees, R., Rajagopal, S., Griffin, C., Goodliffe, L., Dilley, M., & Jenkins, P. O. (2022). Post-traumatic amnesia. *Practical neurology*, *22*(2), 129-137. https://doi.org/10.1136/practneurol-2021-003056 [Scientific Background] • Squire, L. R. (2009). The legacy of patient HM for neuroscience. *Neuron*, *61*(1), 6-9. https://doi.org/10.1016/j.neuron.2008.12.023 [Case Report: HM] • Seidelman, S. (Director). (1985). *Desperately seeking Susan* [Film] Orion Pictures. [Media Portrayal: Roberta. This movie is available free online through Tubi.]
February 5th	Character Analysis Paper due at 9pm
Week 3 – Gradual: Infection, Alcoholism, Tumor	
February 10th	Discussion Starters submitted by 9pm for the following: • Arts, N. J., Walvoort, S. J., & Kessels, R. P. (2017). Korsakoff's syndrome: a critical review. *Neuropsychiatric disease and treatment*, 2875-2890. https://doi.org/10.2147/NDT.S130078 [Scientific Background] • Carlesimo, G. A. (2012). Memory disorders in patients with cerebral tumors. *Journal of neuro-oncology*, *108*(2), 253-256. https://doi.org/10.1007/s11060-012-0825-4 [Scientific Background] • Sacks, O. (1995) The Last Hippie. In *An anthropologist on Mars: Seven paradoxical tales*. Vintage. [Case Report: Greg F. This book is available through the Harvard Library.] • Kohlberg, J. (Director). (2011). *The music never stopped* [Film] Essential Pictures; Mr. Tamborine Man. [Media Portrayal: Gabriel. This movie is available through the Boston Public Library.]
February 12th	Character Analysis Paper due at 9pm
UNIT 2: SYMPTOMS	
Week 4 – Episodic Memory	
February 17th	Discussion Starters submitted by 9pm for the following: • Dickerson, B. C., & Eichenbaum, H. (2010). The episodic memory system: neurocircuitry and disorders. *Neuropsychopharmacology*,

	35(1), 86-104. https://doi.org/10.1038/npp.2009.126 [Scientific Background] • Sacks, O. (1985) The Lost Mariner. In *The man who mistook his wife for a hat and other clinical tales* (pp. 23-42). Summit Books. [Case Report: Jimmie G. This book is available through the Harvard Library.] • Kinsella, S. (2008) *Remember Me?: A novel*. Dial Press Trade. [Media Portrayal: Lexi. Read at least the prologue and chapters 1-3. This book is available through the Boston Public Library.]
February 19th	Character Analysis Paper due at 9pm
Week 5 – Semantic Memory	
February 24th	Discussion Starters submitted by 9pm for the following: • Elward, R. L., & Vargha-Khadem, F. (2018). Semantic memory in developmental amnesia. *Neuroscience letters*, *680*, 23-30. https://doi.org/10.1016/j.neulet.2018.04.040 [Scientific Background] • O'kane, G., Kensinger, E. A., & Corkin, S. (2004). Evidence for semantic learning in profound amnesia: an investigation with patient HM. *Hippocampus*, *14*(4), 417-425. https://doi.org/10.1002/hipo.20005 [Case Study: HM] • Insausti, R., Annese, J., Amaral, D. G., & Squire, L. R. (2013). Human amnesia and the medial temporal lobe illuminated by neuropsychological and neurohistological findings for patient EP. *Proceedings of the National Academy of Sciences*, *110*(21), E1953-E1962. https://doi.org/10.1073/pnas.1306244110 [Case Study: EP] • Dear, W. (Director). (2000). *Santa who?* [Film] Gleneagle Productions. [Media Portrayal: Santa. This movie is available free online through Fandango.]
February 26th	Character Analysis Paper due at 9pm
Week 6 – Non-Declarative Memory	
March 3rd	Discussion Starters submitted by 9pm for the following: • Cohen, N. J., & Squire, L. R. (1980). Preserved learning and retention of pattern-analyzing skill in amnesia: Dissociation of knowing how and knowing that. *Science*, *210*(4466), 207-210. https://doi.org/10.1126/science.7414331 [Scientific Background] • Graf, P., Shimamura, A. P., & Squire, L. R. (1985). Priming across modalities and priming across category levels: Extending the domain of preserved function in amnesia. *Journal of experimental psychology: learning, memory, and cognition*, *11*(2), 386-396. https://doi.org/10.1037/0278-7393.11.2.386 [Scientific Background] • Real Stories. (2016, August 13). *The man with the seven second memory* [Video]. YouTube.

	https://www.youtube.com/watch?v=k_P7Y0-wgos [Case Report: Clive Wearing] • Scully, B. (Writer), & Bianchi, D. (Director). (2010, January 3). Big man on hippocampus (Season 8, Episode 10) [TV series episode]. In S. Callaghan (Executive Producer), *Family Guy*. Fuzzy Door Productions; 20th Television. [Media Portrayal: Peter. Season 8 is available at the Boston Public Library]
March 5th	Character Analysis Paper due at 9pm
Week 7 – Working Memory	
March 10th	Discussion Starters submitted by 9pm for the following: • Baddeley, A. D., & Warrington, E. K. (1970). Amnesia and the distinction between long-and short-term memory. *Journal of verbal learning and verbal behavior*, *9*(2), 176-189. https://doi.org/10.1016/S0022-5371(70)80048-2 [Scientific Background] • Mayes, A. R., Isaac, C. L., Holdstock, J. S., Cariga, P., Gummer, A., & Roberts, N. (2003). Long-term amnesia: a review and detailed illustrative case study. *Cortex*, *39*(4-5), 567-603. https://doi.org/10.1016/S0010-9452(08)70855-4 [Case Report: JL] • Stanton, A. & Unkrich, L. (Directors). (2003). *Finding Nemo* [Film] Walt Disney Pictures; Pixar Animation Studios. [Media Portrayal: Dory. This movie is available through the Harvard Library and Boston Public Library.]
March 12th	Character Analysis Paper due at 9pm
Week 8 – Identity & Personality	
March 24th	Discussion Starters submitted by 9pm for the following: • Garland, M. M., Vaidya, J. G., Tranel, D., Watson, D., & Feinstein, J. S. (2021). Who are you? The study of personality in patients with anterograde amnesia. *Psychological Science*, *32*(10), 1649-1661. https://doi.org/10.1177/09567976211007463 [Scientific Background] • Valenstein, E., Bowers, D., Verfaellie, M., Heilman, K. M., Day, A., & Watson, R. T. (1987). Retrosplenial amnesia. *Brain*, *110*(6), 1631-1646. https://doi.org/10.1093/brain/110.6.1631 [Case Report: TR] • Masius, J. (Writer), Berenbeim, G. (Writer), & Lobl, V. (Director). (1998, April 5). Seek and ye shall find (Season 4, Episode 21) [TV series episode]. In M. Williamson, B. Pearl, J. Andersen (Executive Producers), *Touched by an angel*. Moon Water Productions; CBS Productions. [Media Portrayal: Monica. This episode is available for free through Pluto TV.]
March 26th	Character Analysis Paper due at 9pm
UNIT 3: TREATMENTS & RECOVERY	

Week 9 – Temporary Cases: Spontaneous Remission	
March 31st	Discussion Starters submitted by 9pm for the following: - Wilson, B. A., Evans, J. J., Emslie, H., Balleny, H., Watson, P. C., & Baddeley, A. D. (1999). Measuring recovery from post traumatic amnesia. *Brain Injury*, *13*(7), 505-520. https://doi.org/10.1080/026990599121412 [Scientific Background] - Sellal, F., Manning, L., Seegmuller, C., Scheiber, C., & Schoenfelder, F. (2002). Pure retrograde amnesia following a mild head trauma: a neuropsychological and metabolic study. *Cortex*, *38*(4), 499-509. https://doi.org/10.1016/S0010-9452(08)70019-4 [Case Report: FP] - Moriarty, L. (2009) *What Alice forgot*. Amy Einhorn Books. [Media Portrayal: Alice. Read at least chapters 1-4 & 30-33. This book is available through the Harvard Library and Boston Public Library.]
April 2nd	Character Analysis Paper due at 9pm
Week 10 – Permanent Cases: Progression of Symptoms	
April 6th	Final Project Portrayal Selections submitted by 9pm
April 7th	Discussion Starters submitted by 9pm for the following: - Schacter, D. L., & Glisky, E. L. (1986). Memory remediation: Restoration, alleviation, and the acquisition of domain-specific knowledge. In B. P. Uzzell & Y. Gross (Editors), *Clinical neuropsychology of intervention* (pp. 257-282). Springer. https://doi.org/10.1007/978-1-4613-2291-7_12 [Scientific Background] - Tulving, E., Schacter, D. L., Mclachlan, D. R., & Moscovitch, M. (1988). Priming of semantic autobiographical knowledge: A case study of retrograde amnesia. *Brain and cognition*, *8*(1), 3-20. https://doi.org/10.1016/0278-2626(88)90035-8 [Case Report: KC] - Darabont, F. (Director). (2001). *The majestic* [Film] Castle Rock Entertainment; Village Roadshow Pictures; NPV Entertainment; Darkwoods Productions. [Media Portrayal: Peter. This movie is available free online through Tubi.]
April 9th	Character Analysis Paper due at 9pm
UNIT 4: CLOSING	
Week 11 – Science in Media: Current Practices & Impacts on the Public	
April 13th	Thought Question submitted by 9pm
April 14th	Discussion Starters submitted by 9pm for the following: Rapp, D. N., Hinze, S. R., Slaten, D. G., & Horton, W. S. (2014). Amazing stories: Acquiring and avoiding inaccurate information from fiction. *Discourse Processes*, *51*(1-2), 50-74. https://doi.org/10.1080/0163853X.2013.855048 [Scientific Background]

	• Berlin, H. A. (2016). Communicating science: lessons from film. *Trends in immunology*, *37*(4), 256-260. https://doi.org/10.1016/j.it.2016.02.006 [Scientific Background] • Kirby, D. A. (2013). *Lab coats in Hollywood: Science, scientists, and cinema*. Mit Press. [Scientific Background. Read at least chapters 1, 3, and 5. This book is available through the Harvard Library]

Week 12 – Guest Speaker Q&A: Dr. Mieke Verfaellie, Amnesia Researcher

April 20th	Discussion Starters* submitted by 9pm for the following: • Schacter, D. L., **Verfaellie**, M., & Anes, M. D. (1997). Illusory memories in amnesic patients: conceptual and perceptual false recognition. *Neuropsychology*, *11*(3), 331-342. https://doi.org/10.1037//0894-4105.11.3.331 [Scientific Background] • Race, E., Keane, M. M., & **Verfaellie**, M. (2011). Medial temporal lobe damage causes deficits in episodic memory and episodic future thinking not attributable to deficits in narrative construction. *Journal of Neuroscience*, *31*(28), 10262-10269. https://doi.org/10.1523/JNEUROSCI.1145-11.2011 [Scientific Background] • Hayes, J. P., Bigler, E. D., & **Verfaellie**, M. (2016). Traumatic brain injury as a disorder of brain connectivity. *Journal of the International Neuropsychological Society*, *22*(2), 120-137. https://doi.org/10.1017/S1355617715000740 [Scientific Background] *In lieu of our traditional discussion starters, please submit two questions you'd like to ask Dr. Verfaellie about her work with amnesic patients.
April 23rd	Draft Script/Story and Reflection uploaded to Google Drive for Peer Review by 9pm

Week 13 – Closing & Final Project Presentations

April 27th	Peer Reviews completed by 9pm
April 29th	Submit presentation slides by noon & read the following before class: • Lee, K. (2017). 10 tips for speaking like a Ted Talk pro: Advice from the experts on how to make any presentation sing. *Monitor on Psychology*, *48*(2), 64. www.apa.org/monitor/2017/02/tips-speaking [Scientific Background] • Van Teijlingen, T., Oudman, E., & Postma, A. (2022). Lifelogging as a rehabilitation tool in patients with amnesia: A narrative literature review on the effect of lifelogging on memory loss. *Neuropsychological Rehabilitation*, *32*(10), 2646-2672. https://doi.org/10.1080/09602011.2021.1974891 [Scientific Background]
May XXX	Final Project submitted by 9pm