

Brain, Mind, and Film
Interterm 2022, Chapman University

Course Information:

Class: HON 406; Period: January 3, 2022 - January 29, 2022

Meeting: Monday 1-4:50pm; Wednesday & Friday 9am-12:50pm, at AF 211.

Zoom Information:

<https://chapman.zoom.us/j/95558800145?pwd=S3JaZVpheXVCdDFIb21WVDFGRE9xUT09>

Meeting ID: 955 5880 0145

Passcode: brain

Instructor:

Dr. Amir Raz (raz@chapman.edu) 714-516-5900

Professor of Psychology and Brain Sciences

Director of the Brain Institute.

Office Hours: Fridays, 4pm and by appointment.

Location: 561 N Glassell, Orange / 14725 Alton Parkway, Irvine.

If you need to contact the instructor outside of lecture or office hours, please email brain@chapman.edu with the following subject header, "Chapman HON 406". We will typically email you back within two business days.

Teaching Assistants:

Mr. Jackson Gregory (grego145@mail.chapman.edu), Office Hours: Tuesday 11:00am-12:00pm, Thursday 11:00am-12:00pm (and by appointment), Location: 561 N Glassell

Ms. Hannah Ravitch (hravitch@chapman.edu), Office Hours: Monday 11:00am-12:00pm and Wednesday 2:00-3:00pm (and by appointment), Location: 561 N Glassell

Prerequisites:

None

Restrictions:

Faculty Consent Required

Optional texts:

[Casting Light on the Dark Side of Brain Imaging, 1st Edition \(2019\), Amir Raz & Robert Thibault](#)

[eBook ISBN: 9780128163092](#)

[Paperback ISBN: 9780128161791](#)

[How \(not\) to train the brain: Enhancing what's between your ears with \(and without\) science, Amir Raz and Sheida Rabipour, Oxford University Press, 2019.](#)

Additional Materials:

- Check Canvas regularly (daily) for new readings/videos, tips, and announcements.
- When you work on an assignment: read the instructions carefully and THINK before you do it.
- Explore Extra Credit options. We encourage you to opt for Extra Credit whenever you can.

Course Description:

This class explores the cognitive neuroscience of film from several perspectives: First, how films represent advanced brain research; second, how modern cognitive neuroscience explains the experience of watching a movie; third, what are the interrelationships between what happens in the brains of the screenwriter/cinematographer/editor/director when they create a scene, what happens in the brain of the actor who plays in the scene, and what happens in the brain of the filmgoer when they watch the scene.

Throughout the course we will discuss the relation between the movie watcher as a participant in, and as an observer of, the action. We will also discuss how each movie contributes to a social cognitive neuroscience model of human consciousness. The readings will be about relevant clinical neuropsychological syndromes, neuroimaging experiments in humans, and cognitive film theory,

Throughout the course we will discuss the relation between the audience as a participant in, and as an observer of, filmed action. We will outline how movies shape a social cognitive neuroscience model of human consciousness.

Course readings span relevant clinical neuropsychological syndromes, neuroimaging experiments of the living human brain, and cognitive film theory.

This course explores aspects of the psychological and brain sciences through the lens of motion pictures. As such, the material covered engulfs interdisciplinary topics from neuroscience, psychology, and film studies, but also draws on aspects of medicine, physiology, and clinical interventions, philosophy, anthropology, sociology, and the computational and engineering sciences.

We examine several domains of the brain-film interface:

1. How films feature findings from brain research: when are they off- and when they are on-target? What are the implications of these depictions and how do they influence both science and society? What can brain science offer to the film industry? How about the other way around?
2. How modern cognitive neuroscience unravels the experience of watching a movie. For example, is there a difference between watching alone versus in

company? On a big or small screen? With or without subtitles? Dubbed or in original form?

3. What are the interrelationships between what happens in the brains of the screenwriter, cinematographer, editor, and director when they create a scene? What happens in the brain of the actor who plays in the scene, and what happens in the brain of the audience when they watch the scene?

With the exception of the first lecture, each session focuses on one (or more) film(s): watching the movie(s) together in the classroom, followed by a lecture dissecting the science and empirical findings to support, relate, or inspire it. Attendance during movie/clip screening is mandatory even if you have (or claim to have) seen it before. Some students will miss class or otherwise promise to watch these materials at home; that's fine but hardly replaces the class experience. For repeat viewing, please make your own arrangements.

NOTE: Although brain and film is an exciting topic, this course is not an easy ride. You will have to read and be familiar with complex and sophisticated materials in cognitive neuroscience, including topics such as brain imaging (e.g., functional Magnetic Resonance Imaging) and issues related to research design and hypothesis testing. If you do the assignments entirely and make sure you understand the material, you will learn new ways to watch movies, to learn about the brain, and to reason about consciousness.

Learning Objectives:

1. Knowledge of Core Neuro/Psychological Fields

- Identify the current and historical core content of and what is known therein
- Differentiate the various areas of neuro/psychology and identify what we know in each
- In a chosen topic area in psychology demonstrate clear understanding of operational definitions in that area and use those to clarify what is and what is not presently known, and what is the certainty of each type of knowledge
- In a chosen topic area in psychology, integrate what is presently known to explicate the status of this area of knowledge, design further inquiry, and conclude the present and possible future impact of this knowledge on society

- Evaluate research skills as adequate for a science career

2. Critical Reasoning

- Demonstrate ability to construct and critically analyze complex arguments, and distinguish good reasoning from bad
- Evaluate lay and professional literature related to psychological issues and distinguish appropriate and valid information from specious and flawed information
- Organize and construct a formal critique of a major psychological issue

3. Writing

- Identify the writing format of science
- Recognize when writing is and is not in conformance with appropriate format
- Demonstrate ability to write and critique work by others
- State and operationally define a formal hypothesis and produce a written thesis/research report that applies knowledge of critical reasoning, accurately interpret behavioral science and related sources, and communicate in writing a balanced account and definitive conclusion of whether hypothesis is proven or not proven.

4. Global Perspective

- Identify and/or observe the role of personal and cultural diversity on the behavior of an individual and recognize the necessity and advantages of this information and its impact on individuals and societies.

What will you learn in this course?

How to think critically, in general.
 How to improve your digital literacy.
 How to write analytically about general topics.
 How to think critically about psychology, neuroscience, and related fields.
 How to find and read scientific articles.
 How to synthesize scientific results.
 How to evaluate descriptive and inferential statistics.
 How to evaluate scientific reliability and validity.
 How to evaluate alternative research hypotheses.
 How to communicate engagingly through narrated presentations.
 How to review and apply what you've learned.

How will you learn in this course?

The pedagogy of this course follows empirically proven principles of learning, including the ideas of 1) active learning, which is more beneficial than passive learning; and 2) frequent incremental practice, which is more beneficial than sporadic practice (Gernsbacher, 2014). Therefore, in this course, you will acquire skills every day by completing multiple incremental assignments across the term. We expect you to engage with the course, and with your peers, daily (via online discussion and text-based chats). There are NO timed exams in this course, just quizzes to ascertain you are keeping up with your load. All course materials are available on the Canvas website.

How to “survive” this course:

A) Keep this overview and notify me of any trouble you are having in this course.

B) Read all sections of the two texts plus anything that comes up or is posted on the website to supplement the lectures—sometimes we will hardly have the time to cover all the material in class. Please remember that lectures make more sense if you read the material before the date on the schedule. Sometimes you will also want to re-read materials or re-watch movies after we discuss them in class.

C) Give yourself plenty of time outside of class to review your notes, read the materials, work on assignments, and study. If possible, set up a study group of 1-3 other students. Studying with others can help you with questions you may find difficult and force you to communicate solutions to other students. The best way to learn a subject is to teach it.

D) Focus on concepts. Don’t fall behind. Keep a positive attitude. Get help when you need it early on.

How to be successful in this course:

Here are some helpful characteristics of a successful student:

1. Turn off your cell phone and attend class – regularly and on time. If you miss a lecture, make sure you get all assignments and consult with your classmates to understand better what we covered in class.
2. Demonstrate that you care about this course, about your grade, and that you are willing to improve your standing. Speak out in class when you feel you can contribute.

If you feel that your contributions are a bit clumsy or difficult to make, do something about it and actively work on making them better. Ask questions concerning assignments. Do **not** wait until an exam or deadline is forthcoming.

3. Successful students turn in assignments that are neat and sharp. They take time to produce a final product that reflects a caring attitude and pride in their work.

4. Please see me or the TA(s) before or after class about grades and upcoming tests and other academic problems. Never be afraid to engage in meaningful conversation with any of us.

5. Make sure that you are attentive in class. Do not text, chat, read or eat. In other words, be your sweet, polite, and graceful self. Submit all work and assignments on time. Complete all work—no exceptions.

On January 12th, please bring in an index card with a drawing of an object appearing in the film *Memento* and place it on Dr. Raz's desk at the start of class. Doing so will earn you extra credit.

Successful students work on all the above-mentioned characteristics. They also serve as models for their fellow students, who may be less experienced, and help them with the business of becoming a serious student (a requirement of this course and of this professor).

Why is this Course Important?

It teaches you how to perform an integrative synthesis of information drawing on an interdisciplinary array of materials revolving around the human brain.

How can you do well in this course when not in class?

First, log in and work on the course every day. The best way to acquire any skill is to practice every day. Similarly, the best way to do well in this course is to practice and go over the material (i.e., log-in and work on the course) every day. Do NOT plan to cram in a lot of work at the end of the term. A hang-back strategy is unlikely to work in this course. The second way to do well in this course is to keep up. Remember, once you miss a deadline, the associated assignment will be forever gone. Don't miss assignments. The third way to do well in this course is to always work ahead. Working ahead will allow you to avoid the consequences of any unexpected mishap.

To be safe, you should budget spending about two (2) HOURS per DAY outside of class, six days a week, during each of the 4 weeks of the Interterm session. You should NOT register for this course if you are unable to commit to these time loads.

Controversy Disclaimer:

This course deals with many controversial topics related to deeply held beliefs, including (but not limited to) sex, drugs, god, religion, science, technology, politics, economics, morality, ethics, social attitudes, and transcultural differences. I hope to challenge you to think about your beliefs. My goal is to teach you **how** to think about your beliefs, not **what** to think about them. I have my own set of beliefs that I have developed over the decades, which I do not attempt to hide or suppress; indeed, as a scholar and a public intellectual I am regularly called upon to present and defend my beliefs in lectures, debates, interviews, articles, reviews, and opinion editorials. But in the classroom my goal is not to convince you of anything other than to think about your own beliefs. I am often asked “why should we believe you?” My answer: “You shouldn’t.” Be skeptical, even of me.

In this sense, my classroom is not a “safe space” from politically incorrect ideas. All ideas are subject to analysis and critical thought, including the idea that some ideas should not be discussed or challenged. There will be no “trigger warnings” in this course other than that this class may trigger you to think, and I deem that a very good thing [from Michael Shermer].

Class Rules & Guidelines:

Academic Integrity

Chapman University is a community of scholars that emphasizes the mutual responsibility of all members to seek knowledge honestly and in good faith. Students are responsible for doing their own work and academic dishonesty of any kind will be subject to sanction by the instructor/administrator and referral to the University Academic Integrity Committee, which may impose additional sanctions including expulsion. Please see the full description of Chapman University's policy on Academic Integrity at www.chapman.edu/academics/academicintegrity/index.aspx.

Technology Use

Using electronic recording or any other communications devices (such as MP3 players, cell phones, pagers, recording devices, etc.) in the classroom to record lectures or during exams without the explicit permission of the instructor is strictly prohibited. If you are caught doing so, you will be asked to leave the classroom and will not be granted points for any assignments or exams that are associated with that day. Exceptions will be made for students that have a note from Disability Services.

Technology Requirements

In this course, you are required to have access to a reliable internet enabled computer or mobile device, preferably with a large screen. The following is a sampling of technologies that will be used in the class.

- Zoom online video conferencing (e.g., for office hours)
- Canvas (for daily course material)
- Google Suite (for collaborations)
- Poll Everywhere (for in-class and online polling/surveys)
- YouTube (for videos)

Students with Disabilities Policy

In compliance with ADA guidelines, students who have any condition, either permanent or temporary, that might affect their ability to perform in this class are encouraged to contact the Disability Services Office. If you will need to utilize your approved accommodations in this class, please follow the proper notification procedure for informing your professor(s). This notification process must occur more than a week before any accommodation can be utilized. Please contact Disability Services at (714) 516-4520 or visit

<https://www.chapman.edu/students/health-and-safety/disability-services/> if you have questions regarding this procedure or for information or to make an appointment to discuss and/or request potential accommodations based on documentation of your disability. Once formal approval of your need for an accommodation has been granted, you are encouraged to talk with your professor(s) about your accommodation options. The granting of any accommodation will not be retroactive and cannot jeopardize the academic standards or integrity of the course.

Equity and Diversity Policy

Chapman University is committed to ensuring equality and valuing diversity. Students and professors are reminded to show respect at all times as outlined in Chapman's Harassment and Discrimination Policy. Please see the full description of this policy at <http://www.chapman.edu/faculty-staff/human-resources/eoo.aspx>. Any violations of this policy should be discussed with the professor, the dean of students and/or otherwise reported in accordance with this policy.

Cell Phone Policy

All cell phones and electronic communication devices must be "OFF"—in other words, not on "silent," not on "vibrate," not on "airplane mode", and certainly not "on"—during the entire class period. They should also be away in a place where they cannot be visible, not by you, not by me, not by any of the students in the class. I truly believe electronic devices are a distraction to me—the professor teaching the class—to other students, as well as to you, the user. My goal is to create the most effective environment conducive to learning. If you really need, exceptionally, to keep your phone on, you must inform me before class begins. If you are incapable of holding off on texting or simply cannot turn off your phone and put it away for the duration of lectures, this class is not for you: please find another course.

Grade Disputes

If students are concerned about the grade they received on an exam or paper, they should feel comfortable talking to their instructor about it. Students must submit a typed request explaining the rationale for the grade change. Students must dispute their grade within five (5) business days of receiving it or the instructor will not consider the dispute. Decisions regarding grade disputes are made at the discretion of the instructor.

Attendance and tardiness

Attendance is mandatory at every lecture. If you no longer want to be in the class, **you** must drop the class. If you miss class, you may lose points. **Students can miss one class for any reason.** After that, each absence leads to -5% from your final overall grade (e.g., from 98% to 93% to 88%, etc.).

If you have to miss class after your first absence, the only acceptable reasons are: (a) ill health (only with an official note from a doctor), (b) jury duty or mandatory court appearances (with documentation), or (c) university sanctioned events (e.g., sports, religious holidays).

Class starts exactly on time and finishes on time. Please don't be late and stay the duration of the lesson. If you show up late or leave early, tardy points apply. As they say in Vienna, "If you are not 15 minutes early, you are late." Think about it.

I will apply one tardy point against every minute you are late/missing in a cumulative fashion. Every 30 tardy points will lower your grade by 1%.

Make up policy

If you miss an exam/quiz for an acceptable reason (see above), you must provide documentation/proof to the instructor within three (3) business days from the time the exam was given in class. You are responsible for setting up a time to make-up the exam. Please submit all Movie Reviews and Question assignments (see below) on or before the day noted on the syllabus. Kindly consult the posted due dates below.

Writing Center

Written submissions are a large part of your grade; please write concisely and deliberately. You may want to consult with the Writing Center and other such resources. For more information:

<https://www.chapman.edu/wilkinson/english/orgs-publications/writing-center/>

Canvas

A very limited version of PDFs and other materials will appear online and include: (a) links to videos, (b) updated versions of key documents (e.g., syllabus), and (c) any other relevant materials.

Submitting Assignments

You should submit all assignments via Canvas for a plagiarism check on or before the due date.

Course Structure:

Although this Honors course feels very brainy or psychological, I teach it in a way that would make it appropriate for students who come from different programs, departments, and backgrounds. An initial goal, therefore, will be to get us all on “common ground” regarding terminology, concepts, and background for discussing this research area.

This course is based on the principles of Universal Design, which prescribes that instructional accommodations are built into the environment and available to all students (just like elevators and curb cuts) rather than needing to be requested *ex post facto* or available to only some students. Accordingly, in this course all lecture videos also include written transcripts and all PDFs are screen-readable (and voice-able with text-to-speech software, as well as searchable and highlightable). This course offers many grading opportunities, rather than only three or four, and the timeline for assignments is highly structured with explicit due dates. We have introduced these accommodations into this course to facilitate your success.

This course has a built-in flexibility accommodation available to all students. In other words, all students have the opportunity to work ahead, to miss an occasional quiz, and to still earn a good final grade. In addition, we offer extra credit. Flexibility is built into this course to aid all students, including students with disabilities, chronic health conditions, religious conflicts, care-giving responsibilities, unpredictable work schedules, and student athletes—everyone.

To take advantage of the flexibility accommodation, you must do three things. First, take advantage of the opportunity to work ahead. The entire course is available at, if not before, the start of the term. Take advantage of the opportunity to work ahead and complete as many assignments in advance as you can. If, for example, you are a student with a chronic health condition, the work you do in advance when you are feeling well will be like money in the bank for the times later in the term when you might not be feeling well.

Note: It is unnecessary to ask for an extension on any assignment because we do not grant extensions. Instead, you can plan ahead from the beginning or choose to make up missed grades or otherwise bolster your score by opting for extra credit opportunities.

Take advantage of the feature permitting you to miss an in-class quiz, if needed. If you carefully consider the various opportunities available, you will realize that between dropping your lowest in-class quiz scores and extra-credit options, all students can miss a bit and still earn an A in the course. Take advantage of this built-in flexibility accommodation.

Grading

Here is how we come up with the final grade:

<u>Grade component</u>	<u>Points</u>
Movie Reviews	60
Class Participation, Attendance Record, and Group Activities	20
Quizzes	90
Final Assignment	100
Total:	270
Maximum extra credit possible	10

Movie Reviews:

A movie review is an opportunity for you to showcase your understanding based on lectures and the reading material in the course. Please provide an integrative synthesis through a written critique of the movie screened each week.

We expect you to write (and submit) one Movie Review (MR) for most movies we watch in class throughout the course. You should submit an original Movie Review (MR) after each movie screening. Your MR should analyze the film by expressing your opinion on the movie and discussing the extent to which it exemplified the related topic. You may provide an integrative synthesis of the film in light of lectures, assigned readings, and in-class activities. MRs should be at least 300 words and no longer than 500 words.

Each MR submission will be worth 15 points (for a total of 60 points) and will be graded based on completion of the assignment, clear and in-depth opinion of the film, connection to the course material, and grammar.

Please read the following two sample MRs to get an idea of what we are looking for:

About 300 words:

<https://www.nytimes.com/2018/02/08/movies/review-the-female-brain-flattens-the-female-experience.html?searchResultPosition=1>

About 500 words:

<https://www.nytimes.com/2004/05/08/arts/television-review-battling-brain-injury-and-headache.html?searchResultPosition=8>

Some tips for writing:

- Craft a clear message, focus tightly on one idea or argument and tell readers, high up in the piece, why they should care.
- Write in strong, lively language, but don't rant.
- Provocative or contrarian viewpoints are more likely to grab attention.
- Keep sentences and paragraphs short and simple.
- Choose a strong title for your piece.

- Weave in relevant facts and statistics to bolster your case but try to avoid using too many of them.
- Anecdotes and examples may help illustrate points and add color to the piece.
- If you have a good graphic to drive home a point, offer it.
- Avoid academic jargon and technical terms; if readers have to labor to figure out what you're saying, you've lost them.
- Consider working in a "to be sure" paragraph, to anticipate and preempt objections.
- If you're focusing on a problem, propose ways to fix it.
- Finish on a note that reinforces your message.

You can find further examples of movie reviews in the *New York Times* (<https://www.nytimes.com/reviews/movies>). Consider those examples for format and writing style. **Each week you will need to submit a MR for each topic (a total of 11 MRs) electronically on Canvas through Turnitin.** The due dates will be **Sunday of each week by 11:59pm. All due dates will be listed on Canvas.** Your Turnitin submission serves as the official record. Any discrepancies between the electronic and printed versions will void the assignment.

Class Participation, Attendance Record, and Group Activities:

Field Trip - Lecture Held at Rinker Brain Institute:

One lecture will be held at the Rinker Brain Institute (14725 Alton Parkway, Irvine, CA 92618). A tour will be provided, followed by the viewing of the class movie. A carpool sign-up will be posted on Canvas and more information will be provided as the date approaches.

Attendance and Tardiness

Attendance is mandatory at every lecture. If you no longer want to be in the class, **you** must drop the class. If you miss class, you may lose points. **Students can miss one**

class for any reason. After that, each absence leads to -5% from your final overall grade (e.g., from 98% to 93% to 88%, etc.).

If you have to miss class after your first absence, the only acceptable reasons are: (a) ill health (only with an official note from a doctor), (b) jury duty or mandatory court appearances (with documentation), or (c) university sanctioned events (e.g., sports, religious holidays).

Class starts exactly on time and finishes on time. Please don't be late and stay the duration of the lesson. If you show up late or leave early, tardy points apply. As they say in Vienna, "If you are not 15 minutes early, you are late." Think about it.

I will apply one tardy point against every minute you are late/missing in a cumulative fashion. Every 30 tardy points will lower your grade by 1%.

Quizzes:

Throughout the semester, we will hold 3 quizzes to take at your own time on Canvas **by each Sunday at 11:59pm**. These will need to be completed within 1 hour of the starting time. I will drop the grade of the lowest quiz (only if you have taken them all). Each quiz will cover all course material (e.g., cumulative assigned paper(s), book chapter(s), movies, etc.) beginning after the previous quiz. Thus, it is your responsibility to have read any assigned material and be on top of things.

Note: the main purpose of the quizzes is to permit us to provide you with feedback on how you are doing. We have no intention of stressing you out or unnecessarily adding to your load. We would like you to have an opportunity to showcase what you have learned.

There will be no make-ups for quizzes.

FINAL ASSIGNMENT:

You will choose 1 of the prompts below to complete a cohesive paper with the following requirements:

- 6-8 page, double-spaced paper
- Size 12, Times New Roman

- APA format

Prompts:

1. Pick one topic we have covered or discuss one with your TAs. Choose 3 movies that you feel expand upon the topic and discuss how they may depict the topic better or differently than the movie we presented during lecture.
2. Participate in a floatation session at the Brain Institute and write about your experience. **After** your floatation session, watch the movie *Altered States* (1980) and read these three articles to orient yourself on the science of floatation:
 - Experiments in solitude in maximum achievable physical isolation with water suspension of intact healthy persons (Lilly & Shurley, 1961)
 - Profound experimental sensory isolation (Shurley, 1960)
 - Water immersion and flotation: From stress experiment to stress treatment (Suedfeld et al., 1983)
 After doing all of the above, compare and contrast fiction from reality concerning floatation using your experience, the literature, and *Altered States* (Contact Jackson for scheduling and to receive the papers to read)
3. This writing prompt requires you to watch 3 movies (2 of which are viewed in class): *Ghost in the Shell* (1995), *The Matrix* (1999), and *Blade Runner* (1982). The entirety of the science fiction genre is heavily influenced by these 3 movies. Watch each movie and write on the themes and philosophies of each movie. With the timeline of movie release in mind (*Blade runner* -> *Ghost in the Shell* -> *The Matrix*), discuss also how they have influenced each other and what each movie means to the science fiction genre as a whole.
4. Create your own topic related to the class. Discuss with the TAs for topic approval.

If you have any questions, please contact one of the TAs and we will be more than happy to help. The deadline for this is **Sunday, January 30th, at 11:59pm**. If you so choose, you may also submit the paper before the deadline. Your submission will go through Turn It In on Canvas. Please check your own submission prior to submitting for the course to ensure the assignment is completely original.

Extra Credit Opportunities:

As part of this course, it is highly recommended to participate in at least one experiment at the Brain Institute on the Rinker Campus of Chapman University: 14725 Alton

Parkway, Irvine, CA 92618. Please get in contact with your TAs to select an experiment and schedule a time. **This will be worth extra credit.**

Dr. Raz is currently writing a popular science book along with an app and your feedback on both can earn you extra credit. More information will be provided in class.

Summary

A summary of the workload for this class follows:

- Every day — Review, read, watch, think, write
- Every week —you should submit these:
 - 1 Movie Review
- Periodically— you will do these:
 - Quizzes
 - Watch movies at home

Tentative Schedule:

(Note: This schedule is subject to change)

Week 1 (January 3 - January 7):

Introduction, Humor, & Suspense

1/3/2022 - Introductions and Instructions

WATCH DURING CLASS:

N/A

OPTIONAL MOVIE(S) AND READING(S):

- Zacks, J.M. & Magliano, J.P. (2011). Film, narrative, and cognitive neuroscience. In D. P. Melcher & F. Bacci (Eds.) *Arts & The Senses*, pp 1-16. NY: Oxford University Press.
- Curious? Read more about the Brain Institute on our website:
<https://braininstitute.us/>

1/5/2022 - Humor

WATCH DURING CLASS

Annie Hall (1977), 93 minutes, Directed by Woody Allen, Written by Woody Allen and Marshall Brickman

READING

- Watson K., Matthews, B. J., Allman, J. M (2007) Brain Activation during Sight Gags and Language-Dependent Humor *Cereb. Cortex* (2007) 17(2): 314-324.

OPTIONAL MOVIE(S) AND READING(S):

- Curious? See: Fried, I. (1998). Electric current stimulates laughter. *Nature*, 391(6668), 650.
- Still Curious? See: Azim, E. (2005). Sex differences in brain activation elicited by humor. *Proceedings of the National Academy of Sciences of the United States of America*, 102(45), 16496-16501.

- Curious still? See: Moran, J M. (2004). Neural correlates of humor detection and appreciation. *NeuroImage*, 21(3), 1055-1060.
- Seriously curious? See: Marinkovic, K. (2011). Right hemisphere has the last laugh: neural dynamics of joke appreciation. *Cognitive, affective & behavioral neuroscience*, 11(1), 113-130.

1/7/2022 - Suspense:

WATCH DURING CLASS:

A Quiet Place (2018), Runtime 1 hour 31 min, Directed by John Krasinski, Written by John Krasinski, Brian Woods, and Scott Beck

READING:

- Carroll, N. (1996). The paradox of suspense. In P. Vorderer, H. J. Wulff, M. Friedrischen (Eds.). *Suspense: Conceptualizations, Theoretical Analyses, and Empirical Explorations*. New York: Routledge, 71-91.

OPTIONAL MOVIE(S) AND READING(S):

- Mattenklott, A. (1996). On the methodology of empirical research in suspense. In P. Vorderer, H. J. Wulff, M. Friedrischen (Eds.). *Suspense: Conceptualizations, Theoretical Analyses, and Empirical Explorations*. New York: Routledge, 283-300.

Week 2 (January 10 - January 14):

Memory, Psychedelics and Altered States of Consciousness, & Brain Modulation

1/10/2022 - Memory:

WATCH DURING CLASS:

Memento (2000), 113 minutes, Directed by Christopher Nolan, Written by Christopher Nolan (screenplay), Jonathan Nolan (short story "Memento Mori")

READING:

- Squire, L. R. (2009). The legacy of patient H.M. for neuroscience. *Neuron*, 61, 6-9.

OPTIONAL MOVIE(S) AND READING(S):

- Curious? See [Raz, A., Packard, M., Alexander, M., Buhle, J. T., Zhu, H., Yu, S., & Peterson, B. S. \(2009\) A slice of π: Exploratory neuroimaging of digit encoding and retrieval in a superior memorist. *Neurocase*. 15\(5\) 361-372.](#)

1/12/2022 - Psychedelics and Altered States of Consciousness

WATCH DURING CLASS:

[Fear and Loathing in Las Vegas \(1998\)](#), runtime 1 hour 42 min, Directed by Terry Gilliam, written by Paddy Chayefsky

READING:

- [T. Anderson et al., “Microdosing psychedelics: personality, mental health, and creativity differences in microdosers,” *Psychopharmacology*, vol. 236, no. 2, pp. 731–740, Feb. 2019.](#)

OPTIONAL MOVIE(S) AND READING(S):

- 1) [TED talk by Rick Doblin](#)
 - 2) [Psychonautics: A Comic's Exploration Of Psychedelics \(2019\)](#), 80 minutes, Directed by [Brian Bellinkoff](#), Produced by [Shane Mauss](#), [Matt Schuler](#) and [Brian Bellinkoff](#)
- [W. W. Harman, R. H. McKim, R. E. Mogar, J. Fadiman, and M. J. Stolaroff, “Psychedelic Agents in Creative Problem-Solving: A Pilot Study,” *Psychol Rep*, vol. 19, no. 1, pp. 211–227, Aug. 1966.](#)

1/14/2022 - Modulating the Brain:

WATCH DURING CLASS:

[Brain Training \(CBC Marketplace\)](#)

READING:

- [Rabipour, S., Raz, A. \(2012\). Training the brain: Fact and fad in cognitive and behavioral remediation. *Brain and Cognition*, 79\(2\), 159-179. doi 10.1016/j.bandc.2012.02.006](#)

OPTIONAL MOVIE(S) AND READING(S):

- In advance of the lecture, you may want to watch this [clip](#) and [Minds Wide Open](#). Then watch this [TED talk](#).

- Curious? See: Heilman, K. M., & Valenstein, E. (2011) Introduction In Heilman, K. M. & Valenstein, E. (Eds.) Clinical Neuropsychology, 5th Edition, pp 3-21. NY: Oxford University Press.
- Still curious? See: Rizzolatti, G. & Pizzamiglio L. (1999). Neuropsychology: Introductory Concepts. In Pizzamiglio, L. & Denes, G. (Eds.) The Handbook of Clinical and Experimental Neuropsychology, pp 1-13. Hove: Psychology Press.
- Curious? See: [Raz, A., Shapiro, T., Fan, J., Posner, M. \(2002\). Hypnotic suggestion and the modulation of Stroop interference. Archives of general psychiatry, 59\(12\), 1155-1161.](#)
- Still Curious? See: [Neurofeedback](#)

Week 3 (January 17 - January 21):

Sleep and Dreaming, Emotion and Consciousness, & Mass Psychogenic Illness

1/17/2022 - Sleep and Dreaming:

WATCH DURING CLASS:

~~*Abre los ojos (1997)*, 117 minutes, co-written, co-scored, and directed by Alejandro Amenábar and co-written by Mateo Gil~~

READING:

~~[Stephen LaBerge, Benjamin Baird & Philip G. Zimbardo. Smooth tracking of visual targets distinguishes lucid REM sleep dreaming and waking perception from imagination. Nature Communications volume 9. Article number: 3298 \(2018\)](#)~~

OPTIONAL MOVIE(S) AND READING(S):

- ~~1)- [TED talk by Matt Walker](#)~~
 - ~~2)- [TEDx talk by Param Dedhia](#)~~
 - ~~3)- [TED talk by Dan Gartenberg](#)~~
 - ~~4)- [TED talk by Russell Foster](#)~~
- ~~· Curious? See: [Pre sleep treatment with galantamine stimulates lucid dreaming: A double blind, placebo controlled, crossover study](#)~~
 - ~~· Still Curious? See: [Induction of self awareness in dreams through frontal low current stimulation of gamma activity.](#)~~

1/19/2022 - Emotion and Consciousness:

WATCH DURING CLASS:

Blade Runner: The Director's Cut (1982), 117 minutes, Directed by Ridley Scott, based on the novel by Philip K. Dick

READING:

[Iacoboni, M. \(2009\). Imitation, empathy, and mirror neurons. Annual Review of Psychology. 60, pp 653-670.](#)

1/21/2022 - Mass Psychogenic Illness:

WATCH DURING CLASS:

House, M.D. (Airborne) (2007), 44 minutes, Directed by Elodie Keene, Written by David Hoselton.

READING:

- Weir, E. (2005). Mass sociogenic illness. *CMAJ*: Canadian Medical Association Journal, 172(1), 36.

OPTIONAL MOVIE(S) AND READING(S):

- *The Falling* (2014), 102 minutes, Directed and Written by: Carol Morley.
- Book Chapter

Week 4 (January 24 - January 28):

Artificial Intelligence, Hypnosis, & Course Conclusion

1/24/2022 - Artificial Intelligence

WATCH DURING CLASS:

Ex Machina (2014) 1 hour 48 minutes, Directed and written by Alex Garland

READING: [David J. Chalmers, Facing Up to the Problem of Consciousness. Journal of Consciousness Studies 2\(3\):200-19, 1995](#)

1/26/2022 - Hypnosis

WATCH DURING CLASS:

[Trance \(2013\)](#), 101 minutes, Directed by Danny Boyle, Written by Joe Ahearne & John Hodge.

READING:

- Raz, A. (2011). Hypnosis: a twilight zone of the top-down variety: Few have never heard of hypnosis but most know little about the potential of this mind–body regulation technique for advancing science. *Trends in Cognitive Sciences*, 15(12), 555-557.

OPTIONAL MOVIE(S) AND READING(S):

- The Manchurian Candidate (1962), 126 mins, Directed by John Frankenheimer based on an adaptation of the novel by Richard Condon.
- Curious? See: Hypnosis, Will, and Memory: A Psycho-Legal History by Jean-Roch Laurence and Campbell Perry, The Guilford Press, 1988, ISBN-13: 978-0898623390.

1/28/2022 - Course Conclusion

WATCH DURING CLASS:

Run Lola, Run (1998), 81 minutes, Directed by Tom Tykwer, Written by Tom Tykwer

READING:

- Hasson, U. & Malach, R. (2006). Human brain activation during viewing of dynamic natural scenes. In D. J. Chadwick, M. Diamond, & J. Goode (Eds.) *Percept, Decision, Action: Bridging the Gaps*. Chichester, UK: John Wiley & Sons Ltd, 203-216.

OPTIONAL MOVIE(S) AND READING(S):

- A double life (1947), 104 minutes, Directed by George Cukor, Written by Ruth Gordon and Garson Kanin
- Goldstein T.R. & Winner, E. (2008) A new lens on the development of social cognition: The study of acting. In C. Milbrath & C. Lightfoot (Eds.) *The Arts and Human Development*, New York: Taylor & Francis