

Our “Modern” Culture of Drugs

IDST 089
Spring 2014

Building and Room: Murphey 105

Day and Time: Wednesday 1-3:50

Office Hours: Monday 12-1 (All three; Peabody 201C)
Tuesday 3-4 (Nelson; Peabody 201C)
Thursday 11-12 (Jenna; Davie 320)
Friday 2-3 (Matt; Kerr 2nd floor lobby)

Instructor Names and Contact Information:

Jenna Clark Social Psychology 320 Davie Hall School of Psychology Cell - 919-923-1841 Email - jennac@live.unc.edu	Matt Haynes Pharmaceutical Sciences 1319 Kerr Hall School of Pharmacy Cell - 412-418-0316 Email - mthaynes@unc.edu	Nelson Brunsting Educational Psychology 201C Peabody Hall School of Education Cell - 585-317-8149 Email - brunnc3@unc.edu
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Email is the preferred method of communication, and a response will be given by email within 24 hours of receipt. If you have a problem or concern related to the class, please inform us as soon as possible.

Course Description

Our “Modern” Culture of Drugs is designed to purposefully develop students’ academic skills and processes by interacting with a wide range of (sometimes controversial) information and viewpoints. While each discussion topic could constitute a seminar of its own, materials are chosen to (a) cover a wide array of the scientific advances and issues concerning drugs, and (b) provide engaging starting points from which to investigate a variety of questions and issues. Students should complete the course with: a greater understanding of the science behind and issues concerning drugs, an in-depth knowledge of a few specific aspects of drugs, and an improved academic basis in the acquisition and analysis of process and content.

Course Objectives

1. Develop our abilities to think critically and discuss controversial topics constructively.
2. Approach a complex topic by highlighting multidisciplinary perspectives.
3. Establish an in-depth knowledge in a particular aspect of the course content.
4. Continue to build students’ skill sets for university study and life beyond college.

Expectations

1. Worthwhile discussion in class requires a basic understanding of the topics we wish to discuss. Therefore, please complete reading assignments and coursework before class.

2. It would be unreasonable for us to burden you with a truly comprehensive set of reading assignments. However, those we provide are meant to initiate discussion, not limit it. Engage your mind - genuinely consider the material, and examine different perspectives. We would rather you come to class with a new viewpoint to add rather than simply having “memorized” the provided readings.

3. Aside from establishing basic content knowledge on more complicated course topics (e.g. biological signal processing, health care economics), our class time will primarily be discussion-based. For all of your efforts outside of class to make a real impact, participation in class discussion is absolutely necessary. That being said, we don't expect anyone in this class (even us) to have all or even most of the answers (nobody does). We're in this course to rationally approach a controversial topic which remains largely subjective at best. If you find it difficult to join the discussion, please talk to us about it as soon as possible, so we can find ways to make participation feasible for you.

4. Projects are intended to provide you with a chance to really say something meaningful in whatever medium you so choose (film, print, image, *etc.*). Your audience should be excited to be presented with your work, and you should be excited to present it!

Some Questions to Wrap Your Mind Around...

1. How do drugs work? Do all drugs work?
2. When, where, and why do people use drugs?
3. What factors are involved in the development, production, and distribution of drugs?
4. May one's right to individual agency be trumped by larger societal concerns?

Attendance Policy

1. This course will differ from many of your other freshman courses in that its primary value comes from in-depth class discussion of the topics. Attendance is mandatory for all classes.
2. On rare occasions, it may be necessary to request that an absence be excused (e.g., for illness, death of an immediate family member, or other emergencies). It is the student's obligation to give prior notification of such absences when possible. Further, although the University calendar does not recognize religious holidays, we will make accommodations for students requesting to miss class due to the observance of religious holidays.

Students should make every effort to attend class. In the event of an absence, students should contact the instructor immediately to explain and discuss ways to make up missed work.

3. Instructors reserve the right to lower course grades because of absences and/or tardiness, provided in both cases that advance notice of the policy (herein) is given.
4. In the event of truly inclement weather, we do not want you to risk your well-being due to unsafe conditions:

- If UNC-Chapel Hill departments and schools are cancelled due to weather, we will not hold class.
- If class is cancelled due to weather, or a change of venue occurs, we will send an email message out to the class by 10:00 a.m. on the day of class.
- Rain alone does not constitute inclement weather, nor is the mere presence of snow sufficient for such a distinction.

Required Texts

Irving Kirsch, Ph.D. The Emperor's New Drugs. Basic Books (2011).

- Students should be prepared to read and consider the text throughout the semester. Avoid putting it off until the final weeks, when the materials for discussion escalate in density.

Medical Condition/Disability

If you have a medical condition/disability that may require reasonable accommodation to ensure equal access to and/or potential for success in this course, please contact the Department of Disability Services at 962.8300, <http://disabilityservices.unc.edu/eligibility/index.html>, or via email at disabilityservices@unc.edu

Honor Code

The University of North Carolina at Chapel Hill has had a student-administered honor system and judicial system for over 100 years. The system is the responsibility of students and is regulated and governed by them, but faculty share the responsibility. If you have questions about your responsibility under the honor code, please bring them to your instructor or consult with the office of the Dean of Students or the Instrument of Student Judicial Governance. This document, adopted by the Chancellor, the Faculty Council, and the Student Congress, contains all policies and procedures pertaining to the student honor system. Your full participation and observance of the honor code is expected. If you require further information on the definition of plagiarism, authorized vs. unauthorized collaboration, unauthorized materials, consequences of violations, or additional information on the Honor Code at UNC, please visit <http://honor.unc.edu>.

Harassment and Discrimination

The University's Policy on Prohibited Harassment and Discrimination (<http://www.unc.edu/campus/policies/harassanddiscrim.pdf>) prohibits discrimination or harassment on the basis of an individual's race, color, gender, national origin, age, religion, creed, disability, veteran's status, sexual orientation, gender identity or gender expression. Appendix B of this Policy provides specific information for students who believe that they have been discriminated against or harassed on the basis of one or more of these protected classifications. Students who want additional information regarding the University's process for investigating allegations of discrimination or harassment should contact the Equal Opportunity /ADA Office for assistance at 919.966.3576 or via email at equalopportunity@unc.edu or through U.S. Mail at

Equal Opportunity/ADA Office
The University of North Carolina at Chapel Hill
100 East Franklin Street, Unit 110
Campus Box 9160
Chapel Hill, NC 27599

DATE	CLASS TOPICS	WORK DUE
	Block 1: Biological Approaches	
Class 1 (1/8/14)	Introduction and General Drug Discussion	
Class 2 (1/15/14)	Fundamental Biology and Statistical Evidence	
Class 3 (1/22/14)	Molecular Signaling and Locating and Evaluating of Sources	Class 2 Animations Statistics Factoid
	Block 2: Sociological Approaches	
Class 4 (1/29/14)	History of Drug Use	Class 3 Questions Class 4 Reading Reaction
Class 5 (2/5/14)	Pharmacology and Social Factors Affecting Drug Use	Class 5 Reading Reaction
Class 6 (2/12/14)*	Media Portrayal of Drugs	Class 6 Reading Reaction
	Block 3: Psychological Approaches	
Class 7 (2/19/14)	Addiction: Myth? and Semester Project Updates	Class 7 Reading Reaction
Class 8 (2/26/14)	Alcoholism and Addiction and Reference Lists	Class 8 Reading Reaction
Class 9 (3/5/14)	Legal Issues and Drug Regulation	Class 9 Reading Reaction
	SPRING BREAK	
	Block 4: Economic Approaches	
Class 10 (3/19/14)	Pharmaceutical Development	Group Progress Reports Class 10 Reading Reaction
Class 11 (3/26/14)	Health Care Costs: QALY	Class 11 Reading Reaction
Class 12 (4/2/14)	Drug Efficacy and Mental Illness	
	Block 5: Synthesizing Approaches	
Class 13 (4/9/14)	Class Driven Topic / Free Period	Source for Discussion Final Reading Reaction
Class 14 (4/16/14)	Group Presentations	Semester Project
Class 15 (4/23/14)	Course Discussion and Wrap-Up	

Assignments	Value
Biological Approaches Assignments - 2.5% each for questions; 5% for animations	10%
Weekly Reading Reactions (7 x 5%)	35%
Final Reading Reaction	10%
Class-Driven Discussions (1 per group; 6 total)	15%
Semester Project (<i>e.g.</i> 5-7 page paper, video, <i>etc.</i>)	25%
- Group Progress Reports due by 3/19 (1 page)	5%

Grading

As students ourselves, we've seen that rigid grading rubrics tend toward students "manipulating" their "performances" to satisfy certain baseline criteria. Thus, we feel it is better to describe what we're looking for out of students instead. We will provide a lot of guidance and as well as feedback during the semester, so that students can understand what is expected and feel confident they know how to earn certain grades.

As a general guideline for what we expect from students:

- A, A-:** Student presents an extensive understanding of the readings while often bringing to class new materials/perspectives which broaden and enhance the discussion. Student's weekly writings intimately dissect the topic and present enlightening counterarguments in a *constructive* manner. Student's end-of-semester project shows an ability to investigate and critique a topic with supported analyses that make a strong impact intellectually and emotionally upon presentation. Student also is present on time for each class.
- B+, B:** Student presents a reliable understanding of the readings, and on occasion has brought to class new materials/perspectives which may broaden and enhance the discussion. Student's weekly writings critique and defend viewpoints in a *constructive* manner. Student's end-of-semester project shows an ability to investigate and critique a topic beyond the material/discussions presented in class while presenting analyses in a well-supported manner. Student also is present on time for each class.
- B-, C+:** Student usually presents an understanding of the readings, but on rare occasion shows not to have prepared for class, and rarely contributes outside of the scope of the provided materials. Student's weekly writings are mostly on-topic and discuss opinions in a *constructive* manner. Student's end-of-semester project shows an ability to investigate new material and present analyses in a generally supported manner. Student is rarely late for or absent from class.
- C, C-:** Student often understands the readings, but often does not prepare for class, nor does Student contribute outside of the scope of the provided material. Student's

weekly writings are limited in their approach to and/or discussion of the topic. Student's end-of-semester project investigates new material but somewhat lacks support in analysis. Student is usually present on time for each class.

D+/D: Student rarely prepares for class, nor do Student's weekly writings relate to the provided material. Student's end-of-semester project seems unrelated to the course, or lacks support in analysis. Student is often late for or absent from class.

Evaluations

As teachers, we want to provide the best possible learning environment for you in which to learn and discuss. Thus, your evaluations of our performance will be instrumental to our improvement as we progress through the semester. We will prepare short (1-3 questions) evaluations for you to complete anonymously at the end of classes 4, 8, and 11.

There will be no required readings for this lecture. Students with questions and/or concerns are encouraged to attend office hours or consult an available introductory biology text through the UNC libraries. Purchase of a recently published text is not recommended, as any general biology textbook will cover the material to the extent which we desire. Wikipedia and other online resources remain effective in establishing a basic perspective; however, we will not vouch for the validity or relevance of every detail these sites provide.

The following topics will be emphasized:

1. Macromolecules – Structure to Function
2. Cellular Organelles – the “Business” Model
3. Membrane Proteins and Chemical Gradients

Directions: Students (groups of two) will select and answer (one page total) from two of the following three questions, to be turned in at the start of the next class period:

1. (For those with straightforward desires...) Draw the structure of ATP. Describe why the “sodium-potassium pump” requires ATP to mediate ion transport. Explain how it releases ions after successful transport. Postulate the utility of ionic gradients over other signaling means.
2. (For the creatives among us...) In class, the analogy of a business’ hierarchy was proposed to describe general cellular organization. Come up with your own analogy and defend it based on the overall function of each of the major intracellular organelles described in class.
3. (For those who like a challenge...) The nitrogenous bases which compose DNA interact via hydrogen bonds between their most electronegative atoms. However, equally strong hydrogen bonds are produced in an interaction between such substituents and water. Explain why DNA maintains its Watson-Crick base-pairing in solution despite this apparent motivation otherwise.

Class 2: Evidence Through Statistics

Readings: Please read Darrell Huff’s How to Lie with Statistics, pages 9-28 and 111-124. In addition, choose any two other chapters from the entire book (which will be provided in PDF format) to read.

Assignments: On your own, please look into one common factoid you’ve always suspected wasn’t true. (E.g., we only use 10% of our brains).

Prepare a few sentences to say to the class (under 1 minute, no powerpoints please!) on 1) whether this factoid is true or not; 2) if it’s untrue, what is the actual truth of the matter; 3) if it’s untrue, how it was spread and miscommunicated. Try to pick something interesting/surprising!

Class 3: Molecular Signaling

There will be no required readings for this lecture. Office hours, the UNC libraries, and in most cases Wikipedia remain relevant means for further inquiry.

The following topics will be emphasized:

4. Signal Amplification
5. Transcription and Translation
6. The Neuronal Action Potential
7. Synaptic Transmission

Directions: Students (groups of two) will produce a short animation (similar to the Na/K ATPase and the neuronal action potential animations presented in lecture) which illustrates one of the mechanisms involved in molecular signaling, selected from the following, to be presented at the start of Class 5:

1. Signal Amplification
 - a. FROM GPCR activation TO activation of transcription
2. DNA Transcription
 - a. Initiation, Elongation, Termination (consider splicing as well)
3. mRNA Translation
 - a. Initiation, Elongation, Termination
4. Synaptic Transmission
 - a. FROM presynaptic depolarization TO postsynaptic depolarization

Class 3: Source Evaluation

Readings:

1. <http://writingcenter.unc.edu/resources/handouts-demos/writing-the-paper/evaluating-print-sources>
2. <http://www.virtualsalt.com/evalu8it.htm>
3. <http://blogs.scientificamerican.com/guest-blog/2011/07/16/finding-good-information-on-the-internet/>

Assignments: There will be no assignment for the source evaluation portion of class 3; enjoy the break! However, be prepared to answer questions in-class about the readings and apply the CARS system to actual documents...

Class 4: History of Drug Use

Readings:

1. Wild, A. (2004). *Coffee: A dark history*. London: Fourth Estate. (pp. 32-33, 36-55).
2. Schultz, H. (2011). *Onward!: How Starbucks fought for its life without losing its soul*. West Sussex: John T. Wiley and Sons. (pp. 1-7, 69-86, 100-112, 296-302).
3. Bartline, L., Nicholson, M., & Geller, M. (2013). Cash brews robust U.S. craft coffee market. <http://www.reuters.com/article/2013/06/02/us-usa-coffee-craft-idUSBRE95107420130602>
4. Maynor Lowery, M. (2010). Crafting an argument using historical sources. Unpublished document. Used with permission.
5. Huang, Z.-L., Qu, W.-M., Chen, J.-F., Schwarzschild, M. A., Fredholm, B. B., Urade, Y., & Hayaishi, O. (2005). Adenosine A2A but not A1 receptors mediate the arousal effect of caffeine. *Nature Neuroscience*, 8, 858-859.

Directions:

Please read all five readings. Below are some questions we are likely to discuss in class. Feel free to use them or any other part of the readings to drive your reading reaction due at the beginning of class.

Questions:

1. Some cultures and religions, both past and present, have prohibited the consumption of coffee and/or caffeine. Why do some cultures prohibit coffee, while others include it in their religious rituals? Please (a) pick one culture or religion and explain their stance against the use of coffee/caffeine; and (b) provide a compelling argument for what cultural factors in may have lead to their making coffee taboo.
2. Starbucks has grown from a single coffee shop to a ubiquitous American company and even a global presence. Please answer one of the following: (a) what cultural factors, both of America and of the Starbucks company culture, do you believe have led to their rise?, (b) how has Starbucks successfully competed on the global market in diverse cultures, or (c) could the Starbucks model/strategy work if they were not selling an addictive drug? Please make sure to use at least one source beyond (2) and/or (3) in support of your answer.
3. Both Wild and Schultz refer to coffeehouses as “third spaces” beyond the first two focal spaces for humans: home and work. However, Wild is describing sixteenth and seventeenth century Middle East, Egypt, and Eastern Europe, and Schultz is referring to the twenty-first century world. Why do you believe third spaces have traditionally revolved around drugs (e.g., coffeehouses and taverns)? Would you consider the church another third space?

Readings:

1. Newcomb, M.D., & Felix-Ortiz, M. (1992). Multiple protective and risk factors in drug use and abuse: Cross-sectional and prospective findings. *Journal of Personality and Social Psychology*, 63(2), 280-296.
2. <http://www.drugfreeworld.org/drugfacts/drugs/why-do-people-take-drugs.html> AND <http://www.wikihow.com/Understand-Why-People-Use-Drugs> as a counterpart
3. http://en.wikipedia.org/wiki/Social_cognitive_theory
4. Cialdini, R.B. (2005). Basic social influence is underestimated. *Psychological Inquiry*, 16(4), 158-161.

Directions: Each person in each group will read all four readings. Everyone should then answer the question below in a one-page document, ideally citing one or two sources beyond what's in the reading list.

Questions:

1. In problems such as drug use, people often wonder if the issue lies in the person or their situation. Common perspectives tend to fall more towards the former, ascribing most of the blame to inherent flaws in a person. After the readings, do you think that this is fair? How much of a role do you think a person's situation has versus their own personality in the decision to take drugs?

Class 5: Pharmacology

There will be no *required* readings for this lecture. Students with questions and/or concerns are encouraged to attend office hours or consult the following reading, which will be uploaded to Sakai:

1. Koob G.F., Le Moal M. Addiction and the Brain Antireward System. *Annual Reviews of Psychology* (2008): 59; 29-53.

However, this reading covers material beyond the scope of our focused discussion. An understanding of only the material related to lecture will be sufficient.

The following topics will be emphasized:

1. Reward Systems Neuroanatomy
2. Monoamine Neuropharmacology
3. "Antireward" Recruitment

Directions: Students will answer the following questions (one page total) to be turned in at the start of Class 7:

1. Concomitant administration of a COMT agonist will (INCREASE or DECREASE) dopamine concentrations in the synaptic cleft.
2. TRUE or FALSE: Concomitant administration of a drug which competes for the active site of MAO but possesses no stimulant effects on its own will increase one's initial response to amphetamines.

3. Administration of Reserpine will (INCREASE or DECREASE) dopamine release into the synaptic cleft upon presynaptic depolarization.
4. Which areas of the brain process reward signaling? What are they called altogether?
5. Explain why drugs strive to mimic endogenous compounds in structure. Assuming both cost considerations and your previous answer, give another two reasons why one would spend time developing drugs which instead *mimic* endogenous monoamine structure.
6. Describe how stress contributes to motivate addiction.

Class 6: Societal and Media Portrayal of Drug Use

Readings:

Everyday Drugs (Sugar, Caffeine, Aspirin, etc.):

1. Retrontario (2009). Breakfast cereals of 1985.
<http://www.youtube.com/watch?v=tjLO4eEp0Xs> Accessed 10 June 2013.
2. Calvin and Hobbes.gif (Accessible via Sakai).
3. Archies (1969). Sugar, sugar. http://www.youtube.com/watch?v=h9nE2spOw_o. Accessed 10 June 2013.
4. Carey, A. (2010). Side effects of too much sugar.
<http://www.youtube.com/watch?v=HTBNnsxTHDA>. Accessed 10 June 2013.
5. Anonymous (2010). The truth about high fructose corn syrup—the harmful effects.
<http://www.youtube.com/watch?v=lu1gdijwVac>. Accessed 10 June 2013.
6. Ponder, S. W. (2009). Children of the corn syrup.
<http://www.youtube.com/watch?v=LF8N8zBKz3w>. Accessed 10 June 2013. (Start at 2:30)

Marijuana and Psychedelic Drugs:

1. <http://www.cnn.com/2011/LIVING/07/15/ken.johnson.psychedellic.art/index.html>
2. Burroughs, W. (1983). Introduction. In L. Sloman (Auth.), *Reefer Madness* (pp. ix-xxv). New York: St. Martin's Press.
3. Gertz, S. J. (2008). Dope menace: The sensational world of drug paperbacks, 1900-1975. Port Townsend, WA: Feral House.

Prescription Drugs:

1. Frosch, D. L., Krueger, P. M., Hornik, R. C., Cronholm, P. F., & Barg, F. K. (2007). Creating demand for prescription drugs: A content analysis of television direct-to-consumer advertising. *Annals of Family Medicine*, 5, 6-13.
2. U. S. Food and Drug Administration (2013). Prescription drug advertising.
<http://www.fda.gov/Drugs/ResourcesForYou/Consumers/PrescriptionDrugAdvertising/default.htm>. Accessed 10 June 2013.
3. Sahakian, B., & Morein-Zamir, S. (2007). Professor's little helper. *Nature*, 450, 1157-1159.
4. Polcyn, M. (2011). College students across America using Adderall as a study aid.
<http://www.youtube.com/watch?v=uCA0IVONjNs>. Accessed 10 June 2013.
5. Boston University Today (2009). Adderall for an A-Plus?
<http://www.youtube.com/watch?v=BxcOF7xFFx0>. Accessed 10 June 2013.

Performance-enhancing Drugs:

1. Rutecki, J. W., & Rutecki, G. W. (2010). A study of media impact on public opinion regarding performance enhancement in Major League Baseball. *The Open Sports Sciences Journal*, 3, 140-148.
2. Harris, W. (2013). Ten performance enhancing drugs that aren't steroids.
<http://www.howstuffworks.com/10-performance-enhancing-drugs.htm>. Accessed 10 June 2013.
3. Associated Press (2012). Lance Armstrong's image strong despite scandal.
<http://www.dailyherald.com/article/20121013/sports/710139855/>. Accessed 10 June 2013.
4. ESPN (2006). Armstrong defends himself against doping allegations.
<http://www.youtube.com/watch?v=thyFmxusB9E>. Accessed 10 June 2013.
5. Bishop, G. (2005). Performance-enhancing drugs growing issue for women.
http://seattletimes.com/html/sports/2002551156_boostside10.html. Accessed 10 June 2013.

Directions:

Each group should divvy the reading such that one member in the group has read/watched all of the materials for one of the drug types. Your reaction paper can be on any topic and in any format you like (historical, argumentative, factual, persuasive, visual, etc.). If you get writer's block, you can use the questions we'll discuss in class to guide you.

In class, the group will meet, teach, and discuss what they read and how it pertains to the questions below. Each group will come up with their interpretation of how the media and social portrayal around different types of drugs is the same or different, as well as why this might be the case.

Questions:

1. Advertisements both for and against certain drugs have a tendency to overstate their case. For the particular drug you read about, which side of the argument do you believe relies more on "shock factor" or dramatic approaches to make its point? Why do you think these advertisements/documentaries/articles choose to be so dramatic? Feel free to include sources beyond those you read, as well as general impressions you may have.
2. If you had to provide a summative statement (e.g., media portrayal of performance enhancing drugs in the US is primarily negative/positive and focused on _____) for the category of drugs you read about, what would you write?
3. What do you believe the media portrayal and ongoing public discussion about your category of drugs (or drug in particular) will be like in 10 years? How and why might it change or stay the same?
4. Drugs are often used as metaphors for love, sexual ecstasy, and religious ecstasy, especially in American music. Why might this be?

Class 7: Addiction – Myth?

Readings:

1. <http://www.psychologytoday.com/blog/when-more-isnt-enough/201103/is-hoarding-addiction-or-purely-compulsive-behavior>
2. <http://globalizationofaddiction.ca/articles-speeches/148-addiction-the-view-from-rat-park.html>
3. <http://www.parl.gc.ca/Content/SEN/Committee/371/ille/presentation/alexander-e.htm>
4. Robinson, T.E., & Berridge, K.C. (2003). Addiction. *Annual Review of Psychology*, 54, 25-53.
5. Volkow, N.D., et al. (2010). Addiction: Decreased reward sensitivity and increased expectation sensitivity conspire to overwhelm the brain's control circuit. *Bioessays*, 32, 748-755.

Directions: Each person in each group will read all four readings. Groups will then choose to answer one of the following questions below in a one-page argument. Although each individual in the group will be responsible for writing his/her own reading reaction, it is important the group choose a question together, as the discussion in class will build from small group discussion.

1. Is addiction real?
2. Consider an alternative contributor to the potential establishment of an addictive state (social, psychological, and/or biological), and relate it (with citation) to concepts presented in Robinson and Berridge (2003) and/or Volkow, et al (2010).
3. With the upcoming release of the DSM-V, a handbook of mental disorders used in psychiatric diagnosis, people have argued about the existence of addictions that may not fit the stricter, more biological criteria. Examples include sex addictions and video game addictions. Argue why these should or should not be considered the same phenomenon as addiction to drugs.

Class 8: Alcohol and Alcohol Addiction

Readings:

1. DSM-IV Definitions of Alcohol, Alcohol Dependence, and Alcohol Abuse
2. Steele, C. M., & Josephs, R. A. (1990). Alcohol myopia: Its prized and dangerous effects. *American Psychologist, 45*, 921-933.
3. Lovinger, D. M. (1999). The role of serotonin in alcohol's effects on the brain. *Current Separations, 18*, 23-28.
4. Curtin, J. J., & Lang, A. R. (in press). Alcohol and emotion: Insights and directives from affective science. In J. Rottenberg & S. Johnson (Eds.), *Emotion and psychopathology: Bridging affective and clinical science*. Washington, DC: APA Books.
5. Alcoholics Anonymous. (2002). *Alcoholics anonymous*. New York: Alcoholics Anonymous World Services.
6. World Health Organization. (2013). Alcohol consumption per capita, by country. <http://www.indexmundi.com/blog/wp-content/uploads/2013/04/alcohol-consumption-per-capita.png>. Accessed 10 June 2013.

Directions:

Each person in a group will read (1), will choose and read a chapter in (5), and will look at (6). One person in each group will read (2), one will read (3), and one will read (4). If there are four students in a group, it may be helpful to split (4) between two people. Each person needs to be prepared to help explain their individual reading (i.e., 2, 3, or 4) to the rest of the group.

Questions:

1. Which theory(ies) of alcohol dependence/alcohol abuse/alcoholism do you think are most salient?
2. Did the experiences of the individuals in Alcoholics Anonymous lend support for any theories in particular?
3. Why does alcohol consumption vary widely by country? Do cultural factors interact with the theories or supercede them?
4. Do you agree with the DSM-IV definitions for alcohol abuse and alcohol dependence? Would you make any changes?

Class 9: Legal Issues and Drug Regulation

Readings:

1. http://en.wikipedia.org/wiki/History_of_United_States_drug_prohibition
2. Drucker, E. (2002). Population impact of mass incarceration under New York's Rockefeller Drug Laws: An analysis of years of life lost. *Journal of Urban Health*, 79(3), 1-10.
3. Nutt, D., King, L.A., Saulsbury, W., & Blakemore, C. (2007). Development of a rational scale to assess the harm of drugs of potential misuse. *Lancet*, 369, 1047-1053.
4. http://www.policechiefmagazine.org/magazine/index.cfm?fuseaction=display_arch&article_id=533&issue_id=32005

Directions: Each person in each group will read all four readings. Groups will then choose to answer one of the following questions below in a one-page argument. Although each individual in the group will be responsible for writing his/her own reading reaction, it is important the group choose a question together, as the discussion in class will build from small group discussion. Please incorporate one or two external sources beyond the reading list.

1. Do you feel that harsh zero-tolerance policies like the Rockefeller Drug Laws are ultimately helpful or harmful to society? Why?
2. Considering Nutt et al.'s list of drugs, do you agree with the order in which they've ranked them? Does their scale adequately and fairly assess all the important aspects of potential harm from drug misuse?
3. On the topic of drug legalization, pick two drugs that you feel are misclassified in the US (as either illegal when they should be legal or legal when they should be illegal). Describe why these drugs are misclassified and back up your argument with relevant information.

Class 10: Pharmaceutical Development

Readings:

1. Dickson, M. and Gagnon, J.P. Key Factors in the Rising Cost of New Drug Discovery and Development. *Nature Reviews Drug Discovery* (2004): 3; 417-429.
2. Light, D.W. and Lexchin, J.R. Pharmaceutical Research and Development: What Do We Get for All That Money? *British Medical Journal* (2012): 344; e1-5.
3. Allison, M. Reinventing Clinical Trials. *Nature Biotechnology* (2012): 30; 41-49.
4. <http://www.reuters.com/article/2012/12/31/us-pharmaceuticals-fda-approvals-idUSBRE8BU0EK20121231>
5. Krauss, G.L., et al. Generic Antiepileptic Drugs: How Good is Close Enough? *Epilepsy Currents* (2012): 1; 32-34.
6. <http://www.cnn.com/2011/HEALTH/06/23/scotus.generic.drugs/index.html>

Directions: Each student will read 1-6, and compose a one-page response to one of the following questions below:

1. Discover an alternative issue in drug development to those presented, discussing (with citations) its potential outcomes. Considerations can include public health, financial benefit, individual vs. population, brand vs. generic, etc. If relevant, propose potential solutions.
2. On which side of the “Innovation Crisis” do you stand? Elaborate, citing outside sources.
3. Describe how clinical trials may be improved / expedited beyond the means described by Allison. Be sure to cite your sources.

Class 11: Health Care Costs and QALYs

Paired Readings:

1. Himmelstein, D. U., et al. Medical Bankruptcy in the United States, 2007: Results of a National Study. *The American Journal of Medicine* (2009): 122; 741-746.
2. http://www.nytimes.com/2009/07/19/magazine/19healthcare-t.html?pagewanted=all&_r=0
3. <http://oig.hhs.gov/newsroom/spotlight/2011/rebates.asp>
4. Cohen J. T., et al. Does Preventive Care Save Money? Health Economics and the Presidential Candidates. *New England Journal of Medicine* (2008): 358; 661-663.
5. <http://livingwithmcl.com/BitterPill.pdf>
6. http://www.nytimes.com/2012/04/03/business/ftc-approves-merger-of-express-scripts-and-medco.html?_r=0

Individual Readings:

1. Ladapo, J. A., et al. Projected Cost-Effectiveness of Smoking Cessation Interventions in Patients Hospitalized with Myocardial Infarction. *Archives of Internal Medicine* (2011): 171; 39-45.
2. Kleinke, J.D. The Price of Progress: Prescription Drugs in the Health Care Market. *Health Affairs* (2001): 20; 43-60.
3. http://www.euroqol.org/fileadmin/user_upload/Documenten/PDF/Products/Sample_UK_English_EQ-5D-5L.pdf
4. <http://kaiserfamilyfoundation.files.wordpress.com/2013/01/8023-r.pdf>
<http://kff.org/medicare/fact-sheet/medicare-at-a-glance-fact-sheet/>
<http://kff.org/medicaid/fact-sheet/the-medicaid-program-at-a-glance-update/>

Directions: Students will split into groups of two, such that one reads 1-3 while the other reads 4-6; be prepared to discuss your readings in small groups at the beginning of class. We do acknowledge the density of methods given in Ladapo, et al.; please focus on the general purpose, not the math (we will walk through this paper more thoroughly in class). Students will compose a one-page response to one of the following questions below:

1. Discover an alternative example of cost-effectiveness projections, and compare and contrast methodology, results, and ethical considerations involved in such procedures.
2. Present a pharmaceutical product developed in the past decade (as well as the disease which it is meant to treat), and characterize it economically in the manner described by Kleinke.
3. In what ways do the following entities contribute to the discussion about cost-effective publically-funded health services: Patients? Physicians? Economists? Pharmaceutical companies? Feel free to select another demographic of your choosing to replace one of the above, if you wish.
4. Discuss potential risks and benefits with regard to corporate mergers from the eyes of the consumer, and relate such considerations to pharmacy benefits management.

Class 12: Antidepressant Drug Efficacy and Mental Illness

Readings:

1. Kirsch, I. The Emperor's New Drugs. Basic Books (2011): 1-181.

Directions: Compose a three-page argument on the topic of your choice relating to (but not explicitly derived from) material covered in the book by Kirsch. Utilize at least 3 sources from peer-reviewed scientific literature in constructing your written perspective.

Class 14: Semester Project

Purpose

The purpose of the semester project is for students to demonstrate in-depth knowledge of a particular aspect of drugs, as well as to demonstrate their development in the following academic skills: selecting a question to investigate, defining an approach to the question, formulating an argument, evaluating the sources, supporting the argument, and presenting the argument clearly.

Format

While the purpose of the Semester Project is quite fixed, the format for completing the project is not. As long as groups can meet the criteria below, there is free reign for format of the project. Formats we have seen be successful in similar projects throughout our academic career include: powerpoint/prezi presentations, dramatic re-enactments, visual arts projects, musical presentations, claymations, and websites. Not all groups may prefer these formats and may prefer to complete an academic paper.

Format Options:

1. Academic Presentation (Powerpoint/Prezi)
 - * Presentation in class (15-20 minutes); references included in slides
 - * Informational handout / brochure (1 page)

Turn in to Sakai dropbox: .ppt file, handout copy, reference list
2. Academic Paper
 - * Paper (8-10 pages, double spaced, 1" margins, Times New Roman size 12)
 - * Reference list not included in the page count
 - * Presentation in class (3-5 minutes), outlining the argument of the paper

Turn in to Sakai dropbox: paper, reference list
3. Academic Artistry
 - * Artistic product (very flexible, but efforts must be demonstrative)
 - * 3-5 minute presentation of product (explain/discuss argument/meaning)
 - * 3 pages, connecting the elements of the artistic product to supporting sources

Turn in to Sakai dropbox: Product (or image of product), paper, reference list

Grading:

10% Question is clearly delineated either in presentation, paper, or artistic product.

10% Approach to question is explained.

10% Proposed hypothesis(es) to the question is clearly stated.

30% Support is provided for the hypothesis. Evidence for opposing arguments is considered, and an explanation is made for why the support for the hypothesis is stronger.

10% Reference list is complete and contains at least 8-12 references.

10% Presentation is clear, concise, and within time limits.

20% Teammates' ratings of individual effort and work.

Due Dates

Discuss Topic with Instructors (5-10 minutes): Class 7 (2/19/14)

Progress Reports Due: Class 10 (3/19/14)

Presentations Due: Class 14 (4/16/14)