Course description: Medical controversies are never just about the “science.” Rather, these controversies are intertwined with societal tensions and anxieties about social, cultural, and political values and meanings. Emphasizing the global circulation and impact of scientific knowledge production and the central importance of perspectives and evidence from the social science and humanities to understanding medical controversies, we will explore the following questions: why do scientists come to different conclusions based on the same data? Why and how do controversies in medicine emerge at specific moments in time? What counts as evidence at certain historical moments and why? Why are certain questions asked and not others? Why has the new genetics become racialized? How is this racialization continuous or discontinuous with past racializations in science, medicine, and public health?

A central tenet of this course is that we need to develop careful and thoughtful understanding of health problems while envisioning solutions. Otherwise, we risk developing elaborate and expensive solutions that will not solve problems. This interdisciplinary course will use a case study approach to critically analyze contemporary controversies in science, medicine, and public health. All topics will be framed around topics important to medicine and that have received attention in the popular media. Questions related to the relationship between science, the media, health inequality, and activism will be woven into each of the case studies. Key themes of the course include the relationship between medicalization and racialization of social problems, issues of evidence and knowledge, and middle-class moralism. While the specific controversies we will study have all been featured in the popular press in the past decade, they all have a longer history in US culture and transnationally. Thus, this course will emphasize the importance of history for understanding the present.

This course is designed as a sophomore-level seminar. Enrollment limited to 20. Written permission required. (Not for biology credit).

Objectives

The overarching goals of this course are for students to:

1. Develop the analytical and communication skills necessary to critically examine contemporary controversies in medicine and public health particularly with respect to their racialization

2. Develop an understanding of the social nature of scientific “knowledge” and how knowledge is produced, as demonstrated through course discussion and assignments
3. Demonstrate an understanding of the dynamic relationship between science, the media, and cultural anxieties, including about race, in constructing what we know and what we do not know about health and health inequality

4. Collaborate with classmates on a team project related to the topics in the course

5. Write analytic essays for different audiences on the social meaning of controversies in medicine and their application to clinical practice, drawing on primary source materials from a variety of disciplines

Assignments

Response papers and discussion questions. All students are required to post discussion questions based on close reading of the texts to Canvas by midnight on Wed. (You can edit your questions on Thurs.) Before coming to class, select one question from the discussion board that you would like to discuss in class. The discussion questions are a key component of the course and due each week.

In addition, students will submit a total of 5 response papers, 1 for Class 2 and the others at a time of your own choosing during the course.

The response papers and discussion questions will not be graded but will contribute to your class participations grade. (In final grading I will be emphasize improvement over time.)

Take home quiz: There will be one in-class quiz on basic concepts/definitions in the course. For this quiz you may use all your notes and readings – but not the internet!!!!!

Commentary for the Guardian. This assignment is designed to help you synthesize the readings – and apply the ideas for a broad audience. For this assignment students will write a commentary on any topic we have been discussing in class (or a closely related topic) for the UK newspaper The Guardian. In this commentary, you will engage with the issues of medicalization and evidence, asking whether or not medicalization of social problems is helpful or limiting to addressing medical and public health issues. You should not have to do much additional research for this essay beyond the class readings.

Group project. This group project is a major assignment in the course and has two components: a group presentation and a final individual essay. Each student will be part of a team of 3 (depending on class enrollment) that will conduct research on a topic relevant to the pedagogical goals of the course. The group will select the topic.

Each group will organize a 20 min presentation for the final class. In addition, each individual group member will also write a 2000 word essay for the online journal the Atlantic (theAtlantic.com.) This journal publishes quite a few articles on science and health, including health inequality. Collaboration on developing your ideas is encouraged. You MAY collaborate with other members of the group for this individual essay BUT the writing should be your own. As part of this assignment, you are to conduct a peer review of the essay with a member of your
group. The peer review should be submitted (with track changes) with the final paper for my evaluation. Your paper should be interdisciplinary in its perspective and should draw on history in a major way for its analysis.

Grading
- Class participation: 15% (includes APPROPRIATE in-class participation, response papers, discussion questions and posts on Canvas, and peer review of final research paper); Please note that you cannot get an A in the class if you do not contribute to class discussion on a regular basis – via BOTH the discussion board and in-class discussion. (We will discuss the meaning of appropriate in class.)
- 1 in-class quizzes (open book but not open computer or ipad, or iphone, etc…): 5%
- Commentary for the Guardian (1200 words): 20%
- Group project presentation: 20%
- Final paper: 40%

For possible research presentation topics (see document on Canvas in the Assignments Module)

Accommodations
Brown University is committed to full inclusion of all students. Please inform me early in the term if you have a disability or other conditions that might require accommodations or modification of any of these course procedures. You may speak with me after class or during office hours. For more information, please contact Student and Employee Accessibility Services at 401-863-9588 or SEAS@brown.edu.

Students in need of short-term academic advice or support can contact one of the deans in the Dean of the College office.

Credit Hours
Over the 13 weeks of this course, students will spend 2.5 hours in class each week, or about 33 hours total. Although specific out-of-class time investments may vary for individual students, a reasonable estimate to support this course’s learning outcomes is 150 hours total, or on average, ~11 hours weekly over a 13-week term. Out-of-class preparation will regularly include about seven hours per week of reading and preparation for discussion (92 hours total). In addition to this ongoing preparation time, students are expected to allocate approximately 38 hours over the course of the term to writing assignments and 20 hours for the oral presentation, take home quiz, and discussion board activity.
### Class Topics and Dates

<table>
<thead>
<tr>
<th>Week</th>
<th>Date</th>
<th>Topic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Jan 22</td>
<td>Introduction</td>
</tr>
<tr>
<td>Week 2</td>
<td>Jan 29</td>
<td>Interpreting patterns of disease: Overtreatment, undertreatment, and profit</td>
</tr>
<tr>
<td>Week 3</td>
<td>Feb 5</td>
<td>Evidence-based medicine: What counts as “evidence” and why?</td>
</tr>
<tr>
<td>Week 4</td>
<td>Feb 12</td>
<td>Medicalization, risk, and racialization</td>
</tr>
<tr>
<td>Week 5</td>
<td>Feb 19</td>
<td>Rethinking “obesity” and causality: Epidemic or moral panic?</td>
</tr>
<tr>
<td></td>
<td></td>
<td><strong>In class quiz</strong></td>
</tr>
<tr>
<td>Week 6</td>
<td>Feb 26</td>
<td>The HPV vaccination campaign: The limits of technical solutions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Guest: Dr. Marcie Richardson</td>
</tr>
<tr>
<td>Week 7</td>
<td>Mar 5</td>
<td>Medicalization of teenage pregnancy: the intersection of moralism and racism</td>
</tr>
<tr>
<td>Week 8</td>
<td>Mar 12</td>
<td>Opioids, pain, and the “War on Drugs”</td>
</tr>
<tr>
<td>Week 9</td>
<td>Mar 19</td>
<td>Ebola, anxiety, and quarantine: Knowledge, representation, and history of West Africa</td>
</tr>
<tr>
<td>Week 10</td>
<td>Apr 2</td>
<td><em>Discussion of group projects</em> (read for your group projects); librarian visit to class</td>
</tr>
<tr>
<td>Week 11</td>
<td>Apr 9</td>
<td>Contemporary genetic medicine: Race, ethnicity, and scientific reductionism</td>
</tr>
<tr>
<td>Week 12</td>
<td>Apr 16</td>
<td>Examining top-down health promotion: Collaborative research and the question of knowledge?</td>
</tr>
<tr>
<td>Week 13</td>
<td>Apr 23</td>
<td>Presentations of group projects (groups of 3 or 4 depending on size of class)</td>
</tr>
</tbody>
</table>

### Key concepts in the course:

- How race, class, and gender intersect to shape the design of scientific research, interpretation of findings, and the very nature of what we call “evidence”
- The subtle and not-so-subtle social processes by which medical controversies become racialized
- The relationship among notions of “risk,” “risky people,” cultural anxiety, and blame in the resolution of medical controversies
- The stakes in biomedicalizing social problems
- The imperative to “do something” and the problem of technical fixes and simple solutions to social problems of disease
- The relationship between expert and lay knowledges: who has knowledge

**Due Dates for Assignments:**
- 1st response paper: Jan. 29
- In-class quiz: Feb. 19
- Commentary: Mar. 16
- In-class presentations: April 23
- Final paper: May 11

**Readings**

**Books to purchase:**


Additional readings will be posted as pdfs on Canvas each Week or use the links in the syllabus. Note that the readings from the press are provided to give you a sense of the conventional framing of medical and public health issues. This is following by substantive readings on the history and social context of disease which provide a deeper and more nuanced frame.

**Week 1 Introduction and Survey**


**Week 2 Interpreting Epidemiological Data**

A central tenet of the course is that data, though seemingly “objective,” is always, always interpreted through the lens of “the social.” In the early pages of his book, Brawley argues that the problem with the US Health Care system is that “no one has tried to make the entire system function rationally based on science.” This book raises many interesting socio-scientific questions about race, class, gender and science. Yet it is rooted in the notion of science as a rational and value-free search for the truth. Throughout the course we will explore whether producing an effective health care system – and the challenges that arise – can be best understood through the lens of scientific rationalism.

Questions to reflect on when reading this book: 1) How does Otis Brawley, the Medical Director of the American Cancer Society, explain differing incidence of breast cancer in black and white women? 2) How do social assumptions shape study design and our interpretation of
epidemiological data? 3) How can a deeper understanding of the social nature of science help us understand controversies and their meaning? 4) What are the limits of Brawley’s analysis? 5) Why does it matter?

Readings:

http://well.blogs.nytimes.com/2012/11/28/ignoring-the-science-on-mammograms/?emc=eta1

(read the above for media representation of the issues)

Otis Brawley, How We Do Harm: A Doctor Breaks Ranks About Being Sick in America (New York: St. Martin’s Press, 2011)

Optional: Robbins Basic Pathology, “Cancer”

Week 3 Evidence-based Medicine: What Counts as Evidence and Why?

With the recent turn to “Evidence-based medicine,” the question of what exactly constitutes evidence – and what is not considered evidence -- and how it shapes medical practice and public health policy has become a pressing issue. Even as EBM is integrated into the medical curriculum, the question of what counts as evidence has been submerged. Who could object to high quality evidence? Does science provide the most authoritative “evidence” or should evidence on medical matters from other disciplines have equal authority? Among the concerns with EBM are the underlying reductive notions of biology and of the social world on which it is based. What is the relationship between “evidence” and “truth.”

As you do the readings for class, consider how the various authors define or use “evidence.” What debates has EBM generated and why? What is the relationship between evidence and knowledge? How do social assumptions shape scientific evidence? Why does it matter?

Required readings
http://www.nytimes.com/2013/12/20/health/hypertension-guide-may-affect-7-4-million.html?emc=eta1&_r=0

(read the above for media representation of the issues)


Optional but of interest


Gerald Kutcher, “Cancer clinical trials and the transfer of medical knowledge: Metrology, contestation and local practice,” In Devices and Designs: Medical Technologies in Historical Perspective eds Carsten Timmermann and Julie Anderson (Houndmills, UK: Palgrave MacMillan, 2006)


Week 4 Medicalization, Risk, and Stigma

Diseases are simultaneously “real” entities and sites of intense social, political, and scientific controversy? What is a disease? How does controversy relate to scientific knowledge production about disease? How are scientific controversies about disease adjudicated in the social world, in public health, and in medicine? What does “risk” mean? How do risk and genomics intersect? To begin our analysis of the complex intertwining of disease and society, this class will build on the previous class by examining several important concepts in understanding disease: its framing, medicalization, and notions of “risk.”

Required readings


http://www.guardian.co.uk/society/2013/jun/25/women-risk-breast-cancer-daily-drug

(read the above for media representation of the issues)


**Week 5 Rethinking “Obesity”: Epidemic? Moral Panic?**

Some claim that the United States is currently in the midst of an “epidemic” of obesity – an epidemic that is increasingly racialized. There is no doubt but that severe obesity has profound effects on health. Yet, whether obesity is a disease, how we define obesity, and the health effects of a spectrum of overweight remain uncertain – and contested. To what extent does the contemporary framing of “obesity epidemic” reflect a historically-specific American obsession with fitness and middle-class morality? Why is it important to explore health in relation to historical moralism?

According to some scholars, obesity is an iconic case of medicalization. In the reading for today’s class, we will learn about views on the social construction of the “epidemic,” how the current framing obscures structural determinants of obesity, and how racialization relates to medicalization. We will also pay close attention to what counts as evidence.

The readings below include articles in biomedical journals and social/anthropological perspectives on “obesity.” As you read consider the following questions. How do the arguments differ? What types of evidence do the authors draw on to make their argument? What are the structural determinants of obesity that Boero discusses? What does it mean to construct an epidemic? How does the media contribute to the construction of this epidemic? Why does it matter of structural determinants are erased or obscured? Why is the biomedical model of obesity limited?

**Required readings**

http://www.bbc.co.uk/news/health-23143010

http://www.theguardian.com/world/2014/jan/14/mississippi-population-diabetes-2030-obesity

http://www.nytimes.com/2013/06/19/business/ama-recognizes-obesity-as-a-disease.html?emc=eta1

(read the above for media representation of the issues)
AMA Obesity Resolution Decision

Ali Mokdad et al., The continuing epidemics of obesity and diabetes in the United States, JAMA 2001; 286: 1195-1200. (SKIM INTRO AND DISCUSSION QUICKLY)


(read the above for biomedical representation of the issues)


Michael Pollan, Omnivore’s Delight, chapter 1-3.

Claudia Chaufan et al., “You can’t walk or bike yourself out of the health effects of poverty: active school transport, child obesity, and blind spots in the public health literature,” Critical Public Health

---

**Week 6**

**The HPV Vaccination Campaign: the Limits of Vaccination as a Technical Solution**

Sexually transmitted diseases have long been the site of intense social controversy. As we have seen, however, the nature of those controversies change over time, place, and with respect to the particular types of diseases. Although lauded by public health officials as a seminal achievement of the 21st century, the HPV vaccine has triggered a variety of interesting debates. Who should be vaccinated? At what age? Should the vaccine be state-mandated? How was the vaccine campaign framed and by whom? Would vaccination foster promiscuity (however that is defined)? At a deeper level, is the vaccine a “solution” to the problem of cervical cancer worldwide or is it a technical fix? Answers to these questions entail an examination of the history of vaccines as well as an understanding of the science of HPV and its relationship with its hosts. What do you need to know about the biology of HPV? What do you need to know about the social context and history of sexually transmitted diseases? Whose knowledge should prevail in adjudicating this complex terrain. **Guest:** Dr. Marcie Richardson, Ob/Gyn Beth Israel Hospital

**Required readings**


Robbins Basic Pathology, HPV and cervical cancer (SKIM for main ideas)


Lundy Braun and Ling Phoun. “HPV Vaccination Campaigns: Masking Uncertainty, Erasing Complexity,” In Three Shots at Prevention, pp. 39-60


Week 7 Medicalization of Teenage Pregnancy and Motherhood: Norms, Moralism and Racism

Perhaps nowhere is middle class moralism more evident than in discussions of teenage pregnancy and motherhood. The consensus that teenage pregnancy is something to be actively discouraged, if not punished, is widespread. Indeed as women are more fully integrated into the workforce (but with many remaining constraints) teenage pregnancy and motherhood have been even more intensely vilified. It thus becomes difficult to even ask the question whether teenage motherhood could work well for some people under certain conditions. In this class we will explore the history of social views about teenage pregnancy, its racialization, and medicalization. We will ask whether contemporary sex education reinforces or challenges this moralism. In reading the material for class pay attention to the arguments presented by the authors and how they deploy evidence to support these arguments.

Required reading

“Teenage pregnancies: Growing pains,” The Economist, Oct. 8th 2009 (from the print edition)

Gaby Hinsliff and Jo Revill, “Can love wait?”, The Guardian, March 22, 2004


(read the above for media representation of the issues)

http://www.hhs.gov/ash/oah/adolescent-health-topics/reproductive-health/states/ri.html


(read the above for biomedical representation of the issues)


Week 8 Historical Perspectives on Addiction, Research, and the “War on Drugs:” The Case of Prescription Opioids

Since the introduction of Oxycontin in 1996, there has been mounting concern over addiction, abuse, and overdose deaths from prescription opioids. As a result of activism on the part of clinicians physician interest groups, and law enforcement agencies, the FDA has recently issued tighter regulations for this class of pain killers. One major concern is whether this move will result in decreased relief for those with chronic pain. Indeed, the issue of addiction to opiates is a historically complicated one, dating to the late 19th century. In this class, we will examine the current debate in the context of the history of changing views towards addicts and the role that medicine has played in this history, particularly the ways in which biomedical notions of addiction locate the problem in individuals.

As you read for this class, consider changing views towards addiction as a disease, as a crime, as social deviance, as pleasure-seeking entertainment since the late 19th and early 20th centuries. How was addiction interpreted? What were/are the stakes in these interpretations? What is the difference between an “illicit” and a “licit” drug? What are prescription opioids treated differently than other psychoactive drugs with profound mood-altering physiological effects? What political, social, and cultural values are embodied in the science of addiction? In establishing certain behavior as normative or deviant? Why did debate about prescription opioids emerge at this historical moment? Who is best positioned to adjudicate the socio-medical issue of drug use and addiction?

Required Reading


(read the above for media representation of the issues)


(read the above for biomedical representation of the issues)


Week 9        Ebola

Required reading

TBD

Week 10       Group projects

Discussion of group projects in class and session with librarian on research sources

Week 11       Genetic Medicine: Race, Ethnicity, and Reductionist Thinking

Since the draft of the human genome was announced in 2000, the genetic component of disease great enthusiasm. While critiques of genetic reductionism emerged, the dominant discourse held that genetics would allow for personalized medicine, an approach that would tailor medical interventions to the individual. However, very quickly health, race, and genetics became intertwined in ways that have raised concern among scholars and the public. This class will draw on historical understandings to examine how and why diseases get racialized – and the consequences of this racialization.

Some questions to consider: Whose dream is genetic medicine? What and whose values does this dream embody? How does “the dream” intersect with the profit motive? With identity politics? In other words, is racialization imposed? What specific claims about genetic medicine are being made? How would you evaluate those claims? Would it have been possible for these genetic diseases to become racialized had race not already been “geneticized”? How can you account for changes in racial understandings of PKU, Tay Sachs, and Sickle Cell?

Readings:


Michael Specter, “The Gene Factory,” The New Yorker, Jan. 6, 2015. (This article raises many complicated questions. For this class read this article QUICKLY to get a sense of the transnational vision of genomics articulated by some of the major players in the gene sequencing industry.)

(Read the above for media representation of the issues)

**Readings:**


**Week 12 Collaborative Research: Who has knowledge**

Health promotion programs are mainly designed to dissemination expert knowledge to lay people. Usually this entails developing ways to get people to change their behavior and adopt “healthy lifestyles.” As scholars have shown, however, this approach is fraught at many levels. Importantly, it ignores that lay people have knowledge, oftentimes more nuanced and finely-grained knowledge relevant to their health. In this class, we will explore what happens when expert models ignore lay knowledges and examine models for collaborative research.

**Reading:**

Martha Balshem, *Cancer in the Community: Class and Medical Authority* (Smithsonian Institution Press, Washington and London, 1993.) selected chapters


**Week 13 Group Presentations**