

JOUR 772 – Spring 2012
SEMINAR IN HEALTH, SCIENCE AND THE MEDIA – SYLLABUS

Instructor: Dr. John C. Besley
Class Times: Thursday 11:00-1:45
Classroom: 3020B (lock 5-2-4-1-3)

Office Hours: By appointment
Office Location: 4009C Coliseum

A. Introduction

The course is meant to provide an academic introduction to graduate-level study of science and health communication, including the sub-fields of environmental, and risk communication. The course will particularly focus on issues and theories relevant to the social science of mass communication. Because science and health communication research often deals with issues at play in the public arena, the course will also touch on issues in political communication, including deliberation and civic engagement.

At the heart of science and health communication research is a desire to understand the role of communication in how individuals and society attempt manage complex issues, as well as how those charged with communicating science can do so in an effective way. Appreciating the social processes at the heart of science communication can help the evaluation of science communication efforts, including health and environmental campaigns. Nevertheless, the course will emphasize theoretical and research-oriented topics, rather than practical skills.

Key journals for science communication research include: *Science Communication*, *Public Understanding of Science*, *Risk Analysis*, *Science, Technology and Human Values*, *Social Studies of Science*, *Environmental Communication*, *Environmental Communication Yearbook* and *Society and Natural Resources*. Science communication researchers have also sometimes found success in mainstream communication journals, as well as specialty field journals such as, various versions of *Nature* (i.e., *Nature Nanotechnology*, *Nature Biotechnology*), and the *Journal of Nanoparticle Research*). Developing a sense of the role these journals play in debates about science communication will be necessary to success in this course.

B. Learning Outcomes

The objectives of this course are to provide graduate students with:

1. a grounding in key theories associated with science communication as an introduction to specialized courses in risk communication and applied health communication;
2. an understanding of research approaches used in the study of science communication; and
3. recognition of the key skills relevant to communicating complex issues.

C. Instructional Delivery Strategy

Students are expected to attend all classes having thoroughly read all assigned texts. This a seminar class. While I will often lead the discussion, all students are expected to be able to summarize the texts and discuss their meaning and relevance to theory and practice.

D. Grading

15% – Active class participation (including preparation and verbal engagement)
30% – Reading summaries (Master's students) or Class Leadership (Doctoral students)
65% – Final project (Research paper, proposal or literature review)
(5% Proposal, 10% Outline/bibliography, 10% presentation & 30% paper)

In general, I expect that graduate students should all receive an A or a B+ grade, though lower grades will be assigned for less-than-satisfactory work. An A grade will be assigned when the submitted work is of professional, academic quality. Anything less than professional quality will result in lower grades.

A = 91 or above (Publishable)	
B+ = 90.9 – 85.0 (Almost publishable)	B = 84.9 – 80.0 (Potentially publishable)
C+ = 79.9 – 75.0 (Marginal)	C = 74.9 – 70.0 (Even more marginal)
D+ = 69.9 – 65.0 (Poor)	D = 64.9 – 60.0 (Really poor)
F = below 60.0 (Not acceptable for graduate work)	

E. Assignments

All assignments should be formatted in a standard 12-point font and have 1-inch margins. Students may use any recognized citation style (e.g. APA 5th, Chicago 15th). Quality of writing, including typographical problems, will be factored into grades for each assignment.

Reading Summaries: Starting in February, in addition to being able to critically discuss the readings ...

- *Doctoral students* will come to class with one additional reading related the week's topic that addresses a topic or subject of interest to their own research program. These should be forwarded to the instructor by noon on Wednesday. They will be expected to briefly summarize this reading for their colleagues. The schedule will rotate so that half of the students present each week. Students should also pick a week in which they will take a leadership role in managing class discussion.
- *Master's students* will select three of the weeks and produce three page critical summaries of the relevant readings, as well as relevant supplementary material. These summaries should provide brief summaries of the key arguments in each article (1.5 pages) and attempt to synthesize an overall key lesson relevant to your area of interest (1.5 pages).

Final project ...

- *Doctoral students* should attempt to complete a detailed research proposal or a full conference paper focused on an academic-oriented subject relevant to the class and your own research interests.
- *Master's students* should focus on a more practical project whose aim to demonstrate mastery of the literature in a specific area.

Students wishing to complete a joint assignment with classmates should discuss this with the course instructor by the third week of class

I will post grades on Blackboard but these are not your official grades. Your official grades are what you see written on your returned assignments. If the grade you see on Blackboard is not the same as the grade you have on the hard copy, you must let me know. If you find yourself doing poorly, please come see me.

F. Plagiarism

Citation is how academics give respect to those whose research and ideas that we want to build upon. Plagiarism is the ultimate academic sign of disrespect. If you are caught cheating in this way, I will do what I can to have you removed from the program. At minimum, you will fail the class. Cite anything that needs to be cited, including but not limited to, ideas, theories, and data. If in doubt, ask. For the official university policy, see: (<http://www.sc.edu/policies/rsch100.html>).

Weekly Reading Schedule

January 19th: Introduction to Science Communication

Dunwoody, S. (1992). The challenge for scholars of popularized science communication: explaining ourselves. *Public Understanding of Science, 1*, 11-14.

Wynne, B. (1992). Public understanding of science research: new horizons or hall of mirrors? *Public Understanding of Science, 1*, 37-43.

Lewenstein, B. V. (1992). The meaning of 'public understanding of science' in the United States after World War II. *Public Understanding of Science, 1*, 45-68.

Logan, R. A. (2001). Science Mass Communication: Its Conceptual History. *Science Communication, 23*(2), 135-163.

Kreps, G. L., & Maibach, E. W. (2008). Transdisciplinary science: The nexus between communication and public health. *Journal of Communication, 58*(4), 732-748.

January 26th: Literacy

National Science Board. (2008). Chapter 7: Science and Technology – Public Attitudes and Public Understanding. In *Science and Engineering Indicators*. Washington, DC: National Science Foundation. Online at: <http://www.nsf.gov/statistics/seind08/pdf/c07.pdf>

Miller, J. D. (2004). Public understanding of, and attitudes toward, scientific research: What we know and what we need to know. *Public Understanding of Science, 13*, 279-294.

Sturgis, P., & Allum, N. (2004). Science in society: Re-evaluating the deficit model of public attitudes. *Public Understanding of Science, 13*, 55-74.

Berkman, N. D., Davis, T. C., & McCormack, L. (2010). Health Literacy: What Is It? *Journal of Health Communication, 15*(sup2), 9-19.

Allen, K., Zoellner, J., Motley, M., & Estabrooks, P. A. (2011). Understanding the internal and external validity of health literacy interventions: A systematic literature review using the RE-AIM framework. *Journal of Health Communication, 16*(sup3), 55-72.

February 2nd: Media and Science 1 – Journalists and Journalism*

Nelkin, D. (1987). Chapters 6 and 7: The science of science journalism. In *Selling Science: How the Press Covers Science and Technology* (pp. 85-108). New York, NY: Freeman.

Trumbo, C. W., Dunwoody, S., & Griffin, R. J. (1998). Journalists, cognition, and the presentation of an epidemiologic study. *Science Communication, 19*(3), 238-265.

Tanner, A. H. (2004). Agenda building, source selection, and health news at local television stations. *Science Communication, 25*(4), 350-363.

Nisbet, M. C., Brossard, D., & Kroepsch, A. (2003). Framing science: The stem cell controversy in an age of press/politics. *Harvard International Journal of Press-Politics, 8*(2), 36-70.

Hinnant, A., Len-Rios, M. E., & Oh, H. J. (Forthcoming). Are health journalists' practices tied to their perceptions of audience? An attribution and expectancy-value approach. *Health Communication, 1-10*.

**Final project proposal due in class (hard copy) and by email by end of day*

February 9th: Media and Science 2 – Agenda Setting

Scheufele, D. A., & Tewksbury, D. (2007). Framing, agenda setting, and priming: The evolution of three media effects models. *Journal of Communication*, 57(1), 9-20.

Soroka, S. N. (2002). Issue Attributes and Agenda-Setting by Media, the Public, and Policymakers in Canada. *International Journal of Public Opinion Research*, 14(3), 264-285.

Gutteling, J. M. (2005). Mazur's hypothesis on technology controversy and media. *International Journal of Public Opinion Research*, 17(1), 23-41.

Bonfadelli, H., Dahinden, U., & Leonarz, M. (2002). Biotechnology in Switzerland: High on the public agenda, but only moderate support. *Public Understanding of Science*, 11(2), 113-130.

Look through the content analyses sections for 2011's *State of the Media* report with an eye towards seeing how science and health were covered in the various media formats. Online at:

<http://stateofthedia.org/>

February 16th: Media and Science 2 – Framing

Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 211, 453-458.

Menashe, C. L., & Siegel, M. (1998). The Power of a Frame: An Analysis of Newspaper Coverage of Tobacco Issues-United States, 1985-1996. *Journal of Health Communication*, 3, 307-325.

O'Keefe, D. J., & Jensen, J. D. (2007). The relative persuasiveness of gain-framed loss-framed messages for encouraging disease prevention behaviors: A meta-analytic review. *Journal of Health Communication*, 12(7), 623-644.

Nisbet, MC (2009, March/April). Communicating climate change: Why frames matter for public engagement. *Environment Magazine*. See:

<http://www.environmentmagazine.org/Archives/Back%20Issues/March-April%202009/Nisbet-full.html>

Druckman, J. N., & Bolsen, T. (2011). Framing, motivated reasoning, and opinions about emergent technologies. *Journal of Communication*, 61(4), 659-688.

February 23rd: Media and Science 3 – Long Term Media Effects

Nisbet, M. C., Scheufele, D. A., Shanahan, J., Moy, P., Brossard, D., & Lewenstein, B. V. (2002). Knowledge, reservations, or promise? A media effects model for public perceptions of science and technology. *Communication Research*, 29(4), 584-608.

Besley, J. C., & Shanahan, J. (2004). Skepticism about media effects concerning the environment: Examining Lomborg's hypotheses. *Society & Natural Resources*, 17(10), 861-880.

Noar, S. M. (2006). A 10-year retrospective of research in health mass media campaigns: Where do we go from here? *Journal of Health Communication*, 11(1), 21-42.

Niederdeppe, J., Fowler, E. F., Goldstein, K., & Pribble, J. (2009). Does local television news coverage cultivate fatalistic beliefs about cancer prevention? *Journal of Communication*, 60(2), 230-253.

Murphy, S. T., Frank, L. B., Moran, M. B., & Patnoe-Woodley, P. (2011). Involved, transported, or emotional? Exploring the determinants of change in knowledge, attitudes, and behavior in entertainment-education. *Journal of Communication*, 61(3), 407-431.

March 1st: Trust/Perceptions of Scientists

Siegrist, M., Gutscher, H., & Earle, T. C. (2005). Perception of risk: the influence of general trust, and general confidence. *Journal of Risk Research*, 8(2), 145-156.

Poortinga, W., & Pidgeon, N. F. (2006). Prior attitudes, salient value similarity, and dimensionality: Toward an integrative model of trust in risk regulation. *Journal of Applied Social Psychology*, 36(7), 1674-1700.

Brossard, D., & Nisbet, M. C. (2007). Deference to scientific authority among a low information public: Understanding US Opinion on agricultural biotechnology. *International Journal of Public Opinion Research*, 19(1), 24-52.

Besley, J. C. (2010). Public engagement and the impact of fairness perceptions on decision favorability and acceptance. *Science Communication*, 32(2), 256-280.

Hu, Y., & Shyam Sundar, S. (2010). Effects of online health sources on credibility and behavioral intentions. *Communication Research*, 37(1), 105-132.

March 15th: Scientists' Views of the Public*

Burningham, K., Barnett, J., Carr, A., Clift, R., & Wehrmeyer, W. (2007). Industrial constructions of publics and public knowledge: a qualitative investigation of practice in the UK chemicals industry. *Public Understanding of Science*, 16(1), 23-43.

Davies, S. R. (2008). Constructing communication: Talking to scientists about talking to the public. *Science Communication*, 29(4), 413-434.

Krystallis, A., Frewer, L., Rowe, G., Houghton, J., Kehagia, O., & Perrea, T. (2007). A perceptual divide? Consumer and expert attitudes to food risk management in Europe. *Health Risk & Society*, 9(4), 407-424.

Besley, J. C., & Nisbet, M. C. (2011, Forthcoming). How scientists view the public, the media and the political process. *Public Understanding of Science*.

**Final project outline and bibliography due in class (hard copy) and by email by end of day*

March 22nd: Public Meetings and Deliberation

Delli Carpini, M. X., Cook, F. L., & Jacobs, L. R. (2004). Public deliberation, discursive participation, and citizen engagement: A review of the empirical literature. *Annual Review of Political Science*, 7, 315-344.

Einsiedel, E. F., Jelsoe, E., & Breck, T. (2001). Publics at the technology table: the consensus conference in Denmark, Canada, and Australia. *Public Understanding of Science*, 10, 83-98.

Abelson, J., Eyles, J., McLeod, C. B., Collins, P., McMullan, C., & Forest, P. G. (2003). Does deliberation make a difference? Results from a citizens' panel study of health goals priority setting. *Health Policy*, 66(1), 95-106.

Goven, J. (2003). Deploying the consensus conference in New Zealand: Democracy and problematization. *Public Understanding of Science*, 12, 423-440.

March 29th: Information Seeking and Processing

Griffin, R. J., Neuwirth, K., Giese, J., & Dunwoody, S. (2002). Linking the heuristic-systematic model and depth of processing. *Communication Research*, 29(6), 705-732.

Fleming, K., Thorson, E., & Zhang, Y. Y. (2006). Going beyond exposure to local news media: An information-processing examination of public perceptions of food safety. *Journal of Health Communication*, 11(8), 789-806.

Shim, M., Kelly, B., & Hornik, R. (2006). Cancer information scanning and seeking behavior is associated with knowledge, lifestyle choices, and screening. *Journal of Health Communication*, 11(sup001), 157-172.

Yang, Z. J., McComas, K., Gay, G., Leonard, J. P., Dannenberg, A. J., & Dillon, H. (2010). Applying the theory of planned behavior to study health decisions related to potential risks. *Journal of Risk Research*, 13(8), 1007-1026.

Ye, Y. (2011). Correlates of consumer trust in online health information: Findings from the Health Information National Trends Survey. *Journal of Health Communication*, 16(1), 34-49.

April 5th: Museums and Fiction

National Academy of Sciences (2009). Learning Science in Informal Environments: People Places and Pursuits. Summary, Introduction (Chapter 1) and Conclusions and Recommendations (Chapter 9). Online at: http://www.nap.edu/catalog.php?record_id=12190.

Schiele, B. (2008). Science museums and science centers. In M. Bucchi & B. Trench (Eds.), *Handbook of Public Communication of Science and Technology* (pp. 27-39). New York, NY: Routledge.

Kirby, D. A. (2008). Cinematic Science. In M. Bucchi & B. Trench (Eds.), *Handbook of Public Communication of Science and Technology* (pp. 41-56). New York, NY: Routledge.

Weingart, P., Muhl, C., & Pansegrau, P. (2003). Of power maniacs and unethical geniuses: Science and scientists in fiction film. *Public Understanding of Science*, 12, 279-287.

April 12th: Presentations

April 19th: Presentations

April 26th: Final Projects Due by Email