

Warnings & Risk Communication

Graduate Seminar Syllabus

Psychology 710B: Special Topics (Sec 03)

North Carolina State University
Fall term, 2005

Instructor & Facilitator

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Class Meetings

Mondays
6:15 - 8:55 PM
616 Poe Hall

Office Hours

Tuesdays and Thursdays
11:15 AM - 11:40 PM
or by appointment

Course Objectives

This course explores research and theory related to the human factors of warnings and other forms of risk communication. Topics to be discussed will include design issues, methodological and evaluative approaches, forensics, theoretical models, and applications.. Virtually all of the readings are recently-published primary-source empirical research articles. The course will also serve as a “vehicle” for students to learn how research is carried out, data collected, results analyzed, and implications drawn. A final written paper of the same type is required.

The instructor will not be giving regular lectures. The class will run as a seminar in which the class participates in active discussion. Each student will be assigned three or four half-class reading sets (depending on the number of students in the course) and will lead the class in discussion of the assigned articles (or sections of books). Leaders will summarize each article for a brief period of no more than 3-4 minutes, and then lead discussion of classmates’ questions.

Readings

Almost all of the assigned readings are empirical research articles published in the last 3 years. A complete copy of all articles (except the books) will be made available in the LRC (400 Poe Hall), in the main Psychology Department office (640 Poe Hall), or by some other method agreed upon by the class. Students wishing to use this reference resource for photocopying should do so within 2 weeks of the first class meeting. After that the set will be removed for the instructor’s use.

Course Requirements

Class participation

Because of the nature of the course, i.e., a seminar, your participation in class is essential. You should be prepared to speak up and add to each meeting’s discussion. Class participation will be worth 25% of the final course grade. Also, see “Attendance policy” below.

You are strongly encouraged to critically read the assigned readings twice: Once before making up questions (discussed below) and again before coming to class. It is recommended that you take handwritten notes (and comments) about the articles as you go through them. Review them before coming to class. Remember to bring the articles for that week to class.

Leader assignments

Students will be responsible for leading discussion of three or four sessions. Leaders will summarize the articles, organize questions submitted by class members, go through the questions in class, and request input from class members. Leaders should become “experts” regarding the articles in their assigned sections, by reading their articles very carefully, perhaps 3 times, and possibly by looking at other literature directly related to the readings. Leaders might want to use visual aids (e.g., overheads and handouts) to assist in their presentation or to search for other source materials to develop better, more informative discussions. The quality of the presentations and discussion leadership will account for 25% of the final course grade. Leaders are responsible in making sure that the discussion is fruitful and well paced. There will be a 10 minute break near the midpoint of each class meeting. The first leader should make judgments when to move the discussion along so that the first session does not overlap with the break or usurp time from the second session. The second leader should make sure that the first leader does not go on too long and that the class ends on time. The more important articles and questions should be given priority over the less important ones.

Discussion questions

Each person is required to submit at least 1 to 2 discussion questions on each assigned reading to the leader of the upcoming session. These questions should deal with aspects of the articles that you do not understand and need clarification, or to stimulate discussion, etc. Questions are due to the week’s topic leaders by **5 PM on the Sunday before the next session**. Questions should be sent as text in the body of an Email directly to the leaders of the two leaders (and a copy sent to the instructor’s email address). For every article, the text should include your name, the first author’s last name, and then the question(s)/issue(s). If you do not presently have an email account, please open one. Leaders should edit and collate the questions in whatever fashion that they judge will facilitate class discussion, and then bring hard copies to class for fellow classmates to have. The quality and regularity of your questions will be worth 25% towards your final course grade. Late questions or failure to submit questions will result in penalty. The degree of penalty will depend on such things as how late they were submitted, the frequency of the problem, etc.

Written research project

Students are required to complete a written research project on a topic that has the instructor’s approval. The project can be focused on any area of scientific merit with respect to warnings and risk communication. Students are encouraged to include newly-collected or already-collected data in their paper. Papers should be word processed in the format directed by the *Publication Manual of the American Psychological Association*. A brief version of the required format can be found in any old psychology research methods or experimental psychology text, likely to be found at used bookstores. Older versions of the APA manual may also be found at some used bookstores. Any version of APA style is acceptable. The written report should contain a title page, abstract, review of relevant literature (related to the problem being addressed, purpose of the research (and the reasoning behind it), method (description of the materials and procedure), results

(expected or found), discussion/implications of the research, and references, i.e., comparable in form to the papers read in the class). The report should be no longer than 10-12 double-spaced pages of text (excluding supporting figures and tables). Other kinds of projects may be acceptable and will require approval of the instructor. A written proposal (only a half page to a page is necessary) should be submitted to the instructor by **September 12**. The reason for this early deadline is because most students will have to submit an IRB request (see below) before they can collect data. The proposal is worth 3% of the course grade--just so it is taken seriously.

As soon as is reasonably possible you should discuss research ideas with the instructor. If you need assistance, he will be glad to help guide you in the direction of researchable ideas. In all cases students are urged to discuss research with the instructor, since early submission and approval of proposals allows you to develop materials and to submit an IRB approval request to be able to collect data from participants (either inside NCSU or outside). If you have questions about the research requirement, do not hesitate to bring these up early in the seminar (e.g., TODAY!). Please feel free to consult with the instructor about ideas for the project--even over the phone. The final written portion of the assignment will be worth 22% and is due on **Dec 2** (last day of regular classes before the final exam period).

The instructor regards the research project as the most important component of the class. Students should work with the instructor every step of the way--from topic selection to the design of the study to multiple rewrites of drafts (if needed). Should a good piece of research be generated by this collaborative effort, it might be made suitable for submission to a journal for publication.

If the project involves collection of data from research participants, then it must have approval of their proposed research from the Institutional Review Board (IRB) of NCSU. IRB approval MUST be obtained prior to conducting research using participants from the NCSU Psychology Department's introductory psychology course pool. Approval requires several documents regarding the method and consideration the benefits and costs of the research to humans). Approval can be quick or it can take several weeks to hear back from the IRB office on campus. IRB approval should be initiated--through the instructor--before the end of September at the latest. While the paperwork is getting approved, the student should be working on other aspects of the project to enable it being started to be conducted as soon as approval is confirmed.

Attendance Policy

Students will be expected to attend every class meeting. Missing a single class is like missing a week's worth of classes. Student attendance is important because seminar discussions are only as good as the people who attend and participate. Therefore, students should note that 20% of the course grade is allocated to class participation. Obviously, it is difficult to participate when you are not present. Additionally, with three unexcused absences there will be an automatic penalty of 5% subtracted from the percentage total of the course grade. Each additional missed meeting will result in further reductions of 5% from your final grade. Take the necessary precautions to avoid being in the position to miss a class without a really good excuse.

Grading

All students are expected to do and turn in their own work. Academic integrity is expected. Dishonorable behavior will not be tolerated and when necessary will be pursued through the University's judicial channels.

The grading scale is shown below:

98-100	A+	80-81.9	B-
92-97.9	A	78-79.9	C+
90-91.9	A-	72-77.9	C
88-89.9	B+	70-71.9	C-
82-87.9	B	Less than 70%	F

Plus and minus grades will not be given in this course. A summary of the percentage worth of each of the course components follows:

General class participation:	25%
Leadership of assigned discussions	25%
Weekly questions	25%
Project proposal	3%
<u>Written research project</u>	<u>22%</u>
TOTAL	100%

Calendar / Schedule

for

Warnings & Risk Communication !!

Aug 22 – *Course Introduction, Syllabus and Requirements, Topic Assignments, Overview I*

Aug 29 – *Overview II - Lit Review*

Singer, J. P., Balliro, G. M., & Lerner, N. D. (2003). *Manufacturer's guide to developing consumer product instructions*. In T. P. Smith (Ed.) Technical Report of the Consumer Product Safety Commission. Rockville, MD: Westat.

Wogalter, M. S., & Laughery, K. R. (2005). Effectiveness of consumer product warnings: Design and forensic considerations. In Y. I. Noy and W. Karwowski (Eds.) *Handbook of Human Factors in Litigation* (pp. 31.1-31.11). Boca Raton, FL: CRC Press.

Sep 5 – *Official University Holiday*

Sep 12

1st Half — Age & Format - 6

Wogalter, M. S., Shaver, E. F., & Chan, L. S. (2002). List vs. paragraph formats on time to compare to nutrition labels. *Contemporary Ergonomics*, 458-462.

Shaver, E. F., & Wogalter, M. S. (2003). A comparison of older v. newer over-the-counter (OTC) nonprescription drug labels on search time accuracy. *Proceedings of the Human Factors and Ergonomics Society*, 47, 826-830.

Mendat, C. C., Watson, A. M., Mayhorn, C. B., & Wogalter, M. S. (2005). Age differences in search time for two over-the-counter (OTC) drug label formats. *Proceedings of the Human Factors and Ergonomics Society*, 49, in press.

Morrow, D., Weiner, M., Young, J., Steinley., & Murray, M. D. (2003). Improving comprehension of medication instructions in older adults with heart failure: A patient-centered approach. *Proceedings of the Human Factors and Ergonomics Society*, 47, 232-234.

Wogalter, M. S., & Vigilante, W. J. Jr. (2003). Effects of label format on knowledge acquisition and perceived readability by younger and older adults. *Ergonomics*, 46, 327-344.

2nd Half — Age & Perceptions -5

- Sanchez, J., Nichols, T. A., Mitzner, T. L., Rogers, W. A., & Fisk, A. D. (2003). Medication adherence strategies for older adults. *Proceedings of the Human Factors and Ergonomics Society*, *47*, 237-241.
- Mayhorn, C. B., Nichols, T. A., Rogers, W. A., & Fisk, A. D. (2004). Hazards in the home: Using older adults' perceptions to inform warning design. *Injury Control and Safety Promotion*, *11*, 211-218
- McPhee, L. C., Scialfa, C. T., Dennis, W. M., Ho, G., & Caird, J. K. (2004). Age differences in visual search for traffic signs during a simulated conversation. *Human Factors*, *46*, 674-685.

Sep 19

1st Half — Age & Symbol - 5

- Lesch, M. F. (2003). Comprehension of memory for warning symbols: Age-related differences and impact of training. *Journal of Safety Research*, *34*, 495-505.
- Lesch, M. F. (2004). Age-related effects on warning symbol comprehension. *Proceedings of the Human Factors and Ergonomics Society*, *48*, 233-237.
- Hancock, H. E., Rogers, W. A., Schroeder, D., & Fisk, A. D. (2004). Safety symbol comprehension: Effects of symbol type, familiarity, and age. *Human Factors*, *46*, 183-195.

2nd Half — Symbol Shape and Strength - 5

- Wogalter, M. S., Murray, L. A., Glover, B. L., & Shaver, E. F. (2002). Comprehension of different types of prohibitive safety symbols with glance exposure. *Proceedings of Human Factors and Ergonomics Society*, *46*, 1753-1757.
- Shieh, Kong-King, & Huang, Shih-Miao (2003). Factors affecting preference ratings of prohibitive symbols. *Applied Ergonomics*, *34*, 581-587.
- Leonard, S. D. (2002). A comparison of symbols for preferred behaviors. *Proceedings of Human Factors and Ergonomics Society*, *46*, 1739-1743.
- Jensen, R. C., & McCammack, A. M. (2003). Severity message from hazard alert symbol on caution signs. *Proceedings of the Human Factors and Ergonomics Society*, *47*, 1767-1771.

Sep 26 — HFES meeting - Official Class Holiday

Oct 3

1st Half — Symbols & Transportation - 6

- Shinar, D., Dewar, R. E., Summala, H., & Zakowska, L. (2003). Traffic sign symbol comprehension: A cross-cultural study. *Ergonomics*, *46*, 1549-1565.
- Ward, S. J., Wogalter, M. S. & Mercer, A. W. (2004). Comprehension and training of international road signs. *Proceedings of the Human Factors and Ergonomics Society*, *48*, 2104-2108.
- Nakata, A., Campbell, J. L., & Richman, J. B. (2002). Driver acceptance of general vs. specific icons for in-vehicle information. *Proceedings of the Human Factors and Ergonomics Society*, *46*, 1799-1803.
- Podany, K. I., Wogalter, M. S., & Mayhorn, C. B. (2004). Perceived effectiveness of 'No Turn on Red' traffic signs. *Proceedings of the Human Factors and Ergonomics Society*, *48*, 2004-2007.
- Sayer, T. B. (2002). The development and evaluation of icons for side obstacle warning systems. *Proceedings of the Human Factors and Ergonomics Society*, *46*, 1794-1798.

2nd Half — Symbols & Comprehension - 6

- Mayhorn, C. B., Wogalter, M. S., & Bell, J. L. (2004). Homeland security safety symbols: Are we ready? *Ergonomics in Design*, *12* (4, Fall), 6-14.
- Davies, S., Haines, H., Norris, B., & Wilson, J. R. (1998). Safety pictograms: are they getting the message across? *Applied Ergonomics*, *29*, 15-23.
- Hicks, K. E., Bell, J. L., & Wogalter, M. S. (2003). On the prediction of pictorial comprehension. *Proceedings of the Human Factors and Ergonomics Society*, *47*, 1735-1739.
- Liu, L. Hoelscher, U. & Gruchmann, T. (2005). Comprehension of graphical Symbols on medical devices used in intensive care units. Manuscript submitted for review for publication in *Applied Ergonomics*.

Oct 10

1st Half — Linguistic, Use & Reading - 7

- Edworthy, J., Hellier, E., Moreley, N, Aldrich, K., & Lee, A. (2004). Linguistic and location effects in compliance with pesticide warning labels for amateur and professional users. *Human Factors*, *46*, 11-31.
- Young, S. L., Shah, R. J., Frantz, J. P., & Rhoades, T. P. (2004). Exploring the influence of message length, location, repeated exposure and user evaluation on response to warnings and instructions. *Proceedings of Human Factors and Ergonomics Society*, *48*, 2055-2059.
- Sharp., M. S. (2004). The problem of readability of informed consent documents for clinical trials of investigational drugs and devices: United States considerations. *Drug Information Journal*, *38*, 353-359.
- Wiese, B. S., Sauer, J., & Ruttinger, B. (2004). Consumer's use of written product information. *Ergonomics*, *47*, 1180-1194.
- Mehlenbacher, B., Wogalter, M. S., & Laughery, K. R. (2002). On the reading of product owner's manuals: Perceptions and product complexity. *Proceedings of the Human Factors and Ergonomics Society*, *46*, 730-734.

2nd Half— Multi-Modal and Media-6

- Taylor, V. A., & Bower, A. B. (2004). Improving product instruction compliance: “If you tell me why, I might comply.” *Psychology & Marketing*, 21, 229-245.
- Sierra, E. A., Fisk, A. D., & Rogers, W. A. (2002). Matching instructional media with instructional demands. *Proceedings of Human Factors and Ergonomics Society*, 46, 2089-2093.
- McLaughlin, A. C., Rogers, W. A., & Fisk, A. D. (2002). Effectiveness of audio and visual training presentation modes for glucometer calibration. *Proceedings of Human Factors and Ergonomics Society*, 46, 2059-2063.
- Shavitt, S., Vargas, P., & Lowrey, P. (2004). Exploring the role of memory for self-selected ad experiences: Are some advertising media better liked than others? *Psychology & Marketing*, 21, 1011-1032.

Oct 17

1st Half — Potpourri Factors - 7

- Helmick-Rich, J., Burke, K. A., Oron-Gilad, T., & Hancock, P. A. (2004). The effects of warning presentation and retention under varying levels of stress. *Proceedings of the Human Factors and Ergonomics Society*, 48, 2027-2030.
- Costello, A. J., Hellier, E. J., Edworthy, J., & Coulson, N. (2002). Can food label design characteristics affect perceptions of genetically modified food? *Contemporary Ergonomics*, 443-446.
- Thorley, P., Hellier, E., Edworthy, J., & Stephenson, D. (2002). Orienting response reinstatement in text and pictorial warnings. *Contemporary Ergonomics*, 447-452.
- Silver, N. C., Drake, K. L., Niaghi, Z. B., Brim, A. C., & Pedraza, O. (2002). The effects of product, signal word, and color on warning labels: differences in perceived hazard. *Proceedings of the Human Factors and Ergonomics Society*, 46, 735-739.
- Hartley, J. (2004). Design instructional and informational text. *Handbook of Research on Educational Communications and Technology (2nd Edition)* (pp. 917-947). Mahwah, N.J.: Erlbaum.

2nd Half — Evaluation - 7

- Vredenburgh, A., Longden, S., Williams, K., & Kalsher, M. (2003). Medical product labeling: The evaluation of latex glove warnings in a realistic setting. *Proceedings of the Human Factors and Ergonomics Society*, 47, 1554-1558.
- Laughery, K. R., Paige, D. L., Laughery, B. R., Wogalter, M. S., Kalsher, M. J., & Leonard, S. D. (2002). Guidelines for warnings design: Do they matter? *Proceedings of the Human Factors and Ergonomics Society*, 46, 880-884.
- Laughery, K. R., & Paige, D. L. (2003). Warnings research: A methodological analysis of rating procedures. *Proceedings of the International Ergonomics Association Congress*. Seoul, Korea.
- Laughery, K. R., & Paige, D. L. (2003). The effectiveness of warning information in dietary supplement product labels. *Proceedings of the Human Factors and Ergonomics Society*, 47, 1740-1743.
- Young, S. L., Isaacson, J. J., Frantz, J. P., & Rhoades, T. P. (2004). Evaluation of prototyping labeling for personal flotation devices: Methods and observations. *Proceedings of Human Factors and Ergonomics Society*, 48, 2018-2021.
- Young, S. L., Frantz, J. P., & Rhoades, T. P. (2002). Behavioral adaptation: Unintended consequences of safety interventions. *Proceedings of Human Factors and Ergonomics Society*, 46, 895-899.
- Young, S. L., Frantz, J. P., Rhoades, T. P., & Darnell, K. R. (2002, September). Safety signs & labels. *Professional Safety*, pp. 18-23.

Oct 24

1st Half — Perceived Risk - 7

- Fischhoff, B., Gonzalez, R. M., Lerner, J. S., & Small, D. A. (2005). Evolving judgments of terror risks: foresight, hindsight, and emotion. *Journal of Experimental Psychology: Applied*, *11*, 124-139.
- Freeman, K., & Wogalter, M. S. (2002). On informing women of child bearing age about seat belt risk during pregnancy. *Proceedings of the Human Factors and Ergonomics Society*, *46*, 943-946.
- Paige, D. L., & Laughery, K. R. (2003). Risk perception: The effects of technical knowledge-or lack of it. *Proceedings of IEA*.
- Will, K. E., & Geller, E. S. (2004). Increasing the safety of children's vehicle travel: From effective risk communication to behavior change. *Journal of Safety Research*, *35*, 263-274.

2nd Half — Litigation - 5

- Kalsher, M. J., & Williams, K. J. (2003). Separating the effects of warning and information distribution practices: A case of cascading responsibility. *Proceedings of the Human Factors and Ergonomics Society*, *47*, 1721-1725.
- Laughery, K. R., Paige, D. L., Wogalter, M. S., & Bean, R. N. (2002). Punitive damages awards in civil litigation: Effects of profit information and amount of pain and suffering award. *Proceedings of the Human Factors and Ergonomics Society*, *46*, 1708-1712.
- Peters, G. A., & Peters, B. J. (2004). Design Safety Compromises. *Journal of System Safety*, November-December, 26-29.
- Laughery, K. R., & Wogalter, M. S. (2005). The warning expert. In Y. I. Noy and W. Karwowski (Eds.) *Handbook of Human Factors in Litigation* (pp. 30.1-30.14). Boca Raton, FL: CRC Press.

Oct 31

1st Half — Guidelines, Technology, Urgency - 6

- Wogalter, M. S., Conzola, V. C., & Smith-Jackson, T. L. (2002). Research-based guidelines for warning design and evaluation. *Applied Ergonomics*, *33*, 219-230.
- Wogalter, M. S., & Mayhorn, C. B. (2005). Providing cognitive support with technology-based warning systems. *Ergonomics*, *48*, 522-533.
- Hellier, E., Edworthy, J., Weedon, B., Walters, K., & Adams, A. (2002). The perceived urgency of speech warnings: Semantics versus acoustics. *Human Factors*, *44*, 1-17.

2nd Half — Culture/Language/Ethnicity & Alarm Mistrust - 5

- Yu, Rui-feng, Chan, A. H. S., & Salvendy, G. (2004). Chinese perceptions of implied hazard for signal words and surround shapes. *Human Factors and Ergonomics in Manufacturing*, *14*, 69-80.
- Smith-Jackson, T. L., Leonard, S. D., & Essuman-Johnson, A. (2003). Symbol primes: cross-cultural comparison of symbol representations. *Proceedings of the IEA Congress*. Seoul, Korea.
- Lim, R. W., & Wogalter, M. S. (2003). Beliefs about bilingual labels on consumer products. *Proceedings of the Human Factors and Ergonomics Society*, *47*, 839-843.
- Bliss, J. P., & Acton, S. A. (2003). Alarm mistrust in automobiles: how collision alarm reliability affects driving. *Applied Ergonomics*, *34*, 499-509.

Nov 7

1st Half — Prescription Medications - 7

- Vigilante, W. J. Jr., & Wogalter, M. S. (2005). Assessing risk and benefit communication in direct-to-Consumer medication website advertising. *Drug Information Journal*, 39, 3-12..
- Marinac, J. S., Godfrey, L. A., Buchinger, C., Sun, C., Wooten, J., & Willsie, S. K. (2004). Attitudes of older Americans toward Direct-to-Consumer advertising: predictors of impact. *Drug Information Journal*, 38, 301-311.
- Slater, C. R., & Smith-Jackson, T. L. (2004). Usability problems in consumer-directed broadcast advertisements of prescription medicines. *Proceedings of the Human Factors and Ergonomics Society*, 48, 932-936.
- Hicks, K. E., Wogalter, M. S., & Vigilante, W. J. (2005). Placement of benefits and risks in prescription drug manufacturers' websites and information source expectations. *Drug Information Journal*, 39, 267-278.

2nd Half — Medical Professionals and OTC Drugs - 6

- Ziegler, D. K., Mosier, M. C., Buenaver, M., & Okeyemi, K. (2001, March). How much information about adverse effects of medication do patients want from physicians? *Archives of Internal Medicine*, 161, 706-713.
- Cheatham, D. B., & Wogalter, M. S. (2002). Reported likelihood of reading over-the-counter (OTC) medication labeling and contact a physician. *Proceedings of the Human Factors and Ergonomics Society*, 46, 1452-1456.
- Cheatham, D. B., & Wogalter, M. S. (2003). Comprehension of over-the-counter drug label warnings regarding consumption of acetaminophen and alcohol. *Proceedings of the Human Factors and Ergonomics Society*, 47, 1540-1544.
- Antonuccio, D. O., & Danton, W. G. (2003). Psychology in the prescription era building a firewall between marketing and science. *American Psychologist*, 58, 1028-1043.

Nov 14

1st Half — Memory, Models, & Linguistic Processing - 5

- Vischers, V. H. M., Ruiter, R. A. C., Kools, M., & Meertens, R. M. (2004). The effects of warnings and an educational brochure on computer working posture: a test of the C-HIP model in the context of RSI-relevant behavior. *Ergonomics*, 47, 1484-1498.
- Lesch, M. F. (2005). Remembering to be afraid: applications of theories of memory to the science of safety communication. *Theoretical Issues in Ergonomics Science*, 6, 173-191.
- Bowles, C. T., Fisk, A. D., & Rogers, W. A. (2002). Inference and the use of similes and metaphors in warnings. *Proceedings of Human Factors and Ergonomics Society*, 46, 1703-1707.

2nd Half — Electronic Proximity Detection -6

- Llaneras, R. E., Green, C. A., Kiefer, R. J., Chundrilik, W. J. Jr., Altan, O. D., & Singer, J. P. (2005). Design and evaluation of a prototype rear obstacle detection and driver warning system. *Human Factors*, 47, 199-215.

- Shinar, D., & Schechtman, E. (2002). Headway feedback improves intervehicular distance: A field study. *Human Factors*, *44*, 474-481.
- Ben-Yaacov, A., Maltz, M. & Shinar, D. (2002). Effects of an in-vehicle collision avoidance warning system on short- and long-term driving performance (2002). *Human Factors*, *44*, 335-342.

Nov 21

1st Half — Visibility of Pedestrians-5

- Costello, T. M., & Wogalter, M. S. (2004). Reflective clothing is attractive to pedestrians. *Proceedings of the Human Factors and Ergonomics Society*, *48*, 1999-1202.
- Sayer, J. R., & Mefford, M. L. (2004). High visibility safety apparel and nighttime conspicuity of pedestrians in work zones. *Journal of Safety Research*, *35*, 537-546.
- Tyrrell, R. A., Wood, J. M., & Carberry, T. P. (2004). On-road measures of pedestrians' estimates of their own nighttime conspicuity. *Journal of Safety Research*, *35*, 483-490.

2nd Half — Fire - 5.5

- Bruck, D., Reid, S., Kouzma, J., & Ball, M. (2004). The effectiveness of different alarms in waking sleeping children. In *Proceedings of the 3rd International Symposium on Human Behavior in Fire, Sept. 2004, Belfast, Northern Ireland, London: Interscience Communications*, *3*, 279-290.
- Ball, M., & Bruck, D. (2004). The salience of fire alarm signals for sleeping individuals: A novel approach to signal design. *Proceedings of the 3rd International Symposium on Human Behavior in Fire, Sept. 2004, Belfast, Northern Ireland, London: Interscience Communications*, *3*, 303-314.
- Ball, M., & Bruck, D. (2004). The effect of alcohol upon response to fire alarm signals in sleeping young adults. *Proceedings of the 3rd International Symposium on Human Behavior in Fire, Sept. 2004, Belfast, Northern Ireland, London: Interscience Communications*, *3*, 291-302.
- Mortimer, R. G. (2003). Development of a warning for truck bedliners to avoid gas fueling fires. *Proceedings of the Human Factors and Ergonomics Society*, *47*, 1730-1734.

Nov 28

1st Half — Safety Culture - 6

- Prussia, G. E., Brown, K. A., & Willis, P. G. (2003). Mental models of safety: Do managers and employees see eye to eye? *Journal of Safety Research*, *34*, 143-156.
- DeJoy, D. M., Schaffer, B. S., Wilson, M. G., Vandenberg, R. J., & Butts, M. M. (2004). Creating safer workplaces: assessing the determinants and role of safety climate. *Journal of Safety Research*, *35*, 81-90.
- Mullen, J. (2004). Investigating factors that influence individual safety behavior at work. *Journal of Safety Research*, *35*, 275-285.

2nd Half — Hearing Protection - 7

- Bolia, R. S. (2003). Effects of spatial intercoms and active noise reduction headsets on speech intelligibility in an AWACS environment. *Proceedings of the Human Factors and Ergonomics Society*, 47, 100-1043.
- Simpson, B. D., Bolia, R. S., McKinley, R. L., & Brungart, D. S. (2005). The impact of hearing protection on sound localization and orienting behavior. *Human Factors*, 47, 188-198.
- Casali, J. G., Robinson, G. S., Dabney, E. C., & Gauger, D. (2004). Effect of electronic ANR and conventional hearing protectors on vehicle backup alarm detection in noise. *Human Factors*, 46, 1-10.
- Stephenson, M. T., Witte, K., Vaught, C., Quick, B. L., Booth-Butterfield, S., Patel, D., & Zuckerman, C. (2005). Using persuasive messages to encourage voluntary hearing protection among coal miners. *Journal of Safety Research*, 36, 9-17.