

IS 735 - Social Media

Prof. Roxanne Hiltz for Fall 2016

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According to Wikipedia (a social media system), “Social software enables people to rendezvous, connect or collaborate through Computer-Mediated Communication and to form online communities.” *Social media are those systems for which the “users” of the information are also the “providers” of the content of the information.* The specific social media systems structure the exchange of this communication.

Formal course description:

Prerequisite: A graduate course on quantitative research methods. Ability to read and understand empirical studies in leading IS journals such as MIS Quarterly and ACM TOCHI publications. Seminar style course that covers design and impact of computer-based systems for human communication, including email and IM, Microblogging, discussion boards, Computer-Supported Cooperative Work (CSCW), Group Decision Support Systems (GDSS), and Social Networking Systems. Topics include theoretical foundations, alternative design structures, social impacts, and recent empirical studies of virtual teams, online communities, and systems used for social networking and information exchange, including applications related to emergency management, business, education, and “location aware” systems. Completion of a pilot research study or other term project is required.

Course format: seminar style. Guided independent study with online discussions, some face to face or synchronous online meetings, required online participation, exam and project.

Office hours:

Roxanne: on campus, by appointment; usually available on days of IS seminars. If you need to see me on campus, please email me and I will let you know when I will be on campus next.

Online, via Skype, or Webex: by appointment, most days or evenings

The readings may be updated as new publications appear.

The objectives of this course are to:

1. Familiarize you with the history and state of the art of research on computer-mediated communication, through reading and discussion of both “classic” articles and current research articles.
2. Enable you to understand the nature of “Web 2.0” social computing applications and of social, design, and research issues related to these applications. This includes applications designed or used for specific purposes, such as group decision support, education, and emergency management.
3. Prepare participants to do original research in this area (including design research).

The pre-requisite is any basic graduate-level research methods course or graduate statistics and probability course with a grade of B or higher; this is necessary to be able to understand the research articles. Intended primarily for Ph.D. students, but masters students planning a project or thesis in this area may also wish to participate.

There are recorded lectures (posted in the course Moodle); a few will be “required” but most are optional; some of them are out of date and you may decide that you don’t want to watch them after giving them a try. We will be doing our work primarily online on Moodle, but we may try a week or two on other social media platforms, e.g. a Facebook group space. There will be occasional face to face meetings that could be participated in remotely, or synchronous online sessions on Webex, day and time and location to be chosen based on schedules of participants.

This is a draft plan, subject to revision as opportunities and the interests of the group evolve. Nobody is expected to read all of these sources. Seminar members will share the work of locating, reading, summarizing and critiquing the more important articles for one another. Each student will be responsible for summarizing/ critiquing two articles per week, on the average. You can find your own recent articles on a topic in a journal or proceedings, in addition to choosing from the suggested list. For those subtopics of less interest, you may do only the “required” articles; for those more closely related to your future research plans, you may read everything listed here, and more.

Lectures are available on NJIT’s Itunes.

GRADING (Assessment)

30% class participation, 30% exam, 40% final project

Systems tour: part of class participation

Each student will choose a social media application that is successful in the sense that it has survived thus far and has a reasonable number of users, but not one of the “top” established systems such as Facebook or Twitter, that “everybody” already knows about. Create an online presentation and report which gives a “tour” of the main features of the system(s); what it is used for and by whom; possible research issues that are suggested; and questions for discussion. We will try to have a face to face meeting for these system tours and discussions about week 3 or 4 of the course.

Participation, 33.3% (one third of grade)- Students are required to engage in online summaries and discussions of course materials, each week, as an ongoing formative assessment. This will probably be divided into the two halves of the course.

Each Ph.D. student is expected to post two “reviews” of articles for the module per week in the first part of that week (on or before Wednesday), that will include some questions for discussion, and then to respond to at least two other postings. (Master’s students are expected to review at least one per week.) An entry will list the suggested articles appropriate to a module; you can “claim” yours by replying to that post; first to reply with a choice gets it. (You can make your choices several days ahead, but should do it by Monday of the week in which the module begins.) You should check into Moodle every day if possible and post/ respond several times a week. The grades will assess whether the student is reading and understanding the articles required for the course for each module, and is contributing to the shared building of knowledge by the class.

Exam 33%.

At about the 12th to 14th weeks of the semester, the students will participate in an online collaborative examination to demonstrate their knowledge of the assigned readings and research challenges in this area. Participation will be in the form of individuals each contributing possible questions, answering questions selected for them online, and then doing initial grading of responses to their questions. Questions may cover any aspect of articles that are “required” (with an asterisk) or the content of online reviews and discussions of articles posted by students on Moodle. This is a ‘summative’ assessment of the student’s mastery of the literature in the field.

Term Project: Research study and paper, 33%.

Students will work with the instructor (and/ or perhaps other instructors connected to NJIT) to find a topic of mutual interest and be encouraged to collaborate on research design, data collection, and data analysis. Results should be presented in the form of a draft paper for a conference such as AMCIS or CHI. This has been successful in the past in getting students a “first” publication.

The work and data will be “divided” in terms of each student choosing a topic (such as a set of questions on a questionnaire used as the dependent variables) and then analyzing these data and writing up results. All students who collaborate on a project will be coauthors of all papers, but the student who takes the primary responsibility for writing up the paper will be first author. An objective is to actually submit the paper for a conference or a journal. Each group should also submit a statement of “who did what.” Alternatively, a student may propose an individual project that includes data collection and analysis. This project is an assessment of the student’s readiness to do original research in the field.

DETAILED BIBLIOGRAPHY AND SYLLABUS FOR IS 735

The following is an overview of the topics and the corresponding suggested readings for each module. These readings include a selection of articles published recently in the top journals and conferences that include coverage of social media, and some seminal (classic, oft cited) papers on each topic. Many of these articles will be made available for the students online; others will be located by students who will contribute the URLs or attachments to our online forums for each module.

Abbreviations

MISQ= MIS Quarterly

CSCW= Proceedings of the Conference on Computer Supported Cooperative Work (ACM)

ISCRAM: Proceedings of the conference on Information Systems for crisis Response and Management (see www.iscram.org) or for 2014, www.iscram2014.org

JASSIST Journal of the Association for Information Science and Technology

HICSS= proceedings of the Hawaii International Conference on ‘System Sciences (at www.hicss.org).

JCMC: Journal of Computer Mediated Communication (online)
http://onlinelibrary.wiley.com/journal/10.1111/%28ISSN%291083-6101

Journal of Asynchronous Learning Networks (JALN) (www.sloan-C.org)

READINGS and reference list: An Asterisk means they are “required” and there may be questions specifically on them included in the exam. A double asterisk means very important...

AN XX means an “alumnus of this course” was an author.

Part I: General Overview

Weeks 1 and 2 Module 1: Literature Review, Theoretical Frameworks, General Overviews

Note: Weeks in terms of class work start on Mondays and end on Saturday nights. In Fall 2014 “week 1” is the week of Sept. 1, even though that specific day is a holiday.

The objective of this module is to introduce you to the course and the current participants and to familiarize you with the major theories used in research on CMC/ Social media.

Optional Lectures: Lecture 1, Introduction/ History and Lecture 2, theories

Anandarajan, M. , Zaman, M. , Dai, Q. , Arinze, B. 2010. Generation Y adoption of instant messaging: An examination of the impact of social usefulness and media richness on use richness. IEEE Transactions on Professional Communication , Volume 53, Issue 2, June, Pages 132-143.

*Daft, R.L. and Lengel, R.H., "Organizational information requirements, media richness, and structural design," *Management Science*, 32, 5 (1986), 554-571.

*DeSanctis, Gerardine and Gallupe, B., 1987. "A Foundation for the Study of Group Decision Support Systems," Management Science, **33** (5), May, 589-609.

**DeSanctis, G., and Poole, M.S. (1994) Capturing the complexity in advanced technology use: Adaptive structuration theory. *Organization Science*, 5, 2,121-147.

**Dennis, Alan R., Fuller, Robert M., and Joseph S. Valacich (2008). Media, Tasks, and communication Processes: A Theory of Media Synchronicity. *MISQ*, 32, 3 (Sept. 2008), pp. 575- 600.

- Hiltz, S.R. and Turoff, M. 1978. *The Network Nation: Human Communication Via Computer*. Reading MA, Addison Wesley. Revised Ed., 1993, MIT Press. (skim)
- Kaptein, M., Castaneda, D., Fernandez, N. and Nass, C. 2014. Extending the similarity-attraction effect: The effects of when-similarity in computer-mediated communication. *JCMC*, 19, 342- 357.
- Malone and Crowston, "What is coordination theory and how can it help design "cooperative work systems?" *CSCW '90*, pp. 371-380.
- Sunafrank, Michael. 1986. Predicted Outcome Value During Initial Interactions A Reformulation of Uncertainty Reduction Theory. *Human communication research*, 13, 1, pp. 3-33.
- Turoff, Murray, 1989. "The anatomy of a computer application innovation: Computer mediated communications (CMC)", *Journal of Technological Forecasting and Social Change*, 36, 107-122. Invited paper for 20th Anniversary Issue.

Week 3: (Module 2)- Design Choices and Technology: Historical Overview and Web 2.0 applications

The objective of this module is to introduce you to the range of different "structures" and varieties of software systems that have been designed, and to the design choices that may be included in any specific example of a social media system.

A. Historical structures and issues

- Hiltz, S. R., and Turoff, M., 1981. "The evolution of user behavior in a computerized conferencing system," *Communications of the ACM*, 24 (11), November, 739-751.
- **Hiltz, S. R., and Turoff, M., 1985. "Structuring computer-mediated communication to avoid information overload," *Communications of the ACM*, 28 (7), July, 680-689.
- Johnson-Lenz, P., and Johnson-Lenz, T, 1991. "Post-mechanistic Groupware primitives: Rhythms, boundaries and containers," *International Journal of Man-Machine Studies*, 34, 395-417.
- Malone, T. W., Grant, K. R., Lai, K. Y., Rao, R., and Rosenblitt, D., 1987. "Semi-structured messages are surprisingly useful for computer-supported coordination," *ACM Transactions on Office Information Systems*, 5 (2), 115-131.
- Turoff, M., 1991. "Computer mediated communication requirements for group support," *Journal of Organizational Computing*, 1 (1).

B. Web 2.0 / Social Media

- *Bowler, L. Knobel, c. and Mattern, E. (2015). From cyberbullying to well-being: A narrative-based participatory approach to values-oriented

- design for social media. *Journal of The Association For Information Science And Technology*, 66(6):1274–1293.
- **boyd, d. m., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13(1), article 11.
<http://jcmc.indiana.edu/vol13/issue1/boyd.ellison.html>
- *Beer, D. Social network(ing) sites... revisiting the story so far: A response to dana boyd & Nicole Ellison. *JCMC*, 13 (2008).
- Dwyer, C. (XX) and Hiltz, S.R. Designing Privacy into online communities. *Proceedings of Internet Research 9.0*, Copenhagen, Denmark October 15th to 18th 2008.
- Fulk, J. & Yuan, Y.C. 2013 Location, motivation, and social capitalization via enterprise social networking. *JCMC*, 19, 20- 37.
- Lange, P.G. Publicly Private and privately public: social networking on YouTube. *JCMC* 13, 1, 2007.
- Plummer, M. XX, Hiltz, S.R. and Plotnick, L. XX, Predicting Intentions to Apply for Jobs Using Social Networking Sites: An Exploratory Study. *Proceedings, HICSS 2011*.
- Schuler, R.P., Grandhi, S.A., XX Mayer, J.M. et al 2014. The doing of doing stuff: Understanding the coordination of social group-activities. *Proceedings, CHI2014*, 119- 128.
- Schultze, U., Starr Roxanne Hiltz, Bonnie Nardi, Julie Renneker and Susan Stuckey. Using Synthetic Worlds for Work and Learning. *Communications of the AIS*, Volume 22, Article 19, pp. 351-370, March 2008
- *Steinkuehler, C. and Williams, D. Where everybody knows your (screen) name: Online games as “third places”. *JCMC*. 11 (4) 2006.
- Schmidt,, J. Blogging practices: An analytical framework. *JCMC*, 12, 4, 2007.
- Vitak, Ellison, and Steinfield, The Ties That Bond: Re-Examining the Relationship between Facebook Use and Bonding Social Capital. *Proceedings, HICSS 2011*.

*Video: “Massive Scale Online Collaboration”

https://www.ted.com/talks/luis_von_ahn_massive_scale_online_collaboration?language=en

Optional: (you could post a summary and review as a contribution)- On Netflix, Steve Jobs: the Lost interview. Not really on SM per se, but on the history of computing. (I was lucky enough to see both Steve Jobs and Bill Gates in the “early days” of the 1980s).

(Note: Systems “Tour” assignment with this module)

Weeks 4 5 6 (Module 3)- Social Impacts Studies

Objective: Social media have social impacts, on the individual, group, organization or community, and societal levels. This module should provide you with an overview of the range of studies of SM use and potential impacts, how they have been studied and measured, and the major findings thus far.

Optional Lectures: L5 - Studies of the Social Dynamics of CMC

L6 Social Impacts of CMC

Newer Lecture: (some) recent studies

- Anderson, A.A. et al, 2014. The "nasty effect": Online incivility and risk perceptions of emerging technologies. *JCMC*, 19, 343- 387.
- Bell, C., Faussett, C. et al 2013. Examining social media use among older adults. *Proceedings, ACM Conference on Hypertext and Social Media*, 158- 163..
- Bode, L., Vraga, E.K. et al, 2014. A new space for political behavior: Political social networking and its democratic consequences. *JCMC*, 19, 414- 429
- XX Cho, H.-K., Trier, M., and XX Kim, E. (2005). The use of instant messaging in working relationship development: A case study. *Journal of Computer-Mediated Communication*, 10(4), article 17. <http://jcmc.indiana.edu/vol10/issue4/cho.html>
- Constant, D. Sproull, L. and Kiesler, S. (1996). The kindness of strangers: The usefulness of electronic weak ties for technical advice. *Organization Science*, 7(2), 119- 135.
- *Ellison, N.B. Steinfield, C., and Lampe, C. The Benefits of Facebook "Friends:" Social capital and college students' use of online social network sites. *JCMC* 12, 4 (2007).
- Garrett, R.K. and Danziger,, J.N. IM= Interruption Management? Instant Messaging and disruption in the workplace. *JCMC* 13 (1) 2007.
- Graham, T. & Wright, S. 2014. Discursive equality and everyday talk online: the impact of "superparticipants.". *JCMC*, 19, 625- 642.
- Granovetter, M. (1973). The strength of weak ties. *American Journal of Sociology*. 78 (6), 1360- 1380.
- Grinter, Rebecca E., Palen, Leysia, and Eldridge, Margery 2006. Chatting with teenagers: considering the place of chat technologies in teen life. *ACM Transactions on Computer-Human Interaction*, 13, 4 (December), 423-447.
- Haythornethwaite, C. (2002). Strong, weak and latent ties and the impact of new media. *The Information society*, 18 (5), 385- 401.

- Hiltz, S. R. and Johnson, K., 1989, "Measuring Acceptance of Computer Mediated Communication systems," Journal of the American Society for Information Science, 40 (6), 386-397.
- Liu, I.L.B., Cheung, C.M.K., and Lee, M.K.O. (2016). User satisfaction with microblogging: Information dissemination versus social networking. *JASSIST*, 67, 56-70.
- Mark, G., Guy, I., Kremer-Davidson, S. and Jacovi, M. 2014. Most liked, fewest friends: Patterns of enterprise social media use. *CSCW 2014 Proceedings (ACM)*.
- Ngwenyama, O. and Lee, A. 1997. Communication richness in electronic mail: Critical Social theory and the contextuality of meaning. *MIS Quarterly*, June, 145- 167.
- Oh, S., and Syn, S.Y. 2015. Motivations for sharing information and social support in social media: A comparative analysis of Facebook, Twitter, Delicious, YouTube, and Flickr. *JASSIST*, 66, 2045-2060.
- Rice, R. E. 1993. Media appropriateness: Using social presence theory to compare traditional and new organizational media. *Human Communication Research*, 19, 4 9 (June), 451- 484.
- Sia, CL, Tan, B C Y, and Wei, K K, Group polarization and computer-mediated communication: Effects of communication cues, social presence, and anonymity. *Information Systems Research*, 13, 1 (March 2002), 70- 90.
- XX Shrivastav, H., XX Collins, R., Hiltz, S.R. and XXDwyer, C. Facebook News Feed: Relevance or Noise?". *Proceedings, AMCIS 2012*.
- Sproull, L. and Kiesler, S., 1986. "Reducing Social Context Cues: Electronic Mail in Organizational Communication," Management Science, 1492-1512.
- Sproull & Kiesler, A two-Level perspective on Electronic Mail in Organizations, *J. of Organizational Computing*, 1, 2 1991, 125-134 (very short form of the above).
- Steinfeld, C., 1985. "Computer-mediated communication in an organizational setting: Explaining task-related and socio-emotional uses," in Communication Yearbook 9, McLaughlin, M., (Ed.), Sage, 777-804.
- Steve, Laine, et al, User Groups in Social Networks: An Experimental Study in YouTube. *Proceedings, HICSS 2011*.
- Thompson, D. and Filik, R. (2016). Sarcasm in written communication: Emoticons are efficient markers of intention. *JCMC*, 21, 105- 120.
- Trauth, Eileen M. and Jessup, Leonard M. Understanding computer-mediated discussions: Positivist and Interpretive analysis of group support system use. *MISQ*, 24, 1 (March 2000), 43- 79.
- Vishwanath, Arun (2015). Habitual facebook use and its impact on getting deceived on social media. *JCMC*, 20, 83-98.

- Walther, Joseph B. Computer-Mediated Communication: Interpersonal, Intrapersonal, and Hyperpersonal Interaction, *Communication Research*, 23, 1 (Feb 1996), 3-43. (over 2000 cites)
- Warshauer, M. , Said, G. R. and Zohry, A. Language Choice Online: Globalization and Identity, (*JCMC* July 2002)
- Wang, Y., and Mark, G. 2013. Trust in online news: Comparing social media and official media use by Chinese citizens. *CSCW '13*, 599-610.
- Wong and Shoham, The Emotional Strength of Weak Ties: Reevaluating Social Support Online, *Proceedings, HICSS 2011*.
- Yoo, Y and Alavi, M. Media and group cohesion: Relative influences on social presence, task participation, and group consensus. *MISQ*, Sept 2001.
- Yoonhyuk Jung Understanding the Role of Sense of Presence and Perceived Autonomy in Users' Continued Use of Social Virtual Worlds (pages 492–510) *JCMC* July 2011.

Privacy Issues:

- *XX Dwyer, C., Hiltz, S.R., and Passerini, K. Trust and privacy concerns within social networking sites: A comparison of Facebook and MySpace. *Proceedings, AMCIS 2007, Keystone Colorado, August*.
- *XX Collins, R., Dwyer, C., Hiltz, S.R. and Shrivastav, H. "Do I Know What You Can See? Social Networking Sites and Privacy Management". *Proceedings, AMCIS 2012*. (Nominated for Best Practitioner Paper).
- Kobsa, A. Patil, S., Meyer, B.. 2012 Privacy in instant messaging : An impression management model. *Behaviour and Information Technology*, 31, 4, 355-370.
- Romero, N.A., Markopoulos, P and Greenberg, s. Grounding Privacy in Mediated Communication. *Computer Supported Cooperative Work*, 2013, 22: 1- 32.
- Seo, M., Kim, J-H., and David, P. 2015. Always connected or always distracted? ADHD symptoms and social assurance explain problematic use of mobile phone and multicommuting. *JCMC*, 20, 667-681.
- Vishwanath, A. 2015 Habitual facebook use and its impact on getting deceived on social media. *JCMC*, 20, 83-98.
- Wisniewski, P., Zu, H., Lipford, H., and Bello-Ogunu, E. 2015. Facebook apps and tagging: The trade-off between personal privacy and engaging with friends. *Journal of the Assoc. for Information Science and Technology*, 66 (9), 1883-1896.

PART II SPECIFIC APPLICATIONS

Module 4 (Week 7) Social Media and Emergency Management

Objective: Understand how social media are currently being used in this application are for the various stages of emergency management, the unique demands in terms of software design, the problems and inadequacies of current systems (e.g., data quality/ trustworthiness and information overload) and some potential design solutions to overcome these inadequacies.

**Lecture: Newer lecture on research on Trustworthiness of social media for emergency management (2013).*

Bajpai and Jaiswal, A Framework for Analyzing Collective Action Events on Twitter
<http://www.iscramlive.org/ISCRAM2011/proceedings/papers/119.pdf>

boyd, danah, Golder, Scott, and Lotan, Gilad. (2010). Tweet Tweet Retweet: Conversational Aspects of Retweeting on Twitter. *Proceedings of HICSS-43*. Kauai, HI January 5-8. (conference paper-available through boyds site)

Chew C, and Eysenbach G. (2010). Pandemics in the Age of Twitter: Content Analysis of Tweets during the 2009 H1N1 Outbreak. *Plos One*, 5 (11), e14118.) (available on boyd's site)

Hiltz, S.R. and Gonzalez, J.J., Assessing and Improving the Trustworthiness of Social Media for Emergency Management: A Literature Review, in: V.A. Oleshchuk (Ed.) NISK, Akademika Forlag, Trondheim, Norway, 2012, pp. 135-145.

Hughes, Amanda Lee, and Palen, Leysia. (2009). Twitter Adoption and Use in Mass Convergence and Emergency Events. *Proceedings of the 2009 ISCRAM Conference*

*Imran, R., Castillo, C., Lucas, J., Meier, P. and Rogstadius, J. 2014. Coordinating Human and machine intelligence to classify mrcroblog communications in crisis. *Proceedings, ISCRAM 2014*, available at iscram2014.org.

Liu, S.B.; Palen, L.; Sutton, J.; Hughes, A.L.; and Vieweg, S. 2008. In search of the bigger picture: the emergent role of on-line photo sharing in times of disaster. In *Proceedings of the Fifth International ISCRAM Conference*, 140–149. Washington, DC, May 4–7. Available at www.iscram.org.

Palen, L.; Hiltz, S.R.; and Liu, S. 2007. Citizen participation in emergency preparedness and response. *Communications of the ACM*, 50, 3, 54–58.

*XX Plotnick, Linda L. and Hiltz, S.R. (2016). Barriers to use of social media by emergency managers. *Homeland Security & Emergency Management*.

Starbird, K., and Palen, L. 2010. Pass It On?: Retweeting in Mass Emergency. Proceedings of the 7th International ISCRAM Conference, Seattle, CD rom and accessible at www.iscram.org.

St. Denis, L.A., Palen, L., and Anderson, K.M. 2014. Mastering social media: An analysis of Jefferson County's communications during the 2013 Colorado floods. Proceedings, ISCRAM 2014.

Sutton, J.; Palen, L.; and Shklovski, I. 2008. Backchannels on the front lines: emergent uses of social media in the 2007 Southern California wildfires. In F. Fiedrich and B. Van de Walle (eds.), *Proceedings, Fifth International ISCRAM Conference*, 624–631. Washington, DC. Available at www.iscram.org, accessed May 27, 2009.

Tapia, A. H. & Kathleen Moore 2014. Good enough is good enough: Overcoming Disaster response organizations' slow social media data adoption. Computer supported coeoperative work, (accepted. Web only as of July 2014).

*Vieweg, S.; Palen, L.; Liu, S.; Hughes, A.; and Sutton, J. 2009. Collective intelligence in disaster: an examination of the phenomenon in the aftermath of the 2007 Virginia Tech shooting. In F. Fiedrich and B. Van de Walle (eds.), *Proceedings of the Fifth International ISCRAM Conference*, 44–54. Washington, DC, May 4–7. Available at www.iscram.org, accessed May 27, 2009.

Wu, Y., Wu, P.F., and Wang, X. (2009). Online Community Response to Major Disaster: A Study of Tianya Forum in the 2008 Sichuan Earthquake. Proceedings of the 42nd Hawaii International Conference on System Sciences, CD rom and in IEEE digital library.

Weeks 8 and 9 (Module 5) Group Decision Support

Objective: Group Decision Support Systems are a variety of social software that includes CMC structures and tools to support a group through the phases of decision making, from surfacing alternatives and decision criteria, through consensus formation and agreement on the “best” solution. Students should become familiar with the major tools and systems that have been developed, the research findings about their effectiveness, and the methods used to assess effectiveness.

(“old” Lectures: 7- *Experimental Studies of “same time” GSS (Roxanne Hiltz)*; 8 and 9- *NJIT experiments on Asynch GSS*)

L10 An overview of studies of Group Support Systems)

A. General

- Chidambaram, L. & Tung, L.L. "Is Out of Sight, Out of Mind? An Empirical Study of Social Loafing in Technology-Supported Groups," *ISR*, 16(2), June 2005, pp. 149- 168.
- **Dennis, A.R. Information exchange and use in group decision making: you can lead a group to information but you can't make it think. *MIS Quarterly*, 20, 4 1996, 433-455.
- Dennis, A.R. and Wixom, B.H. Investigating the moderators of group support systems use with meta-analysis. *JMIS*, 18, 3 (Winter 2001-2001), 235-258.
- Fjermestad, J. and Hiltz, S.R. An assessment of group support systems experimental research: Methodology and Results. *Journal of Management Information Systems (JMIS)* 15, 3 (Winter 1998-99), 7- 150. (skim it...)
- Fjermestad, J., and Hiltz, S.R. (2000) . Group support systems: A descriptive evaluation of case and field studies. *J. of Management Information Systems*, 17, 3 (Winter 2000), 112-157. (skim it)
- Gallupe, R. B., Dennis, A. R., Cooper, W. H., Valacich, J. S., Bastianutti, L. M., and Nunamaker, Jr., J. F., 1992. "Electronic Brain Storming and Group Size," *Academy of Management Journal*, 35 (2), 350-369.
- Turoff, M., and Hiltz, S. R., 1982. "Computer support for group vs. individual decisions," *IEEE Transactions on Communications*, Com-30 (1), 82-90.
- deVreede, Gert-Jan, Davison, R.M. and Briggs, R.O., "How a silver bullet may lose its shine," *CACM*, 46,8 (2003) 96- 102.

NJIT Studies of GDSS

- Dufner, D., Hiltz, S. R., Johnson, K., and Czech, R., (1995) "Distributed group support: the effects of voting tools on group perceptions of media richness," *Group Decision and Negotiation*, (4:3), pp. 235-250.
- Ocker, R. and Fjermestad, J. "Communication differences in virtual design teams: findings from a multi-method analysis of high and low performing experimental teams," *Data Base for the Advances in Information Systems*, 39, 1, (2008), 51-67.
- Hiltz, S. R., Johnson, K. J., and Turoff, M., 1991. "Group decision support: Designated human leaders and statistical feedback," *JMIS*, **8** (2), Fall, 81-108.
- Hiltz, S.R., Fjermestad, J., Ocker, R. and Turoff, M. (2006). *Asynchronous Virtual Teams: Can Software Tools and*

Structuring of Social Processes Enhance Performance? In Volume II: Human-Computer Interaction in Management Information Systems: Applications, Dennis Galletta and Ping Zhang, editors. Vol. 5, Advances in Management Information Systems, Edited by V. Zwass. Armonk, NY: M. E. Sharpe, Inc., pp. 119- 142.

- Hiltz, S. R., Turoff, M., and Johnson, K. J., 1986. "Experiments in group communication via computer, 1: Face-to-face vs. computer conferences," Human Communication Research, 13 (2), Winter, 225-252.
- Hiltz, S. R., Turoff, M., and Johnson, K. J., 1989. "Experiments in group decision making, 3: Disinhibition, deindividuation, and group process in pen name and real name computer conferences," Decision Support Systems, 5, 217-232.
- Turoff, M., S. R. Hiltz, A. N. F. Bahgat, and Ajaz Rana. Distributed Group Support Systems, MIS Quarterly December 1993
- Ocker, R., Fjermestad, J., Hiltz, S.R., and Johnson, K. Effects of Four Modes of Group Communication on the Outcomes of Software Requirements Determination. Journal of Management Information Systems, Summer 1998, 15,1,99-118.
- Osatuyi, Babajide, Hiltz, Starr Roxanne, and Passerini, Katia (2015). Seeing is Believing (or at Least Changing Your Mind): The Influence of Visibility and Task Complexity on Preference Changes in Computer-Supported Team Decision Making. Journal of the Association for Information Science and Technology.
- Turoff, M. Hiltz, S.R., Fjermestad, J., Bieber, M., and Whitworth, B. (2001). Computer-Mediated Communications for Group Support: Past and Future. In Carroll, J., ed., HCI in the New Millennium, Addison Wesley pp. 279- 302.

Minnesota Studies of GDSS

- Dickson, Partridge, and Robinson, Exploring modes of facilitative support for GDSS technology," MIS Quarterly, 17 (2), June 1993, 173-194.
- Niederman, F., and DeSanctis, G. 1995. The impact of a structured argument approach on group problem formulation. Decision Sciences, 26, 4 (July/August), 451- 474.
- Poole, M.S., Holmes, M., & DeSanctis, G. 1991. Conflict management in a computer-supported meeting environment. Management Science, 37, 926-953.
- V. Sambamurthy and M.S Poole, "The effects of variations in capabilities of GDSS designs on management of cognitive conflict in groups," Information Systems Research, 1992, 224-251.

Watson, R.T., DeSanctis and Poole 1987. Using GDSS to facilitate group consensus: some intended and unintended consequences. *MIS Quarterly*, 12.

Zigurs, I. And Buckland, B. (1998) "A theory of task technology fit and group support systems effectiveness," *MIS Quarterly*, Sept. 313-334.

(note: Zigurs is now at U. of Nebraska, chairing dept there)

Arizona (profs and former students) Studies of GDSS

*Briggs, RO, GSS Gert-Jan de Vreede, and Jay F. Nunamaker, Jr. 2003. Collaboration Engineering with ThinkLets to pursue sustained success with group support systems. *JMIS*, 19, 4 31-64.

Briggs, Robert O., Jay F. Nunamaker Jr. and Ralph H. Sprague, Jr. 1998. 1001 unanswered research questions in GSS. *Journal of Management Information Systems*, 14, 3, 1998.

Dennis, Alan, R., & Joseph Valacich, , 1999. Research Report: Electronic brainstorming: Illusions and Patterns of Productivity. *Information Systems research*, 10. 4,

George, J.F., Dennis, A.R. and Nunamaker, J.F., An experimental investigation of facilitation in an EMS decision room, *Group Decision and Negotiation*, 1, 1992, 57-70.

Joinson, A.N. (2001) Self disclosure in computer-mediated communication: The role of self-awareness and visual anonymity. *European Journal of Social Psychology*. 31 (2), 177- 192.

Module 6 (Week 10) Virtual Teams and Virtual communities

Lecture: Virtual teams

Objective: Whereas GDSS provides support to short-lived, single-decision groups, support for virtual teams and virtual communities continues over a relatively long period of collaboration and information work related to a joint project or shared interest, from weeks to months. You should become familiar with the major variables that are related to success of virtual teams and virtual communities, including characteristics of the teams (e.g., fully distributed vs. partially distributed) and the building and importance of trust and shared identity.

Bartelt, V.L., and Dennis, Alan R., 2014. Nature and nurture: the impact of automaticity and the structuration of communication on virtual team behavior and performance. *MISQ*, 38, 2: 521- 538.

- *Coppola, Nancy W., Hiltz, Starr Roxanne, and Rotter, Naomi (2004) Building Trust in Virtual Teams. *IEEE Transactions on Professional Communication*, 47, 2 (June), 95-104.
- Chudoba, Katherine M., Eleanor Wynn, Mei Lu and Mary B. Watson-Manheim. *How virtual are we? Measuring virtuality and understanding its impact in a global organization*. *Info Systems* 15, p. 279-306. 2005
- Cramton, C.D. and Hinds, P.J. (2014). An embedded model of cultural adaptation in global teams. *Organization Science*, pp. 1- 26.
- Pamela J. Hinds •Diane E. Bailey Cramton, C.D. and Hinds, P.J. (2014). An embedded model of cultural adaptation in global teams. *Organization Science*, pp. 1- 26.
- XXHan, H.J., Hiltz, S.R., Fjermestad, J. and Wang, Y. Does Medium Matter? A Comparison of Initial Meeting Modes for Virtual Teams. *IEEE Transactions on Professional Communication*, 54, 4 (December 2011), 376-391.
- Hinds, P.J. & Bailey, D.E. "Out of Sight, Out of Sync: Understanding Conflict in Distributed Teams," *Organization Science*, 14(6), November-December 2003, pp. 615-632.
- **Jarvenpaa, S. L. and D. Leidner *Communication and Trust in Global Virtual Teams*. *Organization Science* 10 (6) p. 791-815, 1999
- Jarvenpaa, Shaw and Staples, Toward contextualized theories of trust: The role of Trust in global virtual teams. *ISR*, Sept 2004, 250-267.
- Ling, K., Beenen, G., Ludford, P., Wang, X., Chang, K., Li, X., Cosley, D., Frankowski, D., Terveen, L., Rashid, A. M., Resnick, P., and Kraut, R. (2005). Using social psychology to motivate contributions to online communities. *Journal of Computer-Mediated Communication*, 10(4), article 10. <http://jcmc.indiana.edu/vol10/issue4/ling.html>
- Ocker, R.J., Huang, H., Benbunan-Fich, R. and Hiltz, S.R. Leadership Dynamics in Partially Distributed Teams: an Exploratory Study of the Effects of Configuration and Distance. [Group Decision and Negotiation](#), 2011, 20, 3, 273-292.
- Ocker, R. and Hiltz, S.R. Learning to Work in Partially Distributed Teams: The Impact of Team Interaction on Learning Outcomes. *Proceedings, HICSS 2012*.
- O'Leary, M.B. and Mortensen, M. (2010). Go (con) figure: Subgroups, imbalance, and isolates in geographically dispersed teams. *Organization Science*, vol. 21, no. 1, pp. 115-131.
- XXPlotnick, L., Hiltz, S.R., and Ocker, R. Trust over time and distance in global partially distributed teams. *Proceedings, HICSS 2011*. (nominated for best paper).

- Porter, C. E. A Typology of Virtual Communities: A Multi-Disciplinary Foundation for Future Research JCMC 10 , 1 Nov 2004.
<http://www.ascusc.org/jcmc/vol10/issue1/porter.html>
- * XX Privman, R., Hiltz, S.R. and Wang, Y. In-Group (Us) vs. Out-Group (Them) Dynamics and Effectiveness in Partially Distributed Teams. 2013 IEEE Transactions on Professional and Technical communication, . Vol 56, 1: 33-48.
- Olson, J.S., Olson, G.M., and Dunning, L. 2012. Cross cutting faultlines of location and shared identity in the intergroup cooperation of partially distributed groups. CHI 2012, 3101- 3110.
- Tsai, H.T., and Bagozzi, R.P. (2014). Contribution behavior in virtual communities: Cognitive, emotional, and social influences. MISQ, 38, 1, pp. 143- 163.
- Tseng, F-D, Huang, H-C, and Teng, C.I. 2015. How do online game communities retain gamers? Social presence and social capital perspectives. JCMC 20, 601-614.
- Wasco, M.M. and Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. MIS Quarterly, 29 (1), March.
- Wise, K., Hamman, B. and Kjerstin, T. 2006. Moderation, response rate, and message interactivity: Features of online communities and their effects on intent to participate. JCMC 12 (1). 2006.
- Yoo, Youngjin, and Marayam Alavi. *Emergent leadership in virtual teams: what do emergent leaders do?* Information and Organization 14. p. 27-58. 2004

Module 7 (Week 11) Educational Applications- Asynchronous Learning Networks

Lecture: 11 ALN lecture (Roxanne Hiltz) Recorded 1/15/2007

- S.R. Hiltz and R. Goldman, eds.,) Learning Together Online: Research on Asynchronous Learning Networks. Mahwah NJ: Erlbaum, 2005.
- Alavi, M. and Leidner, D.E. Research commentary: Technology-mediated learning-- a call for greater depth and breadth of research. ISR, 12, 1 (March 2001), 1-10.
- Alavi, M., Marakas, G. and Yoo, Y. (2002) "A comparative study of distributed learning environments on learning outcomes" *Information Systems Research*, 13, 4, December, 404-415.
- * Raquel Benbunan Fich and Starr Roxanne Hiltz, Educational Applications of CMCS: Solving Case Studies through Asynchronous Learning Networks. JCMC 4 (3) March 1999

- Benbunan-Fich, R. and Starr Roxanne Hiltz, (2003). Mediators of the effectiveness of online courses. *IEEE Transactions on Professional Communication*, 46, 4 (December), 298-312.
- *Coppola, N.W., Hiltz, S.R. and Rotter, N. 2002. Becoming a Virtual Professor: Pedagogical Roles and Asynchronous Learning Networks. *JMIS*, 18, 4 (Spring 2002), 169- 190.
- Hiltz, SR, Coppola, N. and Rotter, N. Measuring the Importance of Collaborative Learning for the Effectiveness of ALN: A Multi-Measure, Multi-Method Approach (<http://www.aln.org/alnweb/journal/jaln-vol4issue2.htm>)
- Hiltz, S. R., The Virtual Classroom: Learning Without Limits via Computer Networks, Ablex. 1993.
- Ocker, R., Dana Kracaw, Starr Roxanne Hiltz, and Mary Beth Rosson, , Enhancing learning experiences in Partially Distributed Teams: Training students to work effectively across distances, Volume 1 Number 1 of *ACM Transactions on Computing Education*, March 2009.
- Piccoli, G., Ahmad, R., and Ives, B. Web-based virtual learning environments: A research framework and a preliminary assessment of effectiveness in basic IT skills training. *MIS Quarterly*, 25, 4 (December 2001), 401- 426.
- XX Saltz, J. and Hiltz, S.R., Turoff, M., and Passerini, K. Increasing Participation in Distance Learning Courses. *IEEE Internet Computing*, Volume: 11 Issue: 3 May-June 2007, pp. 36- 44.
- Swan, Karen, (XX) Shen, Jia, and Hiltz, Starr Roxanne. Assessment and Collaboration in Online Learning. *JALN* 10, 1, Feb. 2006, 45-62.
- Wu, D. (XX) , Hiltz, S.R., and Bieber, M. "Acceptance of Educational Technology: Field Studies of Asynchronous Participatory Examinations, " *Communications of the Association for Information Systems (CAIS)*, 2010. Vol. 26, Article 21. Available at: <http://aisel.aisnet.org/cais/vol26/iss1/21>
- XX Ye Xiong, Turki Alelyani, Regina Collins, and Starr Roxanne Hiltz. Not Just Silly Cat Videos: Exploring Student Knowledge Sharing via Social Media. *Proceedings, AMCIS 2015, Puerto Rico, August.*
- Yip, J., Ahn, J. et al, 2014. It helped me do my science: A case of designing social media technologies for children in science learning. *Proceedings, ACM IDC '14*, pp. 155-

Module 8 (Week 12): Business and Marketing (including marketing of political candidates or government programs)

Groundswell: Winning in a World Transformed by Social Technologies, by Charlene Li and Josh Bernoff, ISBN 1422161986. (We will divide up the chapters- choose one from the following. A copy of the book is on reserve. (by the Circulation Desk). It can be borrowed overnight-.Students can go to the Circulation Desk and can request it by the title or call number which is **HC 79 .I55 L48 2011**.

You could photocopy or scan your chapter for your own educational use)-
Chapts 1, 4, 7, 8, 10, 11

Dewan, S. and Ramaprasad, J., 2014. Social media, traditional media, and music sales. *MISQ, Vol. 38 No. 1, pp. 101-121*.

Lee, K., Lee, U, and Oh, W. 2015. Thumbs up sales up? The contingent effect of Facebook likes on sales performance in social commerce. *JMIS, 17, 4, 109-143*.

James M. Leonhardt 2015. Tweets, hashtags and virality: Marketing the Affordable Care Act in social media. 2015. *Journal of Direct, Data and Digital Marketing Practice vol. 16 no. 3 pp 172-180*.

NOTE: Weeks 12-14: collaborative Exam (administered online; for which students make up the questions and do initial feedback/ grading on the questions they make up)

Week 12, you will post three questions by Wednesday – to cover topics through week 12.

Week 13, you will answer two questions assigned to you (by Saturday)

Week 14, you will do initial grading of the answers to the questions you made up

Then by week 15 or so I will review the grading and post your final exam grade.

Module 9 (Week 14)- Location- aware systems, Future systems, future research

Objective: Enable you to make informed speculations about the types of systems and features that will become popular in the next decade, and their impacts. This may help you to identify areas for design research and social impacts research.

(Will be based on discussion and a few very recent articles)

- Bateman, P.J., Pike, J.C., Herente, N. and Hansen, S. Journal of Virtual Worlds Research, Vol 5, No 3 (2012).
[http://journals.tdl.org/jvwr/index.php/jvwr/article/view/6324/Time for a Post-Mortem?: Business Professionals' Perspectives on the Disillusionment of Virtual Worlds](http://journals.tdl.org/jvwr/index.php/jvwr/article/view/6324/Time%20for%20a%20Post-Mortem%3F%3A%20Business%20Professionals%27%20Perspectives%20on%20the%20Disillusionment%20of%20Virtual%20Worlds)
- **Kane, G.C., Alavi, M., Labianca, G. and Borgatti, S.P. 2014. What's different about social media networks? A framework and research agenda. MISQ, 38, 1, 275- 304.
- *XX Julia M. Mayer, Starr Roxanne Hiltz, Louise Barkhuus, Kaisa Vaananen, and Quentin Jones. Supporting Opportunities for Context-Aware Social Matching: An Experience Sampling Study. Proceedings, ACM CHI2016.
- Patil, S. Schlegel, R. et al 2014. Reflection or action? How feedback and control affect location sharing decisions. Proceedings, CHI 2014. 101- 110/
- XX Plummer, Maria, XX Linda Plotnick, Starr Roxanne Hiltz, and Quentin Jones. (2008). A Wiki That Knows Where It Is Being Used: Insights from potential users. The DATA BASE for Advances in Information Systems 13 Volume 39, Number 4, November 2008, pp 13-30.
- Ricken, S., Grandhi, S., XXZytko, D., Hiltz, S.R., and Jones, Q. 2014. Anyone for bowling? Coalescing for shared activities. Proceedings, ACM Group14, Nov. 9-12, Sanibel Island, Fl.

Online: a Disutopian view of the future of the internet:

http://www.circleid.com/posts/20160714_internet_quo_vadis_where_are_you_going/

Final projects: If you wish a grade at the end of the semester, your project must be turned in by the end of the reading day or days after the end of classes. In any case, you will have a project report due by the end of week 14, describing your planned paper. If you elect to take an Incomplete, it is expected that your final project paper will be turned in by Feb. 1.