Syllabus

1 • Overview

A. COORDINATES

1. Course: INF3001H — Research in Information: Foundations
2. Time & place: Wednesday, 1:00–4:00 p.m., Bissell 312
3. Instructor: Brian Cantwell Smith
4. Email: brian.cantwell.smith@utoronto.ca
5. Phone: 416·946·5402
6. Office: Bissell Bldg., Room 633
7. Office hours: By appointment

B. DESCRIPTION:

1. Official: An introduction to, exploration of, and examination of the fundamental intellectual landscape of information research. Topics include:

   a. An historically, conceptually and methodologically grounded understanding of the use of concepts of information and knowledge across the academy (in philosophy, history, social science, politics, engineering, etc.); and

   b. Contemporary uses of 'information' as a substantial theoretical notion, both in the world in general (e.g., in public political discourse, in such constructions as "the information or knowledge age, economy, society, etc."), and in such fields as political theory, biology, medicine, computing, etc.

2. Or in other words:

   a. Each year, a new PhD cohort enters the iSchool to undertake a doctorate in the field of Information. But what is this field? Compared with other academic disciplines, it is a radically multi-disciplinary fabric of theories and approaches drawing on the social sciences, the humanities, the sciences, and engineering. The substantive and methodological diversity of the information "field" is one of the Information community's greatest strengths, but it makes it difficult for those entering the field to develop a sense of intellectual grounding.

   b. The purpose of this course is to uncover, explore and interpret a few of these cross-cutting theoretical and methodological currents, in an attempt to render intelligible the richness of the field's underlying texture, and to explore a bit of the diverse literature base.

C. OBJECTIVES: to develop

1. An intellectual/historical/conceptual map of the intellectual terrain comprising information research/studies;

2. A methodologically neutral (non-ideological) approach to the study of information, in order to be able to appreciate contributions to understandings of information from diverse academic disciplines and sectors;

3. A reflexively critical appreciation of one's own and others' methods, approaches, perspectives, insights, normative standards, and professional practices;

4. Familiarity with a representative sample of foundational literature involving the use of information as a theoretical concept in those aspects of the intellectual landscape relevant to the areas in which you imagine conducting your doctoral research; and

5. Through participation in a safe and open environment, recognition, strength, and power in your unique scholarly voice (written and spoken).

D. OUTCOMES—to be able to:

1. Compare and contrast different notions of information.
2. Compare and contrast different traditions of information studies.
3. Identify, interpret, appreciate, and critique different epistemological traditions.
4. Lead and engage in discussions with peers.
5. Justify a conceptual tradition for your own research agenda.

E. STUDENTS
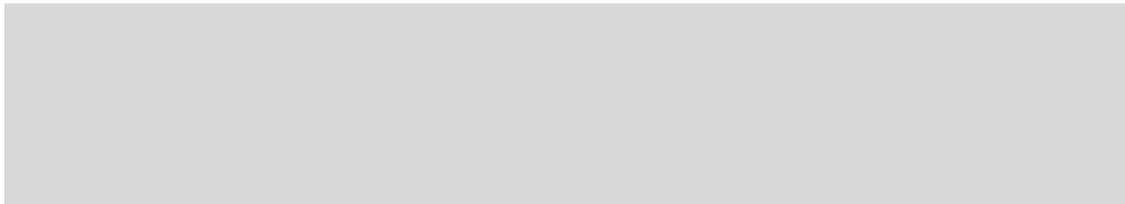
II • Assignments

A. PARTICIPATION Participation in class discussion (worth 20%).

INF3001 is intended to be an intensive seminar. Everyone is expected to participate actively (and come prepared!); the course will be successful only if everyone takes part in the learning and in the discussions. And because there are just 6 students this year, each student's role will be that much greater!

Participation does not just mean showing up. It requires that you engage in the material and contribute to the collective work in a constructive and critical way. It will be evaluated in part on quantity (how often you engage in discussions, how often you start a discussion, how often you comment on other people's discussion contributions, etc.—but don't take over the class!), but more on quality. Quality is a matter of whether you offer insights that bring discussions forward, whether you ask question that help the class think constructively about the issues, whether you offer insights when the discussion is stuck or off on a tangent, etc.

Table I (next page) provides a useful characterization of participation, borrowed from Haverford College (via a previous INF3001 instructor, Prof. Jenna Hartel).

B. REFLECTIONS Short reflections on readings (worth: 15%)

For each week for which new primary readings are assigned,[1] write a brief reflection (short list or 1–2 paragraphs) about each of the assigned primary readings, covering the following points:

a. Paper's main insights,

---

[1] I.e., not including any readings listed as "secondary."

1. *Outstanding Contributor* [A or A+]: Contributions in class are frequent and reflect exceptional preparation in nearly every class. Consistently volunteers answers and asks questions that assist the learning of the class as a whole. Class activities are always approached with enthusiasm and diligence. Attends every class session. If this person were not a member of the class, the quality of the course as a whole would be diminished significantly.

2. *Good Contributor* [A–]: Contributions in class are frequent and reflect thorough preparation in nearly every class. Often volunteers answers to questions. Frequently asks questions that assist the learning of the class as a whole. Class activities are almost always approached with seriousness and diligence. Attends nearly every class session. If this person were not a member of the class, the quality of the course as a whole would be diminished.

3. *Adequate Contributor* [B or B+]: Contributions in class are infrequent but reflect adequate preparation. Rarely volunteers answers to questions. Infrequently asks questions, but they are appropriate and helpful to class. Class activities are usually approached with diligence. Absent from a few class sessions. If this person were not a member of the class, the quality of discussion would remain unchanged.

4. *Non-Participant* [B-]: Does not participate in class at all. Absenteeism is a problem. As a result here is no adequate basis for evaluation. If this person were not a member of the class, the quality of discussion would remain unchanged.

Table I — Categories of Participation

   b. Points of agreement,
   c. Points of disagreement, and
   d. Questions for discussion.

These reflections should be posted on the weekly discussion page (on Black Board) by the end of the day on Monday.[2] Before class on Wednesday, students—especially the discussant (below)—should read the reflections of the other seminar members, and come to class prepared to engage.

   Reflections should be a few hundred words—on the order of a page or so total (and in no case more than 2 pages). I.e., approx. ⅓ or ½ of a page per reading.

C. LEADERSHIP Leadership of one class discussion (worth: 15%).

   Each week, one student (the discussant) will lead the seminar discussion of the reading(s). Sometimes this will happen at the outset of class; sometimes after a presentation by the instructor, or even after the break. They[3] should <u>very briefly</u> (1-3 min.?) summarize each of the readings (remembering that all other students will already have read it), provide a critical appraisal, and introduce questions and points for discussion.

   In preparation, the discussant should read all of the reflections that other class members will have posted on Blackboard, and use them in shaping and organizing the seminar. Doing so will go a long way towards ensuring lively engagement and a meaningful discussion that resonates with the interests of the group as a whole.

---

[2]I.e., about 36 hours before class.
[3]See §II.B of the "Writing Tips," in the "INF3001 · Syllabus etc." section within "Course Materials" on Blackboard.

D. PARAGRAPH   D. PAPER   A term paper of approximately 5–6,000 words.[4] Four stages of preparation, the last three of which will be graded. Worth 50%.

1. *Topic*   Write a review and interpretation of the work of a scholar who has made a significant contribution in the theoretical foundations of information studies. The review should take the form of a critical evaluation of the scholar's contributions, the intellectual background from which they have been made, and your interpretation of the substance of their views, their impact on the field, and their relevance to your own research. (The review should be accompanied by an appropriate bibliography of the scholar's works.)

    Or, if you are more ambitious, instead of focusing on the work of a particular scholar, you may choose to write about a particular *idea* that has played a significant role in the development of the field of information studies. In this case you should review the idea's genesis, substance, reception, interpretation, evolution, and role in the development of the field.

2. *Skeleton*   The first step is to submit, on 1 or 2 pages (maximum!), what I call a **skeleton**—a conceptual distillation of the argument to which your full paper will give voice. *It should not be in prose!* Rather, it should instead be a clear, condensed, skeletal version of the argument to be advanced.

    As described in the accompanying handout,[5] skeletons are not intended to be *outlines*; nor are they designed for public consumption (with definitions, introductions, etc.). Outlines typically identify topics or areas for discussion, organized by the thread that the paper will follow—and thus typically consist of *noun phrases* identifying issues to be discussed, points to be brought forward, etc. A skeleton, in contrast, should consist of *sentences* or *claims*—brief distillations, in structured and highly abbreviated form, of the argument to be made. The entire conceptual structure (including assumptions, theses, arguments—and flaws!) of the paper should be revealed.

    a. Due: Nov. 2; (I am not going to grade the skeletons, not only because the form is likely to be unfamiliar, but also, and more seriously, because skeletons are *deucedly difficult* to develop. Still, do the best you can. There will be time during subsequent weeks for you to refine and improve your skeleton. (I believe that developing skill with this skeletal form will prove invaluable as preparation for writing your dissertation, and papers for the rest of your life.)

    b. Some (many?) people will not be able to produce anything resembling a skeleton without first writing a rough draft, in order to know what they are arguing. Fair enough. But the skeleton should not be that rough draft; rather, it should consist only of the paper's distilled argument structure—extracted, if this is the approach you select, from the draft.

    c. Developing skeletons requires a *tremendous amount of work!* Don't be misled by the fact that the skeleton may be no longer than 1–2 pages. If all goes well, producing the skeleton, short as it is, will be the bulk of the work of writing the paper. If a skeleton is done well, writing the subsequent prose will be easy.

---

[4]To the extent that your paper differs from that length (in either direction), it should be correspondingly fabulous.
[5] "INF3001 · Skeletons," in the "INF3001 · Syllabus etc." section within "Course Materials," on Blackboard.

3. *First draft* Upon submission, each person's first full draft will be distributed (on a random basis) to two other students, for comments.

   a. Due: Nov 23; worth 10%

4. *Comments* Comments due on the two other students' first drafts that have been assigned to you. You should write detailed annotations, throughout the text, plus some paragraphs of general remarks, as appropriate—and be prepared to talk about your comments and critique, in class. I would expect the textual commentary to run to 2 or 3 pages (500–1,000 words). Be critical, but in the most helpful and supportive way. If you see room for improvement, or have suggestions, feel free to give voice to them (the author can always ignore them!).

   a. Due: Nov 30; worth 10%

5. *Final draft* Due: Dec 14; worth 30%. (Note that that the last class of the semester is Dec. 7, a week earlier.)

E. GRADING Grades will be based on clarity, imagination, power, and coherence of arguments and insights. I am especially interested in people struggling to give voice to substantial views and problems, rather than mere citing of views published by others, "logic-chopping," or piece-wise rearrangement of already established positions. That said, clarity and articulateness are of the very greatest importance.[6]

   I won't be reticent in presenting and defending positions, nor do I expect you to be.

F. WRITING As a doctoral student, you are expected to be able to write well. In case it is helpful, though, I have included here some information I incorporate in undergraduate classes, in case any of the listed resources should prove useful. I have also included, on Blackboard, an idiosyncratic set of "Writing Tips" that I developed over many years in response to student papers, which you might want to keep in mind while writing.

1. *U.of.T* Your should be familiar with the resources at the U.of.T [writing support web site](#),[7] where among other things more than [60 advice files](#)[8] are available on all aspects of academic writing.

2. *Other* There are many "guidelines for writing philosophy papers" available online, which contain information relevant not only to philosophy per se, but to conceptual writing in any field. A sample are given in the footnote.[9]

3. *Resources* Some additional online philosophy resources that may be useful:

   a. [Stanford Encyclopedia of Philosophy](#)[10] ("From its inception, the SEP was designed so that each entry is maintained and kept up to date by an expert or

---

[6] In passing: In undergraduate seminars, I often tell students that I will down-grade, by one grade level (from A to A–, from A– to B+, etc.) any paper that presents a view with which I agree, especially one with which we have become familiar in class—in order to discourage attempts to parrot back what I or others said. The goal is to encourage students to manifest ferocious intellectual autonomy in their work. Since you are doctoral students, however, I do not expect any problems in this regard ;-).

[7] http://www.writing.utoronto.ca/

[8] http://www.writing.utoronto.ca/advice

[9] http://philosophy.fas.harvard.edu/files/phildept/files/brief_guide_to_writing_philosophy_paper.pdf
   http://philosophy.fas.harvard.edu/files/phildept/files/guide_to_philosophical_writing.pdf
   http://www.csus.edu/phil/guidance/writing%20guidelines.html
   http://www.sfu.ca/philosophy/resources/writing.html

[10] http://plato.stanford.edu/contents.html

group of experts in the field. All entries and substantive updates are refereed by the members of a distinguished Editorial Board before they are made public.")

   b. Routledge Encyclopedia of Philosophy[11] ("Comprehensive resource. Articles from all continents, all periods and cultures.")

   c. Internet Encyclopedia of Philosophy[12] ("Most of the articles in The Internet Encyclopedia of Philosophy are original contributions by specialized philosophers around the Internet.")

III • Methodologies

A. One of the purposes of this course is to develop familiarity with multiple perspectives and methodologies—since "information" is a notion that has been theorized in just about every corner of the academy. Depending on your background, various of the readings we are going to examine are likely to seem dense, obscure, technical, irrelevant, arcane, hopelessly unsocial or apolitical, etc. This is by explicit intent! Your task is to see through these detriments and infelicities (remarking on them is easy), in order to figure out what, of substance and value, the author was in fact giving voice to—and then to assess that, from a charitable as well as critical perspective.

B. In case it is helpful, I will quote a couple of paragraphs from a paper I wrote some years back:[13]

A Caterpillar D9

"Everyone's right." Or anyway that's what I tell my students. "Look," I say; "this paper you are reading was written by a dedicated, intelligent person, who has devoted their life to studying these issues. The author's had an insight, uncovered some subtlety, which they're trying to tell us about. Imagine that they're showing us a path through the forest. Problem is, people write in *words*; and words are blunt instruments: intellectual bulldozers, Caterpillar D9s—big bruisers, that cut wide swaths. Rare persons—poets, mostly—can wield words with enough finesse to clear a delicate trail, without doing too much collateral damage. But most of us, when we write, even when we think we are navigating a exquisite line, are in fact unwittingly mowing down trees, ripping up the earth, sewing all kinds of destruction.

   "So here's my advice," I go on. "Don't assume this text is written in a language you know, and take your task to be one of figuring out whether what they've written is true or false. You will almost certainly judge it false. Be more generous! Assume what you are reading is true, and tell me what language it is written in. Ignore the ancillary damage; pointing that out is easy, and anyway that stuff will grow back. Figure out what the author was on to—what they were excited about, what wonder they have seen. Tell me, if we were to follow their path further, where it would lead."

---

[11] http://resource.library.utoronto.ca/a-z/more_info.cfm?id=5220 NB: this link currently seems to work only on Windows machines. We are investigating whether U.of.T access is available for Mac users.

[12] http://www.iep.utm.edu/

[13] Smith, Brian Cantwell. "Cummins—or Something Isomorphic to Him," in Hugh Clapin (ed.), *Philosophy of Mental Representation*, Oxford Univ. Press, 2002, 170–90 (commentary through p. 218).

IV • Practical Issues

A. *Communications:* If you have questions, suggestions, observations, etc. about the course, there is a good chance that others in the class will have the same question—or at least will benefit from the answer. Please therefore copy the rest of the class in an email, so that everyone in the class can benefit from your questions and from our collective answers.

B. *Academic integrity:* The essence of academic life revolves around respect not only for the ideas of others, but also their rights to those ideas and their promulgation. It is therefore essential that all of us engaged in the life of the mind take the utmost care that the ideas and expressions of ideas of other people always be appropriately handled, and, where necessary, cited. For writing assignments, when ideas or materials of others are used, *they must be cited*. Such attention to ideas and acknowledgment of their sources is central not only to academic life, but life in general.

    Use of material by others without proper citation—called **plagiarism**—is absolutely forbidden, and considered to be a very grave academic offence. Note that *neither the instructor nor either TA has any discretion whatsoever in dealing with cases of plagiarism. All cases must be reported.* This is a very strict U.of.T rule, to which we, as instructors, are bound. In particular, we are explicitly forbidden from "deciding charitably to let a confused or repentant student off," no matter how much we might otherwise be tempted.

    Please acquaint yourself with U.of.T's [Code of Behaviour on Academic Matters](.)[14]

Note that citation is critical whether or not the cited passage or idea has been published. If you rely on an idea suggested by someone else (including any of your classmates), make sure to cite the person and to give them full and appropriate credit (e.g.: Ebenezer Le Page, personal communication, Feb 30, 2015).

C. *Students with a disability or diverse learning styles:* Students with diverse learning styles and needs are welcome in this course. If you have a disability or health consideration that may require accommodations, please approach the instructor and/or the [Accessibility Services Office](.)[15] as soon as possible. The Accessibility Services staff are available by appointment to assess specific needs, provide referrals and arrange appropriate accommodations. The sooner you let us know about your needs, the more quickly we can assist you in achieving your learning goals in this course.

---

[14] http://www.governingcouncil.utoronto.ca/policies/behaveac.htm
[15] http://www.accessibility.utoronto.ca/

Schedule[16]

1 • Backgrounds   Sept. 14

A. The first class will be dedicated to finding out where each of us have come from, what matters to us, what we are interested in, what we are looking for, etc. We will be working closely together all fall, and you will be a "cohort" together for a number of years to come. Especially because we are such an interdisciplinary community, it will be useful to have a sense of each person's background, perspective, and intellectual predilections. I would therefore like each of you to speak briefly (for 10 minutes or so) on how you see yourself approaching your PhD. Among other things, I will ask you to address the following four issues:

1. BACKGROUND: Previous educational focus (undergraduate, master's, etc.), including department or discipline, topic, claim(s) you argued for in any theses you have written, and the methods or style of work you used and/or are comfortable with—e.g., science, social science (quantitative, qualitative, ethnographic, etc.), humanities, engineering, programming, or whatever.

   You should also mention expertise you come with, which might be of use to others in the class (e.g., you are a master statistician, have translated Hegel into Japanese, can design dynamite web sites and help people with CSS, etc.)

2. PLANS: What, at the moment, you expect to focus on, wrestle with, conduct research about, or investigate in the course of your doctoral work—and also, and not incidentally, what *standards* you would like to meet, and what you would like your work to *stand for*. (It would be helpful, for example, for us to know whether your ultimate goal is to bring feminist insights into information system design, or to participate in developing an alternative to late neo-capitalism and state socialism, or to understand how western notions of objectivity are compatible with eastern notions of detachment, etc.)

   Needless to say, it is early days, so your ideas may well change, over the next couple of years. In fact I hope they do! If they don't, I will feel that the iSchool has let you down. Don't worry, therefore, whether you know what project, topic or even area you want to focus on. I'm just looking for a sense of what *matters* to you, intellectually.)

3. LACUNAE: What sorts of education, understanding, and insight you do *not yet have*, that you will need to fulfill your goals? What you do not yet know, that you think you will need to know or understand, in order to do the work you are aiming at? I.e., what are you looking for—and what can we all help you with?

4. FOUNDATIONS: What literatures and research (books, papers, projects, etc.) you expect to play a fundamental role in the research you intend to focus on? This will include works you have already know, but I am especially interested in things you have *not yet read*, but would like to— things you know will be important. We can adjust the syllabus to include things you all would like to read, if there is a rough consensus on doing so.

After each presentation, we will have some time for others in the class to ask questions and have a bit of discussion.

---

[16]The readings for the semester build on versions of INF3001 offered at the iSchool in previous years by Profs. Siobhan Stevenson, Jens-Erik Mai, and Jenna Harte, and also on reflections on and suggestions for the course by students in INF3008 in the spring of 2015—particularly those of Brian Griffin. My thanks and appreciation to all.

II • History of Information Studies   Sept. 21

   A. Primary

     1. Day, Ronald (2001). "European documentation: Paul Otlet and Suzanne Briet." In Day, Ronald. The Modern Invention of Information: Discourse, History, and Power. Edwardsville: Southern Illinois Press, Chapter 2, 7–37.

     2. Bush, Vannevar (July 1945). "As we may think." *Atlantic Monthly*, 101–108

     3. Shera. Jesse (1973). "Towards a theory of library and information science. Knowing books and knowing men, knowing computers, too." Littleton, CO: Libraries Unlimited, 93–110.

     4. Rayward, W. Boyd (1994). "Vision of Xanadu: Paul Otlet (1868-1944) and Hypertext." Journal of the American Society for Information Science, 45(4): 235–250.

     5. Gold, Rich (1995). "How smart does your bed have to be, before you are afraid to go to sleep at night?" *Cybernetics and Systems*. **26:** 379–386.

     6. Nunberg, Geoffrey (1996), "Farewell to the Information Age." In Nunberg, Geoffrey (ed.), *The Future of the Book*, U. California Press.

   B. Secondary

     1. Budd, John (2002). "Jesse Shera, social epistemology and praxis." Social Epistemology, 16 (1), 93–98.

     2. Burke, Colin (2008). "History of Information Science." *Annual Review of Information Science and Technology* 41(1), 3–53.

     3. Butler, Pierce (1933). An introduction to library science. University of Chicago Press. (Forward plus pp.1–101). http://archive.org/details/introductiontolio11501mbp

     4. Olson, Gary M. and Grudin, Jonathan (2009). *Interactions*, March & April 2009: 16:15–19. In Timelines section.

     5. Rayward, W. Boyd (1996). "The history and historiography of information science: Some reflections," Information Processing & Management, Vol. 32, No. 1, 3–17.

     6. Weiser, Marc (Sept. 1991). "The Computer for the 21st Century." *Scientific American*, 94–104.

III • Information in IS   Sept. 28

     1. Buckland, M. (1991). "Information as thing." *Journal of the American Society for Information Science* 42(5), 351–360.

     2. Frohmann, Bernd (2004). *Deflating Information from Science Studies to Documentation*. Toronto: *Toronto University Press*. Introduction, 3–22; and Chapter 2, 53–91.[17]

     3. Hayles, Katherine (1993). "The materiality of informatics." Configurations 1.1 (1993) 147–170.

     4. Furner, J. (2004). "Information studies without information." *Library Trends*, 52(3), 427–446.

---

[17]As well as being available in PDF on Blackboard, this book is available at (make sure you click on the "Read this book" tab): http://simplelink.library.utoronto.ca/url.cfm/122278

IV • Knowledge   Oct. 5

A. Primary

   1. Fleck, Ludwik (2012). *Genesis and Development of a Scientific Fact*. University of Chicago Press. Chapters 1 & 2.

   2. Kuhn, Thomas S. (1996). *The Structure of Scientific Revolutions*. 3rd. ed. Chicago: University of Chicago Press. Chapters 1–5.

   3. Foucault, Michel. (1980). *Power/Knowledge: Selected Interviews and Other Writings*, 1972–1977. *Random House LLC.* Pages 78–108.

   4. Latour, Bruno (2004). "Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern." *Critical Inquiry* 30: 225–248.

B. Secondary

   1. Bourdieu, Pierre (1983). "The Field of Cultural Production, or: The Economic World Reversed." *Poetics* **12:** 311–356.

V • Philosophy   Oct. 12

A. Primary

   1. Floridi, Luciano (2010). *Information: A Very Short Introduction*. Oxford University Press

   2. Floridi, Luciano (2008). "Trends in the Philosophy of Information." *Handbook of the Philosophy of Science* 8: 117–35

   3. Adriaans, Peter (2012). "Information," in the *Stanford Encyclopedia of Philosophy*
      http://plato.stanford.edu/entries/information

   4. Adriaans, Peter (2010), "A Critical Analysis of Floridi's Theory of Semantic Information," *Knowledge, Technology, and Policy,* 23:41–56.

B. Secondary

   1. Shannon, Claude E and Weaver, Warren (1948/1971). *A mathematical theory of communication*. University of Illinois Press, 1971. Originally published in the *Bell System Technical Journal*, 27 (July and October, 1948), 379–423 & 623–656. Corrected version available at:[18]
      http://cm.bell-labs.com/cm/ms/what/shannonday/shannon1948.pdf

   2. Shannon, Claude E. (1956). "The Bandwagon," *IRE Transactions on Information Theory* **2**:3.

VI • Semantics   Oct. 19

A. Primary

   1. Barwise, Jon (1997). "Information Flow: A Review." Lecture 1 in Jon Barwise and Jerry Seligman, *Information Flow: The Logic of Distributed Systems.* Cambridge University Press. 3–25.

   2. Israel, David and Perry, John (1990). "What is Information? In Philip Hanson (ed.), *Information,*

---

[18]Shannon's classic paper formulating his "theory of information," together with comments by Weaver. *I do not expect you to read and understand the mathematics.* Read them as far as you can—Weaver (P7)at least up to the middle of p. 8, for example—but at a certain point those of you who aren't mathematically inclined will run into inscrutable formulae. Nevertheless—and this is the important thing—even if you don't follow any of the subsequent mathematics, I strongly suggest that you to continue to "read through" the rest of both articles, in order to see what the two authors are concerned with, what notions are being bandied about, etc.

Language and Cognition. Vancouver: University of British Columbia Press. 1-19.[19]

3. (Dretske, Fred (2008). "Epistemology and information." In Handbook of the Philosophy of Science. Volume 8: Philosophy of Information, Pieter Adriaans and Johan van Benthem (eds).) Amsterdam: Elsevier. 33–51.)

B. Secondary

1. Dretske, Fred (1983) "Précis of *Knowledge and the Flow of Information.*" *Behavioral and Brain Sciences* **6(1):** 55-90.

2. Dretske, Fred (1990). "Putting Information to Work." In P. Hanson (ed.), *Information, Language, and Cognition* (112-124); with reply by Smith, Brian Cantwell (1990), "Putting Dretske to Work" (125-140). Vancouver: University of British Columbia Press.

3. Floridi, Luciano. Semantic Conceptions of Information. Stanford Encyclopedia of Philosophy.

    http://plato.stanford.edu/entries/information-semantic/

4. A collection of 19 papers on the philosophy of information, with many further links, is: Adriaans, Pieter & van Benthem, Johan, eds. (2008). *Philosophy of Information*. North Holland, which is available (for download) through the UofT library system at:

    http://simplelink.library.utoronto.ca/url.cfm/116073

VII • Classification   Oct. 26

1. Borges, Jorge Luis (1975). "The Analytical Language of John Wilkins." In Jorge Luis Borges, *Other Inquisitions*. University of Texas Press.

2. Bowker, Geoffrey C., and Susan Leigh Star (1999). *Sorting Things Out: Classification and Its Consequences*. MIT Press. Introduction, chapters 1-5 & 10.

3. Foucault, Michel (1970) The Order of Things: An Archaeology of the Human Sciences. Vintage Books. Pages xv-xxiv, 128-138, 157-162, 226-232.

4. Dupré, John (2006). "Scientific Classification." *Theory, Culture & Society* 23(2–3), 30–31.

5. Dupré, John (1993). *The Disorder of Things: Metaphysical Foundations of the Disunity of Science*. Harvard University Press. Chapter 1: 17–36.

VIII • Communication   Nov. 2

1. Innis, Harold (1951/2008). *The Bias of Communication*. Univ. of Toronto Press.

2. McLuhan, Marshall (1964). *Understanding Media*. New York: McGraw-Hill. Introduction and 3-107a.[20]

3. Hayles, N. Katherine (2012). *How We Think: Digital Media and Contemporary Technogenesis*. University of Chicago Press. Chapters 1-5.

— Fall Break —

---

[19]Don't worry about their formalism (i.e., the discussion on pages 7-15). You will want to look at their passages about the "helpfulness" of information, though, and about the circumstances in which one might need to use *representation* (15-18).

[20]Available on the U.of.T library system at:
http://books1.scholarsportal.info.myaccess.library.utoronto.ca/viewdoc.html?id=/ebooks/ebookso/tf/2009-12-01/8/0203995821

IX • Discussion of papers & skeletons — Nov. 16 & 23

X • [To be Decided] — Nov. 30

It is possible that previous weeks' discussions will have spilled over, and so this week may be absorbed into the foregoing. If it is free, however, we will choose a topic together. Some possibilities:

A. Digitality

1. Haugeland, John, Chapter 2 ("Automatic Formal Systems") of *Artificial Intelligence: The Very Idea*, Cambridge, MA: The MIT Press/A Bradford Book (1985), pp. 47–84. (New edition: 1989; I don't know whether the page numbers are the same.)

2. Goodman, Nelson, Chapter 4 ("The Theory of Notation") of *Languages of Art*, Indianapolis and New York: Bobbs-Merrill (1968), pp. 127–173.

3. Lewis, David, "Analog and Digital," *Nous*, **v**:3 (Sept. 1971), pp. 321–327.

4. Haugeland, John, "Analog and Analog," *Philosophical Topics* (Spring 1981); reprinted in J. I. Biro & Robert W. Shahan, (eds), *Mind, Brain, and Function: Essays in the Philosophy of Mind*, Norman, Oklahoma: University of Oklahoma Press (1982), pp. 213–225; and also as chapter 4 in Haugeland, John, *Having Thought: Essays in the Metaphysics of Mind*, Harvard Univ. Press (2000), pp. 75–88.

B. Cantwellian stuff…

1. (ms.) "Rehabilitating Representation"

2. (2002), "The Foundations of Computing", in Matthias Scheutz, ed., *Computationalism: New Directions*, MIT Press, 23–58.

3. (ms.) "The Nonconceptual World"

4. (ms.) "Introduction" to *Indiscrete Affairs, Vol. I.*

XI • Wrap-up — Dec. 7