HPSC0065 Philosophy of Information

Course Syllabus

2019-20 session | Dr Phyllis Illari | Email Address phyllis.illari@ucl.ac.uk

Course Information

Information is now a vitally important scientific concept, while changes in information and communication technologies have rapidly altered our personal and working lives. This course examines these changes. It looks at philosophical approaches to information, and the implications of the 'information revolution' for such issues as society, personal identity, and scientific knowledge.

Basic course information

Moodle Web site:	https://moodle.ucl.ac.uk/course/view.php?id=7468#section-11
Assessment:	1 essay (4,000 words)
Timetable:	www.ucl.ac.uk/timetable
Prerequisites:	None
Required texts:	See reading list for required reading each week
Course tutor(s):	Dr Phyllis Illari
Contact:	phyllis.illari@ucl.ac.uk
Web:	https://www.ucl.ac.uk/sts/people/dr-phyllis-illari
Office location:	22 Gordon Square, Room 1.2

Schedule

UCL Week	Topic	Date	Activity
6	The information revolution		Reading for class
7	The method of abstraction		Reading for class
8	Society: Organization and Trust		Reading for class
9	Personal identity		Reading for class, thinking about essay

10	Informational structural realism		Reading for class, choosing essay
11	Reading Week		No classes, work on essay plan
12	Knowledge		Reading for class, work on essay
13	Constructionism		Reading for class, work on essay
14	Mind and cognition		Reading for class, work on essay
15	Information ethics		Reading for class, work on essay
16	Society: acting technologies		Reading for class, work on essay

Assessments

Summary

	Description	Deadline	Word limit
Essay plan	Plan for feedback, including peer feedback, no grade	13 November 2020	2 pages
Essay	1 Essay, as discussed in class, 100% of final grade for course	4 January 2021 17.00	4,000

Assignments

Essays must be submitted via Moodle. Essay topics to be distributed on Moodle. In order to be deemed 'complete' on this module students must attempt the 4,000 word essay.

Specific Criteria for Assessment for this Module:

The departmental marking guidelines for individual items of assessment can be found in the STS Student Handbook.

Details of college and departmental policies relating to modules and assessments can be found in the STS Student Handbook www.ucl.ac.uk/sts/handbook

All students taking modules in the STS department are expected to read these policies.

Course-specific guidance to be presented and discussed in class.

Aims & objectives

Aims:

To introduce students to the information revolution; allowing them to explore the philosophical consequences of the information revolution for timely topics such as personal identity, society, and scientific knowledge. A key focus of the course is on situating even esoteric philosophical issues in a context in which they are societally significant.

The course will contribute to skills development as for all philosophical courses: clarity and rigour in assessing and constructing arguments, and ability to take part in such arguments orally and in writing.

Objectives:

By the end of this module students should be able to:

- Explain the information revolution, and a little of the recent history of information and communication technologies, with a particular focus on its ethical and societal significance.
- Understand some of the conceptual difficulties in defining information, in spite of its extensive usefulness in multiple areas of science and technology.
- Understand and explain some of the philosophical issues caused by the rapid technological change of the information revolution, such as how we should conceive of personal identity, society and knowledge.
- Understand, be able to explain and use, key concepts in philosophy of information including the information revolution, levels of abstraction, organisational concepts, personal identity, and information ethics.
- Construct clear and rigorous arguments concerning these topics, applied to real world cases.

Reading list

Best General Introductions:

See section on Moodle with Reading List links.

Lecture Readings:

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1 The information revolution

Essential Reading

- **James Beniger: The Control Revolution: Technological and Economic Origins of the Information Society, 1989 Harvard University Press, Ch 1 'Introduction'.**
- **Floridi: *The Ethics of Information*, OUP, 2013, Ch1 'Ethics after the information revolution'.**

Questions

1. What does information mean to you?
2. What kinds of technological change are intended in talking of the 'information revolution'? How do they compare with, for example, the technological change of the industrial revolution?
3. Is it really a revolution? In what sense?
4. In what ways are you a member of the new information society?
5. How is life different for those who cannot or do not participate in the new information society? Who are they?
6. How do you use search engines/information sites like Wikipedia/apps/etc? When do they *not* help?

Extra Reading
- Floridi: *The Fourth Revolution: How the Infosphere is shaping reality*, OUP, 2014, Chs 1 'Time hyperhistory' and 4 'Self-understanding: The four revolutions'.
- Anthony Beavers: In the Beginning Was the Word and Then Four Revolutions in the History of Information in H. Demir (ed), *Luciano Floridi's Philosophy of Technology: Critical Reflections*, Springer, 2011.
- Bynum: 'Philosophy in the information age', *Metaphilosophy*, 2010, 41(3) 420-442.
- James Beniger: *The Control Revolution: Technological and Economic Origins of the Information Society*, 1989 Harvard University Press (the rest of it!).
- Daniel Bell: *The coming of post-industrial society*, Basic Books, 1976.

2 The method of abstraction
Essential Reading
- **Floridi: *The Ethics of Information*, OUP, 2013, Ch 3 'The method of abstraction'.**

Questions
1. What kinds of things do we describe in terms of levels?
2. What's an observable? What's a level of abstraction?
3. What kinds of things can we describe using these new concepts?
4. What are the implications of thinking everything is described – and even interacted with – at some level of abstraction or other?

Extra Reading
- Herbert Simon: 'The Architecture of Complexity', in his *The Sciences of the Artificial*, MIT Press; 3rd Edition edition (31 Oct. 1996)
- The Π Research Network: *The Philosophy of Information: An Introduction*, published by the Society for the Philosophy of Information, 2013, Ch 2 'What is the philosophy of information today?' and Ch 1 'A quick history of the philosophy of information'.

3 Society: organization and trust
Essential Reading
- **Peter Galison: 'The Ontology of the Enemy: Norbert Wiener and the Cybernetic Vision', *Critical Inquiry*, Vol. 21, No. 1 (Autumn, 1994), pp. 228-266.**
- **Safiya Umoja Noble: *Algorithms of oppression: how search engines reinforce racism*, New York University Press: 2018, Ch 2.**

Questions
1. What is cybernetics? What were its core ideas?
2. What were the main influences on Wiener?
3. How are those ideas still influential?
4. What is an algorithm? How often are they involved in our lives?
5. What would it mean for algorithms to be 'objective'?

Extra reading
- Donna Haraway "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century," in *Simians, Cyborgs and Women: The Reinvention of Nature*. Routledge (1991)
- Frank Webster: *Theories of the information society*, Routledge, 2006, especially Ch 2 'What is an information society?'
- Floridi: *The Fourth Revolution: How the Infosphere is shaping reality*, OUP, 2014, Ch 8, 'Politics: the rise of the multi-agent systems'.
- Floridi: *The Ethics of Information*, OUP, 2013, ch 11 'Distributed Morality'.
- The Π Research Network: *The Philosophy of Information: An Introduction*, published by the Society for the Philosophy of Information, 2013, Ch 5 'Society'.
- Manuel Castells: *The rise of the network society*, Wiley-Blackwell, 2011. The Culture of Real

Virtuality (the rest).

4 Personal Identity

Essential Reading

- **danah boyd: It's Complicated: The social lives of networked teens, Yale University Press, 2014, Ch 1 'Identity'.**
- **Floridi: *The Fourth Revolution: How the Infosphere is shaping reality*, OUP, 2014, Ch 3, 'Identity onlife'.**

Questions

1. What are the biological and psychological criteria for personal identity? Do you think they capture personal identity?
2. What is an inforg? Are you an inforg? How could ICTs (Information and Communication Technologies) affect your identity?
3. What is the place of interpersonal relationships in the creation of personal identity?
4. What does narrative have to do with personal identity?

Extra Reading

- Sherry Turkle: *Alone Together*, Basic Books, 2011.
- Floridi: *The Ethics of Information*, OUP, 2013, ch 11, 'The informational nature of selves'.
- Floridi: *The Fourth Revolution: How the Infosphere is shaping reality*, OUP, 2014, Ch 5.
- The Π Research Network: *The Philosophy of Information: An Introduction*, published by the Society for the Philosophy of Information, 2013, Ch 15 'Personal identity'.
- Luciano Floridi The Construction of Personal Identities Online, *Minds & Machines* (2011) 21:477–479
- Soraj Hongladarom Personal Identity and the Self in the Online and Offline World, *Minds & Machines* (2011) 21:533–548
- Dave Ward Personal Identity, Agency and the Multiplicity Thesis, *Minds & Machines* (2011) 21:497–515
- Janice Richardson: The Changing Meaning of Privacy, Identity and Contemporary Feminist Philosophy, *Minds & Machines* (2011) 21:517–532
- Eric T. Olson: The Extended Self, *Minds & Machines* (2011) 21:481–495

5 Informational structural realism

Essential Reading

- **Floridi 2008, "A Defence of Informational Structural Realism", Synthese, 161(2), 219-253.**
- **Anthony Beavers: 'Historicizing Floridi: The Question of Method, the State of the Profession, and the Timeliness of Floridi's Philosophy of Information' *Etica and Politica*, XIII, 2011, 2, pp. 255-275.**

Questions

1. What does it mean to say that the world is made of information?
2. Could the world really be made of information?
3. How does this fit with Floridi's constructionism?
4. In what ways is this a realist view? In what ways is it not?

Extra Reading

- Erwin Schrodinger 'WHAT IS LIFE?' Based on lectures delivered under the auspices of the Dublin Institute for Advanced Studies at Trinity College, Dublin, in February 1943.
- The Π Research Network: *The Philosophy of Information: An Introduction*, published by the Society for the Philosophy of Information, 2013, Ch 3 'Naturalised information'.
- Floridi: *The Philosophy of Information*, OUP, 2011, Ch 15 'A Defence of Informational Structural Realism'.
- Floridi 2009, "Against Digital Ontology", Synthese, 168(1), 151-178.

- John Archibald Wheeler: 'INFORMATION, PHYSICS, QUANTUM: THE SEARCH FOR LINKS' in Reproduced from Proc. 3rd Int. Symp. Foundations of Quantum Mechanics, Tokyo, 1989, pp.354-368.
  https://jawarchive.files.wordpress.com/2012/03/informationquantumphysics.pdf

6 Knowledge
Essential Reading
- **Schafer: 'Information Quality and Evidence Law: a new role for social media, digital publishing and copyright law?' in Floridi and Illari (eds)** *The Philosophy of Information Quality*, **2014 Springer, pp217-38.**
- **Radder, Hans: 'Which Scientific Knowledge is a Common Good?' in** *Social Epistemology*, **2017, Vol.31(5), pp.431-450.**

Questions
1. What is knowledge? Why do we want it?
2. What kinds of technologies have changed the way we build knowledge lately?
3. Think about information, and knowledge. How are they related? Do you think one notion is more fundamental?
4. What does Floridi mean by 'integrated'? Do you think knowledge has to be integrated? Does it have to be 'accounted for'?
5. What would the sceptic say? Does it matter?

Extra reading
- Safiya Umoja Noble: *Algorithms of oppression : how search engines reinforce racism*, New York University Press: 2018, Chapter 3, 4, 5.
- The Π Research Network: The Philosophy of Information: An Introduction, published by the Society for the Philosophy of Information, 2013, Ch 8 'Knowledge'.
- Ghezzi, Chumber and Brabazon: 'Educating Medical Students to evaluate the quality of health information on the web' in Floridi and Illari (eds) *The Philosophy of Information Quality*, 2014 Springer, pp 183-99.
- The Π Research Network: *The Philosophy of Information: An Introduction*, published by the Society for the Philosophy of Information, 2013, Ch 9 'Science'.
- Floridi: *The Philosophy of Information*, OUP, 2011, Ch 12 'Semantic Information and the Network Theory of Account'.
- Kusch, M. 2002. Knowledge by Agreement. The Programme of Communitarian Epistemology. Oxford: Oxford University Press

7 Constructionism
Essential Reading
- **Lawrence Lessig:** *Code Version 2.0*, **Basic Books 2006, Ch 1 'Code is law'.**
- **Floridi:** *The Ethics of Information*, **OUP, 2013, Ch 8 'The constructionist values of** *homo poieticus*'.**

Questions
1. What is the infosphere? How is it created? Who or what controls it?
2. Is cyberspace completely free? How might it be restricted in hidden ways?
3. What does Floridi mean by poiesis'?
4. What is 'maker's knowledge'?
5. Why does Floridi say that philosophy is 'conceptual engineering' or 'conceptual design'?

Extra reading
- Floridi: 'A Defence of Constructionism: Philosophy as Conceptual Engineering', Metaphilosophy, Vol. 42, No. 3, April 2011, pp282-304.
- Federica Russo: 'The homo poieticus and the bridge between physis and techne' in H. Demir (ed), *Luciano Floridi's Philosophy of Technology: Critical Reflections*, Springer, 2011.

- Lawrence Lessig: *Code Version 2.0,* Basic Books 2006 (the rest!)

8 Mind and Cognition

Essential Reading

- **A. M. Turing: 'Computing Machinery and Intelligence',** *Mind***, 59, No. 236 (Oct., 1950), pp. 433-460**.
- **Andrew Pickering: The Cybernetic Brain, University of Chicago Press (15 Dec. 2011), Chapter 2, Ontological Theatre.**

Questions

1. What is Turing trying to do?
2. Why is it important? What does it help us understand?
3. What are we doing when we construe the mind as an information-processor? Is it?
4. Does that even make sense? How is it related to Pickering's idea of 'ontological theatre'?

Extra reading

- The Π Research Network: *The Philosophy of Information: An Introduction*, published by the Society for the Philosophy of Information, 2013, Ch 10 'Cognition'.
- Von Neumann: *The Computer and the Brain*, Yale University Press; 2nd Revised edition edition (1 Sept. 2000)
- Andrew Pickering: *The Cybernetic Brain*, University of Chicago Press (15 Dec. 2011)
- Floridi: *The Fourth Revolution: How the Infosphere is shaping reality*, OUP, 2014, Chs 6 'Intelligence inscribing the world' and 7 'Agency enveloping the world'.
- The Π Research Network: *The Philosophy of Information: An Introduction*, published by the Society for the Philosophy of Information, 2013, Ch 11 'Mind' and Ch 13 'Computation' (and possibly Ch 1: section 1.2 on Turing and 1.3 on Shannon).

9 Information ethics

Essential Reading

- **Floridi: *The Ethics of Information*, OUP, 2013, ch 2 'What is information ethics?' and ch 15 'Global information ethics'.**

- **Virginia Eubanks: *Automating Inequality*, St Martin's Press, 2018, Ch 3 'High-tech homelessness in the city of angels'.**

Questions

1. What is information as a resource, a product, or a target?
2. What does Floridi mean by the information cycle?
3. In what ways is Floridi's information ethics all-embracing?
4. How are people and social systems involved in the cycle of information?
5. How can the cycle of information go wrong?
6. Does it really make sense to promote the flourishing of information?

Extra Reading

- Manuel Castells: The rise of the network society, Wiley-Blackwell, 2011, Ch 5 'The Culture of Real Virtuality'.

- The Π Research Network: The Philosophy of Information: An Introduction, published by the Society for the Philosophy of Information, 2013, Ch 4 'Ethics'.

  Raphael Cohen-Almagor 'Content Net Neutrality – A Critique' in H. Demir (ed), *Luciano Floridi's Philosophy of Technology: Critical Reflections*, Springer, 2011.
- Volkman: 'Why information ethics must begin with virtue ethics' in Allo (ed.) Putting information first, 2011, Wiley-Blackwell, pp131-152
- Lucas: 'Levels of Abstraction and morality' in Demir (ed.) Floridi's Philosophy of Technology (Springer, Forthcoming)

10 Society: acting technologies

Essential Reading

- **Floridi: *The Ethics of Information*, OUP, 2013, ch7 'The morality of artificial agents'.**
- **Sherry Turkle: *Alone Together*, Basic Books, 2011, Chapter 3 'True Companions'.**

Questions

1. Is there a clear distinction between when a human being acts and when a piece of technology acts?
2. What are artificial agents?
3. In what sense are algorithms unbiased? In what sense might they still be biased?
4. Should we become emotionally attached to artificial agents? What might go wrong?

Extra Reading

- Robert Sparrow: 'Killer Robots', Journal of Applied Philosophy, Vol. 24, No. 1, 2007, 62-77.
- E Schrödinger: *What is life? The physical aspect of the living cell and mind*, CUP, 1944
- The Π Research Network: The Philosophy of Information: An Introduction, published by the Society for the Philosophy of Information, 2013, Ch 5 'Society'
- Google's self-driving car test: http://www.google.co.uk/about/careers/lifeatgoogle/self-driving-car-test-steve-mahan.html

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Popular reading:

These are good quality popular books that might help you understand what is so exciting about studying information, as well as being resources for wonderful examples for thinking about information.

- Hans Christian von Baeyer: Information: The new language of science, Phoenix (2004)

- Heather Brooke: The revolution will be digitized: dispatches from the information war, William Heinemann (2011)

- James Gleick: The Information: A history, a theory, a flood, Fourth Estate (2011)

- Seth Lloyd: Programming the Universe: a quantum computer scientist takes on the cosmos, Vintage (2007)