Hong Kong Institute for the Humanities and Social Sciences
The University of Hong Kong

Technology and Everyday Life in Modern East Asia: Artefact, Knowledge, Practice and Infrastructure

Syllabus for Course IHSS6003 at HKU, Jan –April, 2019

Venue: Room 201, 2/F, May Hall, HKU
Time: Thursdays 2:30-4:30 PM (except Feb 15, see details below)

Instructor: Prof. Angela K.C. Leung

This course explores new ways of understanding modern East Asian history from the 19th to the 20th centuries by focusing on changing technological engagement in people' s everyday life. It looks at East Asia as an inter-connected set of sociotechnical systems – webs of materials, practices, socio-economic relationships – where technology and society co-evolved. Instead of explaining the modern history of East Asia as a process of one-way transfer of modern, Western technology as an autonomous body of practices and knowledge, the seminar examines how East Asian societies - including China, Japan, Korea, Taiwan, Hong Kong, Vietnam – chose, modified, innovated, maintained, appropriated, rejected various technologies in their quest for modernity. How did engagement with modern technology change modern East Asian societies? And how did modern East Asian societies modified new technological practices and artefacts, and produce new knowledge? We shall look at both historical sources as well as current theories to tackle these questions.

To unpack the history of technology in the modern East Asian context, this seminar investigates technology's various constituents - artefacts and materials, practices and skills, encoded knowledge and ideas, social groups and political institutions involved, situating them in the region's environment and infrastructures.

This course is a **research & training seminar** designed to enable students to develop a critical sense of the study of modern technology, to analyse and discuss collectively in class, and to deploy these thoughts in a substantial piece of academic work

The seminar will meet regularly during the spring semester of 2019. Students will be asked to read theoretical and empirical essays (about 100 pages per week) assigned that they will discuss in class. They will also need to present a short think piece based on the readings and their own projects, and submit a final essay on a topic related to one of the main themes of the seminar that they will also present in the last class. Students should discuss the topic of their final essay with the teacher before March.

.

Requirements and Evaluation

The requirements of this class are:

1. Students should attend all classes, read all require readings before coming to class so that they can actively take part in the discussion.
2. Each student should submit a thoughtful **think-piece** and a **final essay**. Think pieces need to be uploaded to Moodle. For the presentation of the think-piece, students are free in their media choice (video, ppt, comic, blog-writing, images). The presentation of the think-piece will be on **March 21**.
3. Complete a written assignment that will include 2 (two) components:
    a. A literature review (presenting the state of the field on your chosen topic for the final essay) to be uploaded to Moodle by Thursday **March 28, 10PM. This critical analysis should be no longer than** 3 pages. Select at least one item from the bibliography of the syllabus with other related academic publications related to your study.

    b. A final essay on a research project. Choose a case elaborated in at least one framework out of the four discussed in class (artefact, knowledge, practice, infrastructure). This final essay should be uploaded to Moodle by Monday, **May 6, 10 pm** and should be no longer than 15 double-spaced pages (including references, Times New Roman 12 pt., 1-inch margins, for references use "author year: page number" format, e.g. 2006:14).

    c. Oral presentation of your final essay will be on April 25.

We will discuss with you the topic and other details of the final essay later in the course.

SUBMIT ON TIME: NO LATE SUBMISSION OF ASSIGNMENTS WILL BE ACCEPTED.

Your performance in this course will be assessed according to the following criteria:

Participation (active participation in discussions): 25%
Presentation of the think piece: 15 %
Presentation of project: 20 %
Final Essay: 40 %

Structure and Themes

**** Primary sources will also be discussed in class. The sources will be uploaded to Moodle.**

**** All readings will be uploaded to Moodle in December.**

1. Jan 17 Introduction 1: The sociotechnical system

We will first look at the relations between technology and society by studying together classical theoretical studies on technological systems addressing the inter-dependence, or co-evolvement of technology and society. We then look at how such discussions are relevant to East Asian societies and history. Why technology should not be considered as an autonomous body of knowledge and practice that is applicable everywhere. We will discuss why the assumption that modern Western technology has been simply "transferred" to, or copied by backward Asian societies since the 19th century was a simplification of a complex historical process. We will try to appreciate why technology and its use can be powerful conceptual tools that allow us to have a deeper understanding of the history and culture of a society.

Readings:

- Hughes, Thomas. 1987. "The evolution of large technological systems" in *The Social Construction of Technological Systems.* W. Bijker et al. eds. MIT Press: 45-76.

- ---------- 1986. "The Seamless Web: Technology, Science, Etcetera, Etcetera". *Social Studies of Science.* 16: 281-92
- Francesca Bray. 2013. "Introduction: The Power of Technology" in *Technology, Gender and History in Imperial China. Great Transformation Reconsidered.* Routledge: 1-35
- Dagmar Schaffer. 2011 "Introduction" in *The Crafting of the 10,000 Things. Knowledge and Technology in 17th-century China.* University of Chicago Press: 1-19.

2. Jan 24. Theories on technology

We will discuss in the second class the various theoretical aspects of technology. How do we deconstruct the notion of technology? How do we unlearn conventional meanings of technology and take a fresh look at the notion to make it conceptually productive in its application.

Readings:

- Ingold, Tim. 2000. "Tools, minds, and machines: An excursion in the philosophy of technology" chapter 15 of *The Perception of the Environment: Essays on Livelihood, Dwelling and Skill*. Pp. 294-322.
- Bijker, Wiebe. 2010. "How is technology made? - That is the question!" *Cambridge J of Economics*, 34: 63-76
- Edgerton, David. 1999. "From innovation to use: ten eclectic theses on the historiography of technology", *History and Technology* 16 (2), 111-36
- Malafouris, Lambros. 2008. "At the Potter's Wheel: An argument for material agency". *Material Agency: Towards a non-anthropocentric approach.* C. Knappett and L. Malafouris eds. Springer: 19-36.
- Marx, Leo. 2010. "Technology: The emergence of a hazardous concept". *Technology and Culture* 51/3: 561-177.

3. Jan 31. Technology in cultural (Asian) contexts

In this class we shall study technology in specific Asian contexts: history, state, and society.

Readings:

- Schafer, Dagmar and Popplow, Marcus. 2015 "Technology and innovation within expanding webs of exchange" *The Cambridge World*

History. Vol.5 Expanding Webs of Exchange and Conflict, 500 Ce-1500 Ce. Cambridge University Press: 309-337.

- Eyferth, Jacob. 2010. "Craft knowledge at the interface of Written and Oral Cultures". *EASTS* 4: 185-205.
- Bray, Francesca. 2002. "Towards a critical history of non-Western technology", in Tim Brook & Gregory Blue eds., *China and Historical Capitalism: Genealogies of Sinological Knowledge.* Cambridge University Press: 158-209.
- Gooday, Graeme and Low, Morris. 1998. "Technology transfer and cultural exchange. Western scientists and engineers encounter. Late Tokugawa and Meiji Japan". *Osiris* 13: 99-128

Feb 7 No class: Chinese New year

4. Feb. 14 Artefacts 1: Making a new artefact

In this class we look at a key component of technology: artefact. How do we study technology through the emergence and construction of a new artefact? How and why is it made the way it is?

Readings:

- Pinch, Trevor and Bijker, Wiebe. 2012. "The social construction of facts and artifacts: or how the sociology of science and the sociology of technology might benefit each other." *The Social Construction of Tehnological Systems*. MIT Press, pp. 11-44 (especially after p. 28)
- Steele, William. 2014, "Mobility on the Move: Rickshaws in Asia", *Transfers* 4 (3):88-107.
- Lee, Jun. 2013. "Invention without Science: Korean Edisons and the changing understanding of technology in colonial Korea", *Technology and Culture* 54:782-814.
- Mullaney, Thomas. 2016. "Controlling the Kanjisphere: The Rise of the Sino-Japanese Typewriter and the Birth of CJK". *JAS* 75 (3): 725-753.
- Rhoads, Edward. 2012. "Cycles of Cathay: A History of the Bicycle in China" *Transfers*2 (2): 95-120

Feb 21 No class

5. Feb 28. Artifacts 2: Transforming traditional artefacts

In this class, we look at how "traditional" East Asian artefacts are being "transformed" into new, modern ones. Do these new artefacts retain their traditional "East Asianness"? Do they become different things? How "new" are they? What new values are created by such technology?

Readings:

- Cwiertka & Moriya. 2008. "Fermented soyfoods in South Korea. The industrialization of tradition" in Du Bois, Tan & Mintz *The World of Soy.* NUS: 160-181
- Lee, Victoria. 2018. "The Microbial Production of Expertise in Meiji Japan", *Osiris* 33:171-190.
- Kloos, Stephan. 2017. "The pharmaceutical assemblage. Rethinking Sow Rigpa and the Herbal Pharmaceutical Industry in Asia". *Current Anthropology* 58/6: 693-717.
- Eyferth, Jacob. 2006. "Socialist Deskilling: The struggle over skills in a rural craft industry, 1949-1965" in Eyferth, Jacob ed., *How China Works. Perspectives on the 20th-century industrial workplace. Routledge:* 41-58

Read also:

- Lee, Victoria. 2015. "Mold cultures: traditional industry and microbial studies in early 20th century Japan", in P.D. Kingsland, *New Perspectives on the History of Life Sciences and Agriculture. Archimdedes,* v. 40:231-252

March 7: reading week

6. March 14 Knowledge and practice 1

Agriculture and mining

- Bray, Francesca. 2008. "Science, technique, technology: passages between matter and knowledge in imperial Chinese agriculture, *BJHS* 41 (3): 319-344.
- Schmalzer, Sigrid. 2016 "Chinese peasants: "experience" and "backwardness"", in *Red Revolution, Green Revolution. Scientific Framing in Socialist China*. University of Chicago Press: 100-128.
- Ko, Dorothy. 2017. "Yellow Hill Villages: The Stonecutters", in *The Social Life of Inkstones.* University of Washington Press: 49-78.

- Schmalzer, Sigrid. 2002 “Breeding a better China: Pigs, Practices, and Place in a Chinese County, 1929-1937” *Geographical Review,* v. 92, v.1: 1-22
- Flitsch, Mareile. 2008. “Knowledge, embodiment, skill and risk: anthropological perspectives on women’s everyday technologies in rural Northern China”. *East Asia Science, Technology and Society.* 2: 265-288

Also read:

- 杜新豪 2018 : “施肥技術的發展與制約” in 《金汁: 中國傳統肥料知識與技術實踐研究 10-19 世紀》. 中國農業科學技術出版社: 144-167

7. March 21 presentation of think pieces

8. March 28 knowledge and practice 2

Medicine and dietetics

Readings:

- Lei, Sean HL. 2016. “Science as a verb: scientizing Chiense medicine and the rise of Mongrel Medicine” in *Neither Donkey nor Horse.* University of Chicago Press: 141-66
- Leung, Angela. 2008, “The business of vaccination in 19th-century Canton”, *Late Imperial China*29 (1): 7-39.
- Andrews, Bridie. 2001 “From case records to case histories: the modernisation of a Chinese medical genre, 1912-1949” in E. Hsu ed., *Innovation in Chinese Medicine.* Cambridge U Press: 324-336.
- Tsing, Anna. 2015. Chapter 16 “Science as translation” in *Mushroom at the end of the World.* Princeton University Press: 217-225
- Farquhar, Judith & Lai, Lili. 2014. “Information and its practical other: crafting Zhuang nationality medicine”. *East Asian Science, Technology and Medicine. An International Journal.* 8:417-437

Also read:

- Leung, Angela. Forthcoming. “To build or to transform vegetarian China: Two Republican projects”. *Moral Foods.* Leung and Caldwell eds. University of Hawaii Press.

- Fujimura, J. (1999) "Transnational Genomics, Transgressing the Boundary between the 'Modern/West' and the 'Pre-modern/East'" *https://web.stanford.edu/dept/HPS/RethinkingSciCiv/etexts/Fujimura/Transnational%20Genomics.html*

Students should submit their literature review on March 28.

9. April 4 Infrastructure: East Asian networks and connectedness

We shall study in this class the various infrastructures that affect and are created by technology: material, institutional, organizational, politico-economic. How unique are these East Asian infrastructures?

Readings:

- Larkin, Brian. 2013. "The politics and poetics of infrastructure", *Annual Review of Anthropology.* 42:327-43
- McDonald, Kate. 2014. "Imperial Mobility: Circulation as History in East Asia under Empire". *Transfer* 4 (3): 68-87
- Lavelle, Peter. 2015. "Agricultural improvement at China's First Agricultural Experiment Stations" in D. Phillips & S. Kingsland eds., *New Perspectives on the History of Life Sciences and Agriculture.* Springer: 323-344.
- Mazumdar, Sucheta.1998. Chapter 7 "Divergent outcomes: the Sugar Industry in Guangdong and Taiwan", in *Sugar and Society in China. Peasants, Technology, and the World Market.* Harvard-Yenching Institute Monograph Series: 338-386.
- Misa, T. & Schot, J. 2005. "Inventing Europe: Technology and the hidden integration of Europe". *History and Technology.* 21/1: 1-19.

Also read:

- Burns, Susan. 2017. "Japanese patent medicine trade in East Asia; Women medicines and the tensions of Empire". In Leung and

Nakayama eds., *Gender, health and Medicine in Modern East Asia.* HKU Press: 139-165.

- Simone, AbdouMaliq. 2004. "People as infrastructure: Intersecting fragments in Johnanesburg". *Public Culture* 16/3:407-429.

April 11 No class.

10. April 18 Everyday technology and East Asian economy

In this class, we shall discuss the dialectics between technology and economy in East Asia, especially in the historical context of the 19th to the 21st centuries. To what extent is technological dynamism in terms of innovation is critical for economic development in East Asia? What kind of innovation are we talking about? What other kinds of technological engagement are more "natural" to East Asian cultures and societies.

Readings:

- Ian Inkster. 2007. "Technology in world history: cultures of constraint and innovation, emulation, and technology transfer", *Comparative Technology Transfer & Society* 5: 108-127
- Kaoru Sugihara. 2003. "The East Asian Path of economic development", in G. Arrighi, T, Hamashita, A. Seldon eds., *The Resurgence of East Asia, 500, 150 and 50 Year Perspectives.* Routledge:78-123
- Martin Fransman. 1985. "Conceptualizing technical change in the third world in the 1980s: an interpretive survey". *J of Development* 21 (4):572-652
- Michele Bolton 1993 "Imitation versus Innovation: Lessons to be learned from the Japanese" *Organizational Dynamics.*21 (3):30-45

11. April 25 Presentation of final paper

Students should submit the final paper on or before 10 PM, May 6.