

COURSE SYLLABUS

ARCHA6927-1

Monday 11-13h

Fall 2024

Science and Technology Studies (STS)

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COURSE DESCRIPTION

The Science and Technology Studies (STS) tradition 'flourished' in the 1980s in the aftermath of the structuralism wave and generated new concepts and methodologies for the understanding of innovation and technological change. In the past two decades STS, and in particular Actor-Network-Theory (ANT), gained popularity among researchers in the fields of design, planning and architecture studies.

The aim of this course is to introduce the students to research techniques from Science and Technology Studies (STS) that will equip them with analytical and narrative tools to account and make sense of technological developments in cities.

We will:

- ⇒ provide an introduction into STS and will discuss critically how specific STS methods, concepts and insights can be relevant for the design and planning disciplines. We will focus on key concepts such as innovation, creativity, success and failure, controversies, object-oriented politics, traceability.
- ⇒ examine closely recent attempts to extend the methods of STS and ANT into the field of design, architecture, planning and urban studies.
- ⇒ provide a crash course on creative writing for urban/design scholars. We will hone our writing and critical thinking skills based on introspection, reflection and 'slow' observation of design experiences and urban processes.

To be a savvy 'reflective practitioner' in any field, you will need to be able to reflect critically on issues of innovation, creativity, success and failure, the agency of design objects and urban artefacts, and technological processes and networks. The course welcomes students: a) with an interest in architectural and urban technologies of different type and scale; b) willing to engage in reflection on their own experiences as designers and urban dwellers and to experiment with different writing techniques; c) curious about relational perspectives to design and cities.

FORMAT

The course will focus on discussion and creative/experimental writing. There will be 2 types of sessions:

1. The discussion sessions will typically consist of a presentation by the Professor followed by discussion organized around a reading (typically 1 chapter of 20-30pages from the reading list) or a film screening.
2. The atelier d'écriture sessions will include a writing exercise: all students in the class are invited to write 1 page (300-500w) on a particular topic and bring their work in class. This *atelier*-type sessions follow a method developed by Bruno Latour that consists in writing a short piece in response to a topic and analyze closely the texts by extracting implicit theories about the phenomena discussed. This approach is based on the assumption that 'thinking *follows* and does not *precede* writing'. We will study different narrative approaches that might be useful for urban/architectural researchers, will focus on the 'art of description' and will practice different writing techniques.

In class each paper will be read out loud and then analyzed collectively (through a careful 'dissection' of both the specific arguments and the writing style). In the discussions, we will explore the performativity of writing and in particular, the role of description as a type of narrative that is never neutral but always holds implicit theories of the phenomena under scrutiny. The atelier sessions will act as a 'surgery' of different writing styles and narrative techniques. This will be an opportunity to reflect on the mechanics of writing and the countless surprises generated by the material act of writing. The seminar includes 4 *ateliers d'écriture* in total: 'mundane artefacts', 'designing', 'dwelling' and 'tracing cities'.

ASSIGNMENTS AND GRADING

Participation in weekly discussions and in the *ateliers d'écriture* will be essential to the success of this course. The main assignment is a final project presented in the form of an essay, story, ethnographic account, interactive mapping. It should feature the analysis of one technology, artefact or innovation process in the field of architecture, city planning or urban design. Your text should trace the development of the chosen technology (history of invention, genealogy, use), elaborate on a typology with a range of variations, unpack the materiality and modalities of use as well as the different modes of human engagement and experiences. You should make an argument based on secondary materials (images, texts, archival materials, news reports) and first-hand observations, original sketches, photographs, maps, interviews, ethnographic site

visits. You should select a writing style that better suits your argument – be creative! Detailed instructions will follow.

The following milestones are important to put the project together:

1. Select the topic and draft an initial proposal (1 page) including a discussion of themes, initial key sources and empirical plan for your final essay. Reflect on possible visuals and the writing style. Please, submit this plan directly to Albena by 30 October 2024, no matter how tentative you think it is. Your essay may take off from a syllabus topic, developing it in more detail or it can complement the syllabus by generating other topics. Individual meetings will be held in the week of 11 November 2024.
2. Further feedback on the progress of research and writing will be provided in November upon request.
3. The final paper (10 pages excluding references) is due by **18 December 2024**. No matter what your topic is, your paper needs to make some use of a subset of seminar readings and writing techniques.

LEARNING OUTCOMES

Upon successful completion of this course, you will:

- ⇒ become familiar with the analytical vocabularies of STS and will be able to confidently discuss concepts and methods from this field and put them in dialogue with architecture, planning and urban studies.
- ⇒ gain extensive knowledge about technological innovation, failure and success, and the role of technology in urban life which will inform further your research agenda and design or planning practice.
- ⇒ advance your understanding of the current technological developments in cities and the conditions of urban life through a range of methods that inspire careful observation, tracing and description applied in your final project.
- ⇒ develop and fine-tune your writing and critical thinking skills in the sessions '*atelier d'écriture*' through the writing of a series of short and experimental texts.

SCHEDULE

Week 1 (9 Sept): INTRODUCTION & PRESENTATION OF THE COURSE

Introduction of the Course. Introduction to the Method of the '*Atelier d'écriture*'. 'The Tale of the Two Writers'

Please, prepare 1-2 slides to introduce yourself, your interests, and expectations from this course.

Week 2 (16 September): STS: EPISTEMOLOGICAL OFFERINGS

Plan of the session: This session will outline the key epistemological offerings of STS for Architecture and Urban Studies. It will introduce key insights from Sociology of Technology and will discuss their relevance and limits for the analysis of cities and architectural design. We will present in particular key arguments from the work of Bruno Latour (one of the founding figures of STS): 'We Have Never Been Modern', 'There is no Society', 'Follow the Actors', 'Give me a Gun and I will Make All Buildings Move'.

Readings

Compulsory:

Latour, B and Yaneva, A. (2008) 'Give me a Gun and I will Make All Buildings Move: An ANT's View of Architecture', In Geiser, Reto (ed.), *Explorations in Architecture: Teaching, Design, Research*, Basel: Birkhäuser, pp. 80-89.

Optional:

Yaneva, A. (2022) *Latour for Architects*, Oxon and New York: Routledge. OA: <https://www.routledge.com/Latour-for-Architects/Yaneva/p/book/9780367348632>

Latour, B. (2003) 'On using ANT for studying information systems: a (somewhat) Socratic dialogue', In *The Social Study of Information and Communication Study*, edited by C. Avgerou, C. Ciborra, and F.F. Land, Oxford University Press, pp.62-76, 2004 [Republished in Livres/Books (XII)]

Week 3 (23 September): MUNDANE ARTEFACTS

[ATELIER D'ECRITURE]

Plan of the session: This session will discuss the socio-technical approach by focusing on the role of objects and artefacts in social life. We will reflect on concepts and descriptive approaches used by the sociology of mundane artefacts (the example of the Berlin Key). We will focus on the concept of 'mediation' and 'delegation' of action. The writing exercise will help us understand the difference between 'mediator', 'intermediary', 'script', 'prescription', 'affordance', 'program of action' and 'anti-program'.

Assignment for the atelier: Describe a situation of using an object, artifact, device, or technology. Focus on its agency and relational capacity. Unpack the modalities of engagement with it, interactions and transactions. Try to be specific, base your text on experience (personal or collective), NOT on general reflections on the role of objects in design and dwelling practices. **Send your text (500w max) directly to Albena (without sharing it with anyone else) by the 21st of September (5pm).**

Readings

Compulsory:

Latour, B. (1991) 'The Berlin Key or How to Do things with Words', In P.M. Graves-Brown (ed) *Matter, Materiality and Modern Culture*, Routledge, London pp. 10-21.

Optional:

Gibson, James J. (1979) 'The Theory of Affordances'. *The Ecological Approach to Visual Perception*, Boston: Houghton Mifflin. (focus on 'affordance' pp. 127-128 and pp.133-134)

Akrich, M. (1992) 'The De-scription of Technical Objects', In *Shaping Technology/Building Society: Studies in Sociotechnical Change*, eds. W.E. Bijker & J. Law, pp. 205– 224. Cambridge, MA: MIT Press. (focus on 'script' pp201-211)

Week 4 (30 September): INNOVATION AS A SOCIAL PROCESS

Plan of the session: This session will discuss the socio-technical approach to innovation focusing on the Social Constructivist perspective and The Actor-Network-Theory perspective. Drawing on a range of examples, we will demonstrate how society is built by things - IT technologies, trains, telegraph cables, cars, but also buildings and infrastructure. Different technologies from ordinary bicycles, through to Bakelite and bulbs, and to advanced technologies will be discussed, the process of innovation scrutinized, and the concept of 'project' and 'technological failure' unpacked.

Readings

Compulsory:

Bijker, Wiebe E. (1995) *Of Bicycles, Bakelite, and Bulbs: toward a Theory of Sociotechnical Change*, Cambridge: MIT Press; Chapter 2, 'King of the Road: The Social Construction of the Safety Bicycle', pp. 19-100 [focus on 'relevant social groups' pp. 19-53]

Optional:

Akrich, M, Callon, M. and B. Latour (2002) 'The Key to Success in Innovation, Part I: The Art of Interestment', In *International Journal of Innovation Management* Vol. 6, No. 2 (June), pp. 187–206.

Latour, B. (1993) 'Ethnography of a "High-tech" Case: About Aramis', In Pierre Lemonnier (editor) *Technological Choices -Transformations in Material Culture since the Neolithic*, Routledge and Kegan Paul, pp.372-398.

Week 5 (7 October): TECHNICAL FAILURE

Plan of the session: This session will discuss success and failure in design. It will draw on studies of historians of technology on the diversity of everyday objects and the evolution of technology in terms of failure and success. We will also discuss the importance to study unsuccessful projects with the same degree of attention as the successful ones, and their way of coming into being, whether they turn into utopian dreams or objects.

Assignment: Read Donald Norman's text and think how the concept of 'psychopathology of everyday things' applies to architectural and urban design. Extract key ideas from this book on the requirements for good design: visibility, affordance, mapping, feedback, etc. We will conduct a visual experiment. During this week on campus, please, think about mistakes and failures related to the built environment. Take 1 picture based on your experience or find a picture on internet that illustrates bad design, mistakes, failures, psychopathologies of architectural/urban design. **Please, send the picture directly to Albena (without sharing it with anyone else) by the 5th of October (5pm).**

Readings

Compulsory:

Norman, D. (1990) *The Design of Everyday Things*, New York: Doubleday; Chapter 1 'The Psychopathology of Everyday Things', pp. 1-34. Optional Chapter 4 'Knowing What to Do', pp. 81-105.

Optional:

Petroski, H. (1994) *Design Paradigms: Case Histories of Error and Judgment in Engineering*, Cambridge: Cambridge University Press, Chapter 10, pp.166-180.

Petroski, H. (1992) *The Evolution of Useful Things*, NY: Vintage Books, A division of Random House, Inc.; Chapter 2 'Form Follows Failure' and Chapter 14 'Always Room for Improvement'.

Blake, P. (1977). *Form follows fiasco: Why modern architecture hasn't worked*. Boston: Little, Brown.

Wolfe, T. (1981). *From Bauhaus to our house*. New York: Washington Square Press: Pocket Books.

Week 6 (14 October): DESIGN *qua* Verb

[ATELIER D'ECRITURE]

Plan of the session: This session will shift the attention from design as product, to design as practice. This will require tracing ethnographically the complex socio-spatial coordinates of design venture through the daily work of architects, planners

and their technologies, as well as producing narrative and visual accounts of the contingency of design practice. We will reflect on the use of ethnography as a method for tracing architectural and planning processes.

Assignment for the atelier: Describe your process of design. Try to capture design *qua* verb, or, designing: Where are you? What do you do? Who else is there in addition to you? What happens in the spur of the moment? Who participates and how? Who acts? What are the different events, temporalities, and spaces? Try to be specific, base your text on your own experience or the observation of another designer/creative practitioner, NOT on general reflections on the process of design/planning. **Send your text (500w max) directly to Albena (without sharing it with anyone else) by the 12th of October (5pm).**

Readings

Compulsory:

Sennett, R. (2008) *The Craftsman*. New Haven, CT: Yale University Press; Chapter 9 'Quality-Driven Work', pp. 241-267. focus on "The Janus Face of Obsession: A Story of Two Houses", pp. 252-263.

Optional:

Till, J. (2008) 'Three Myths and One Model', In *Building Material* 17: 4-10.

Yaneva, A. (2005) 'Scaling Up and Down: Extraction Trials in Architectural Design', In *Social Studies of Science*, 35(6): 867-894.

Week 7 (21 October): DESIGN ARCHIVE *qua* VERB

Plan of the session: This session will shift the attention from archive as a source, to archive as practice. We will examine the situated and local practices of arranging, cataloguing and taking care of archival objects in architecture and how they all happen to produce larger structuring effects in collections. We will address critically issues of architectural legacy and the traditional understandings of star-authorship, placing the architect or the curator in the limelight of History. We will advocate a more comprehensive approach to archiving that includes a range of unheard voices - both human and nonhuman.

Assignment: this week we will reflect critically on the afterlife of architectural objects, and we will conduct a visual brainstorming on archiving practices. Think about the different forms of archiving in architecture and the different types of collections and archives we assemble (professional, amateur, personal, institutional, etc.). Take 1 picture or find a picture on internet that illustrates a specific form of archiving in architecture/urban design. **Please, send the picture directly to Albena (without sharing it with anyone else) by the 20th of October (5pm).**

Readings

Compulsory:

Wigley, M. (2005) 'Unleashing the Archive', In *Future Anterior: Journal of Historic Preservation, History, Theory, and Criticism* 2 (2): 10-15.

Yaneva, A. (2020) *Crafting History: Archiving and the Quest for Architectural Legacy*, Ithaca and London: Cornell University Press; Chapter 2 "Architecture and the Fever of Archiving" pp. 42-57 [Focus on section "Archiving in Design Practice" pp. 42-48 and then section "Toward an Anthropology of Architectural Archiving", 55-57; optional - Introduction: 'The Secret Life of Architectural Objects', pp.1-24.]

Optional:

Derrida, J. (1995) 'Archive Fever: A Freudian Impression.' Translated by Eric Prenowitz. In *Diacritics* 25 (2): 9-63.

Week 8 (28 October): OBJECT-ORIENTED POLITICS

Plan of the session: The session will discuss issues around politics of infrastructure and object-oriented politics. To prepare you should read the essay of Winner (1980). In class we will watch the documentary *Misleading Innocence: Tracing What a Bridge Can Do*, CCA (2014). We will debate the following two questions: 1. Is the film *Misleading Innocence* a good presentation of Landon Winner's argument on the politics of artefacts (if so, why? if not, why?) 2. If you were commissioned to do this documentary, how would you do it and how would you approach the theme of politics of architecture?

Readings

Compulsory:

Winner, L. (1980) 'Do Artifacts have Politics?', in *Daedalus*, Vol. 109, No. 1 (Winter), 121-36. (focus on pages 121-128)

Optional:

Jaquē, A. (2020) *The Superpower of Scale*. New York: Columbia University Press; Chapter 5: 'Politics Do Not Happen in Squares', pp. 168-182.

Barry, A. (2001) 'Demonstrations: Sights and Sites' (Chapter 8), In *Political Machines*, London & New York: The Athlone Press, pp. 175-197.

Week 9 (11 November): DWELLING *qua* VERB

[ATELIER D'ECRITURE]

Plan of the session: This session will shift the attention from the functionalist concept of 'use' (and 'user') to using/inhabiting/dwelling as a process. We will develop an understanding of dwelling as the process of active settling in, transforming, appropriating, adjusting, and living with the varying materiality and programs of a building/urban environment. 'Dwelling' will be unpacked here as the activity of worldmaking through active participation in the shaping of material form through inhabitation.

Assignment for the atelier: Write a mini photo-essay to describe how you inhabit a space (domestic, university, leisure, public). Talk us through the process of 'dwelling': What happens? Who is there? What/who acts, interacts, transacts? In what times? Where? How? Gather evidence and add visuals in a smart way. Use your advanced design skills to account for different dwelling processes! **Send your text (500w max) directly to Albena (without sharing it with anyone else) by the 9th of November (5pm).**

Readings

Compulsory:

Ingold, T. (2000) 'Building, dwelling, living: How animals and people make themselves at home in the world', In *Perception of the Environment: Essays on Livelihood, Dwelling and Skill*, London: Routledge, pp. 172-188. (focus on what Ingold calls the "dwelling perspective" – pp. 176-178; the concept of Umwelt from Jakob von Uexküll, the example of the oak tree; read also the last section "The House as Organism" pp 187-188.)

Optional:

Brand, S. (1994) *How Buildings Learn: What Happens after They're Built*, New York: Viking; Chapter 'The Study of Buildings in Time', pp. 427-450.

Strebel, I. (2011) 'The living building: Towards a geography of maintenance work', In *Social & Cultural Geography*, 12(3), pp. 243-262.

Week 10 (18 November): TRACING CITIES

[ATELIER D'ECRITURE]

Plan of the session: This session will discuss a pragmatist approach for the study of cities. We will argue that a better understanding of cities could be gained by literally keeping our compass sights on the paths through the city, following the routes that link humans with the material and natural world, the subjective with the objective, the built with the unbuilt, the small with the big.

Assignment for the atelier: To prepare for the session, please 1) Read selected parts from Sorkin or Latour (details below); 2) Extract key arguments on the authors' understanding of the material culture of cities and urban technologies. Pay attention to Sorkin's way of writing about NYC and Latour and Hermant's writing about Paris; 3) Choose one city or neighborhood to describe/trace. Stroll there for 20mins; 4) Write a mini essay à la Sorkin or à la Latour & Hermant. **Send your text (500w max) directly to Albena (without sharing it with anyone else) by the 16th of November (5pm).** The best essays will be read in class.

Readings

Compulsory:

Sorkin, M. (2009) *Twenty Minutes in Manhattan*, New York: Reaktion books; Chapter 'The Stairs' pp. 9-67 (focus on pp. 9-29) or 'The Stoop', pp. 67-79.

Latour, B. & E. Hermant (1996) *Paris, Invisible City*, Paris: Les empêcheurs de penser en rond. [Read 'Distributing', pp 62-71; <http://www.bruno-latour.fr/virtual/index.html>]

Optional:

Calvino, I. (1974) *Invisible Cities*, New York: Harcourt Brace Jovanovich.

Week 11 (25 November) – PRESENTATIONS OF FINAL PROJECTS