AR-517

Data centers: architecture,environment,information

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Cursus	Sem.	Type
Architecture	MA2, MA4	Opt.

Language of teaching	English
Credits	3
Session	Summer
Semester	Spring
Exam	During the semester
Workload	90h
Weeks	12
Hours	**2 weekly**
Courses	2 weekly
Number of positions	

Summary

This seminar aims to investigate the prehistory of the building type of our century: the data center. Through weekly readings and discussions, we will investigate how apparently immaterial regimes of information turned nature into data through a series of built artifacts since the 19th century.

Content

At least since the eighteenth century, information has become essential to manage large-scale enterprises, from corporations to empires, by anticipating and reducing risks. Measuring the dangers of the modern world, however, is not merely a matter of gathering preexisting data. Information is not a natural object that can be collected like berries in a forest. Information is made, and with it, the world is made in its image. Understanding the stakes of living in an age of information entails grasping the conditions under which information is produced. As any other man-made artifact, information is produced in concrete places by actual people at a specific time. Any artifact, Marx tells us, is historical in that it is a repository of stored labor (an accumulation of the knowledge that went into the instruments of its production. Information is not an exception.) Data is historical, not least because it is produced by mechanisms that took centuries to forge. This course will chart a long history of the facilities of information production known today as data centers. Momentarily displacing digital computation as the single historical cause of their rise, the goal is to understand how regimes of calculation came into being, aided by technologies that preceded the computer by centuries. From ledgers to buildings, these technologies have a history that intermittently intersects with the history of architecture. Paying special attention to these intersections, this course proposes to examine a vast literature stemming from the wide array of historical fields that have contributed to charting a history of information. The specific focus will be on methods: how has the history of information been told? What actors have been accounted for? Which ones have not? How can architecture history contribute to understanding the cosmos of data inside of which we live today?

Keywords

Architecture, History, Environmental History, Data

Learning Prerequisites

Recommended courses

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Learning Outcomes

By the end of the course, the student must be able to:

- Identify architectural typologies, material arrangements, and spatial logics that contributed to the production, organization, and circulation of information before the rise of modern data centers.

- Critique weekly readings through informed, critical discussion, showing understanding of each text's contribution to the historiography of information.
- Develop a short research project or analytical essay that traces a specific artifact, site, or regime of information production.
- Analyze insights visually and verbally, using architectural representation, historical evidence, and conceptual argumentation.
- Synthesize

Assessment methods

The main component of the assessment is a final analytical essay or short research project in which students apply the seminar's concepts and methods to a historical case study, demonstrating their ability to synthesize readings and develop an original argument. Throughout the semester, students are also evaluated on their preparation and active participation in weekly seminar discussions. Doctoral students (along with master's students who request it) will additionally lead or co-lead one session by introducing the assigned readings and framing the discussion.

Resources

Moodle Link

- https://go.epfl.ch/AR-517