EPFL

AR-516   **The adventures of rationalism**
                Aureli Pier Vittorio

Cursus	Sem.	Type
Architecture	MA2, MA4	Opt.

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

Summary

The course traces the recurring reemergence of a rational approach in design and building form throughout the history of Western architecture, from the Middle Ages to the late 20th century.

Content

The terms *rational* and *rationalism* entered architectural discourse in the early 20th century, but they are rooted in architectural culture since the Enlightenment -- and even before. Rational architecture consists into an approach driven by reason, that is, by the knowledge of the concrete terms through which architecture is built. This approach emerged when architecture was no longer deduced from the imitation of nature, understood as a divine or metaphysical concept, but from the logic of building itself, understood as scientific fact. Yet, the emergence of rationalism is profoundly intertwined with the rise of Capitalism and its abstracting logic connected with trade and industry. With the advent of the industrial revolution, building form underwent a process of rationalization and optimization that escaped ancient forms of building craft. Moreover, the emergence of what Henri Lefebvre called 'abstract space' -- that is, space informed by the intensification of the industrial and financial organization of society --, manifested itself into an increasingly abstract construction system, which often architects attempted to mask with ornaments and classicizing forms.
It is possible to argue that rational architecture was a willful sublimation of building form, intensively reified by its industrialization. The rationalist language that emerges from the architecture of Henri Labrouste, Le Corbusier, Ludwig Hilberseimer, Mies van der Rohe, Margarete Schütte-Lihotzky, can be understood as a sublimation of the industrial logic of capitalist space. Precisely for this reason, rationalism is an architecture that accepts and yet idealizes its real conditions of production. This is both the quality, and the problem of rationalist architecture. The idealizing and essentializing tendency of rational architecture is especially visible in the architecture produced within totalitarian regimes, such as Fascist Italy. At the same time, rational architecture was also understood as an architecture governed by the possibility of judging architecture according to shared criteria. Rational architecture was the architecture of scientific reasoning about large-scale social problems, the architecture of high modernism, the welfare state and its even distribution of resources. In this context, rational architecture consisted into a partially decommodified architecture focused on its use value. The last iteration of rationalism in architecture was its critical reappraisal in the 1960s and 1970s by the architects affiliated with the Tendenza and 'Radical' movements. In the case of Tendenza, rationalism was understood as the possibility to define the architectural project as driven by legible and thus sharable criteria that would manifest into what Italian architect Giorgio Grassi defined as 'the logical construction of architecture'.
The course traces the recurring reemergence of a rational approach in design and building form throughout the history of Western architecture, from the Middle Ages to the late 20th century. From the 'Medieval Machine' to the rise of the Engineer, from Henri Labrouste to Hannes Meyer, from Ludwig Hilberseimer to Archizoom, the course aims to reconstruct a possible history of rationalist architecture.

LECTURES
1st Lecture, 20.02.25
Medieval Rationalism
Medieval Architecture and the Rationalization of Building Form

2nd Lecture, 27.02.24
The Column and the Wall
Ornament and Construction in the Work of Filippo Brunelleschi, Leon Battista Alberti, Francesco Di Giorgio and

Michelangelo

3rd Lecture, 06.03.25
Fortress Mentality
Military Architecture and the Birth of 'Design'

4th Lecture, 13.03.25
Construction First
Architects and Engineers in France (1600-1800)

5th Lecture, 20.03.25
Classicism and Rationalism
The Architecture of Karl Friedrich Schinkel and Henri Labrouste

6th lecture, 27.03.25
Form and Construction
The Theories and Histories of Architecture by Eugène Viollet-Leduc and Auguste Choisy

7th Lecture, 03.04.25
Rational Architecture for Real
Capitalism and the Advent of the Factory in England and United States

8th Lecture, 10.04.25
Architecture or Revolution
Le Corbusier, Planning and Capitalism

9th Lecture, 17.04.25
Rationalization and the Ideology of the Plan
Architecture in Weimar Germany, 1920 - 1933

10th Lecture, 01.05.25
From Formalism to Constructivism
Architecture in Soviet Russia, 1914-1930

11th Lecture, 08.05.25
The Ambiguities of Rationalism
Modern architecture in Fascist Italy

12th Lecture, 15.05.25
Tendenza vs. Radical Architecture
Politics and Architecture in Italy, 1960-1973

Course Assistant: Marson Korbi

Learning Outcomes

By the end of the course, the student must be able to:
  • Interpret in a critical manner the concepts developed during the course
  • Argue the relations between rationalism, architecture and class relationships
  • Produce a reflection on the relationship between historical conditions and rationalist architecture

Expected student activities

Personal work during the semester, reading of texts, personal study of a theme to be concretized into a paper of approximately **3.000 words**.

Assessment methods

The main goal of the course is to encourage students to read as much as they can. Therefore, the main factor in the

evaluation will be the student's capacity to assemble and read a relevant body of texts.
40% **Specificity** of the theme and **reading** relevant bibliography
40% Writing of the paper, especially referencing and footnoting
20% Clear oral exposition

Supervision

Assistants   Yes

Resources

Moodle Link

- https://go.epfl.ch/AR-516