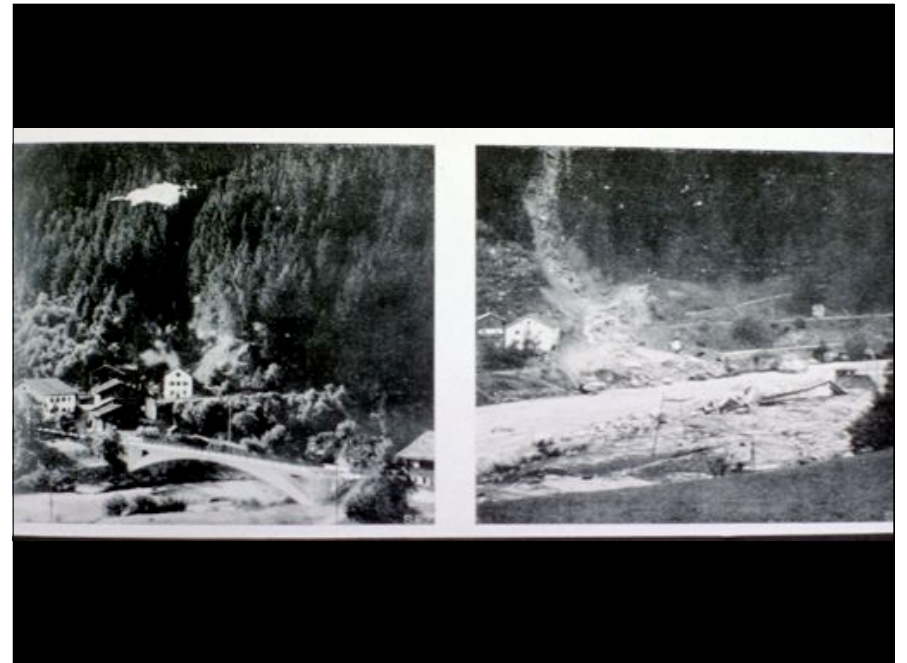
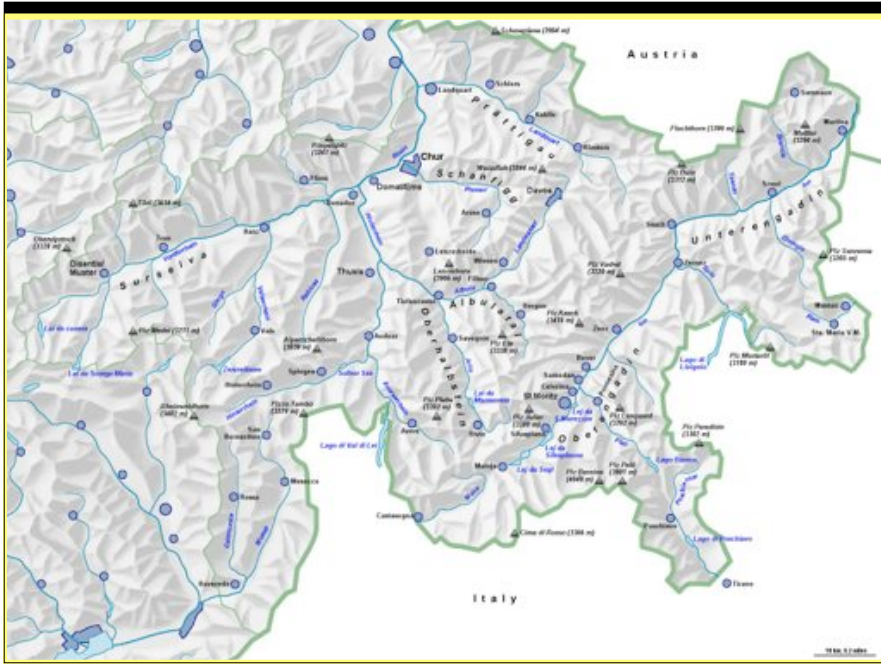
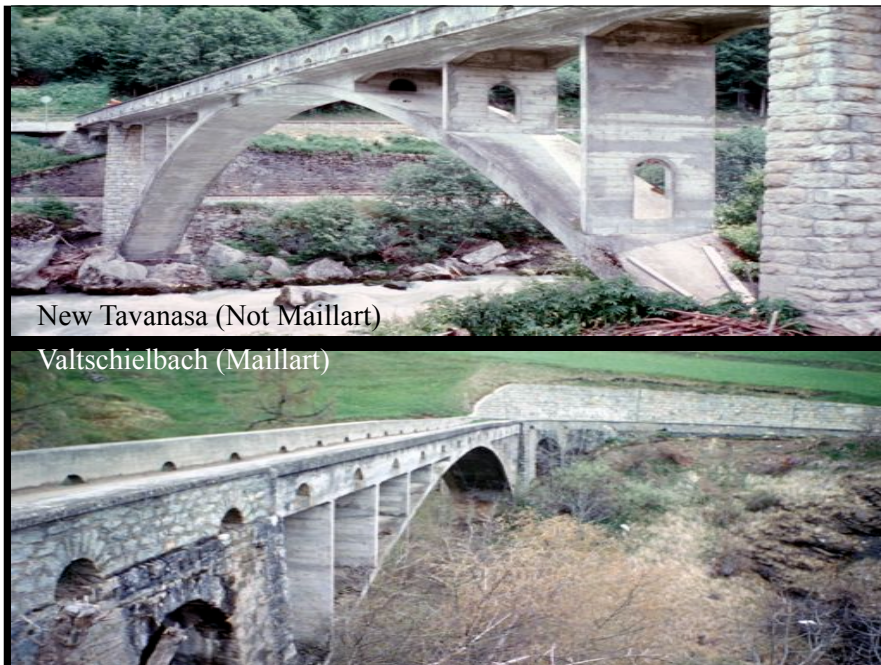
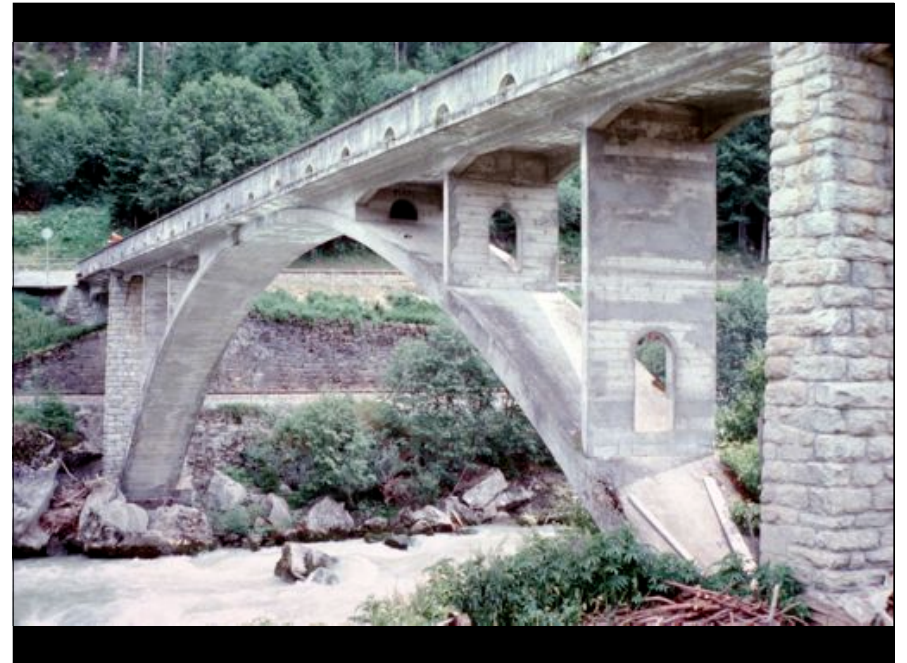
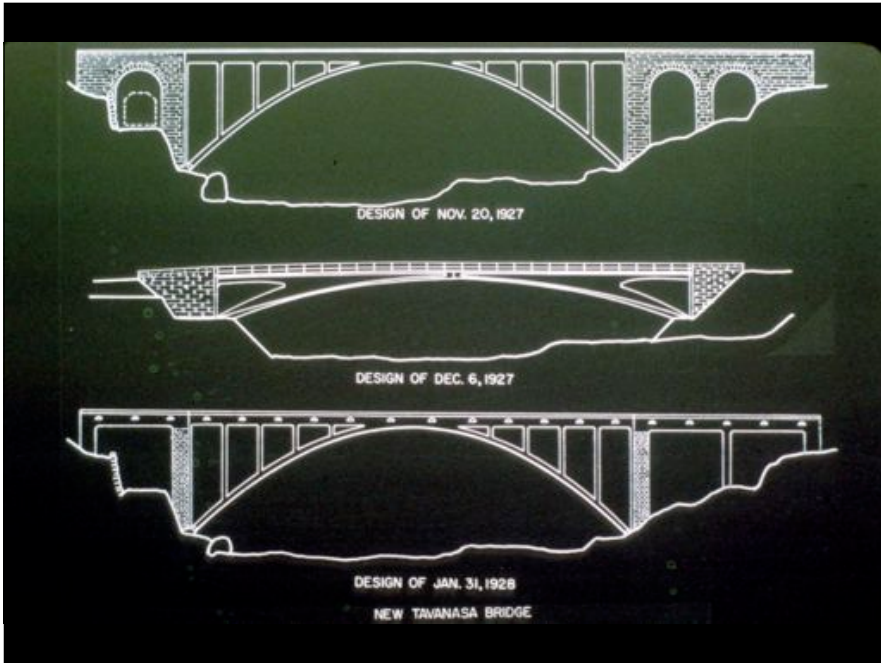


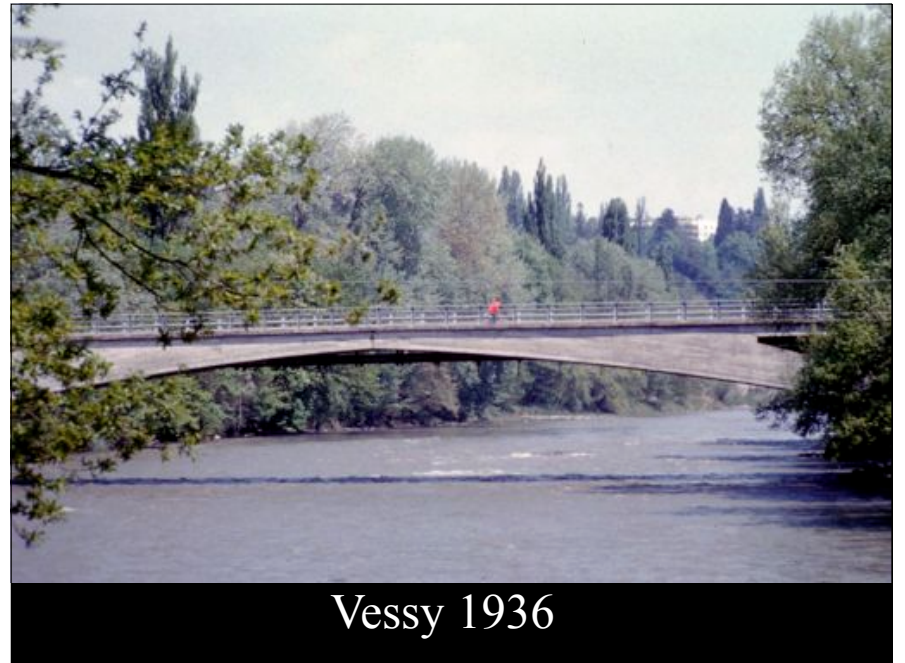
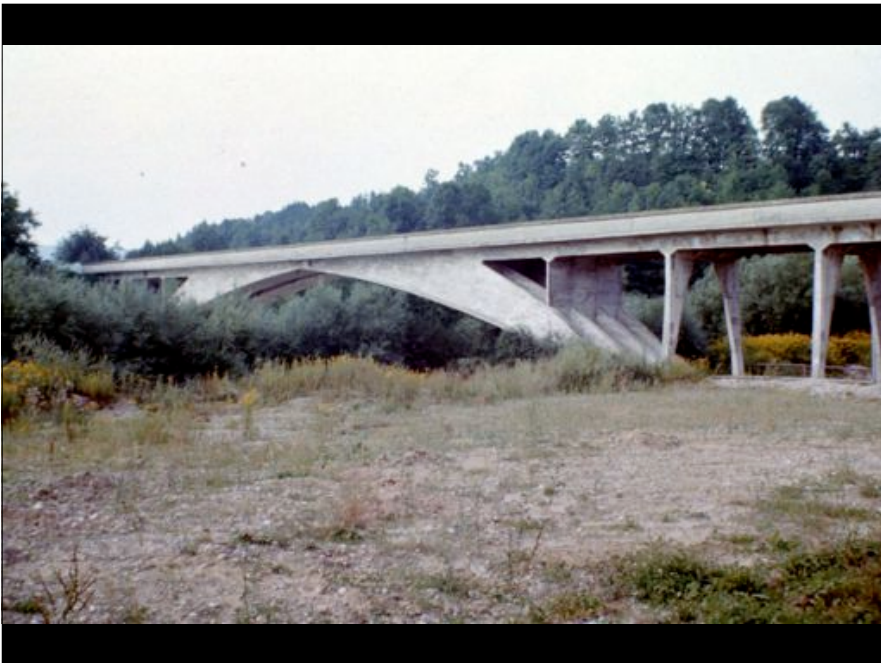
New Bridge Forms: Maillart and Menn

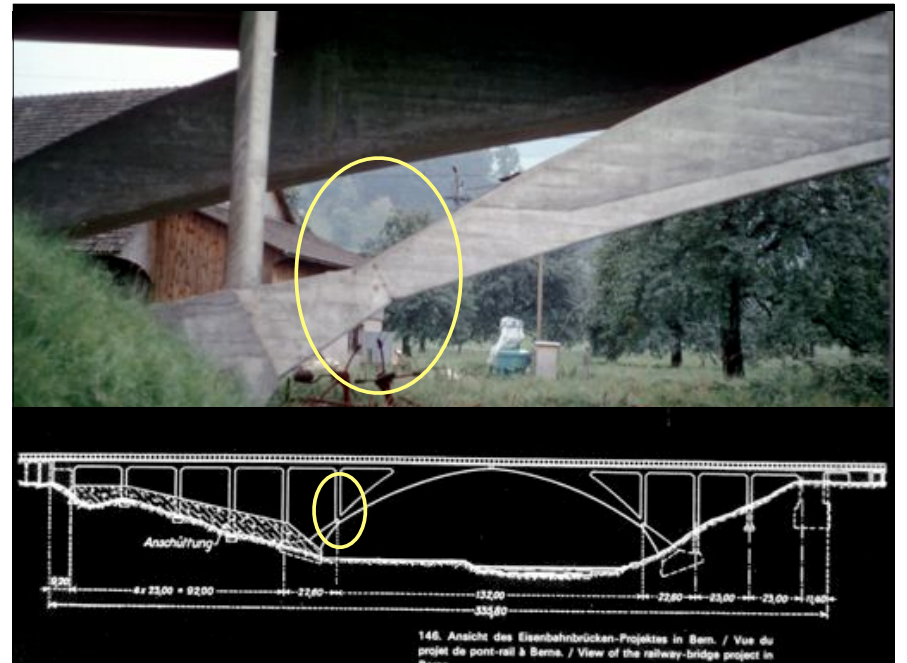
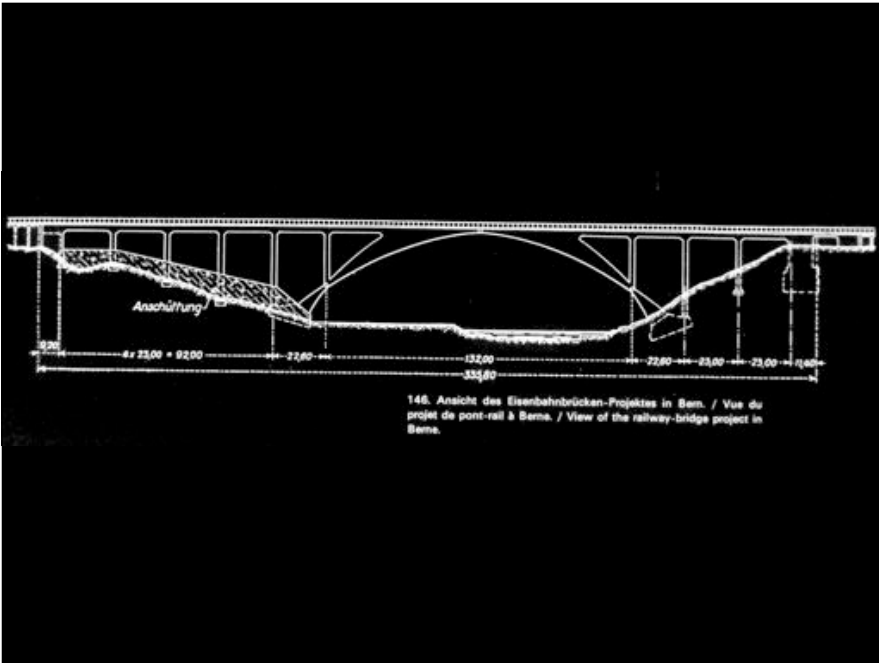
The hollow box arch after Salginatobel
Early Menn bridges and the influence of Maillart
Long span arches of Christian Menn
prestressing and deck-stiffening
Menn and the long span, prestressed, hollow box girder
The Ganter Bridge, a new form
Menn's cable-stayed bridges

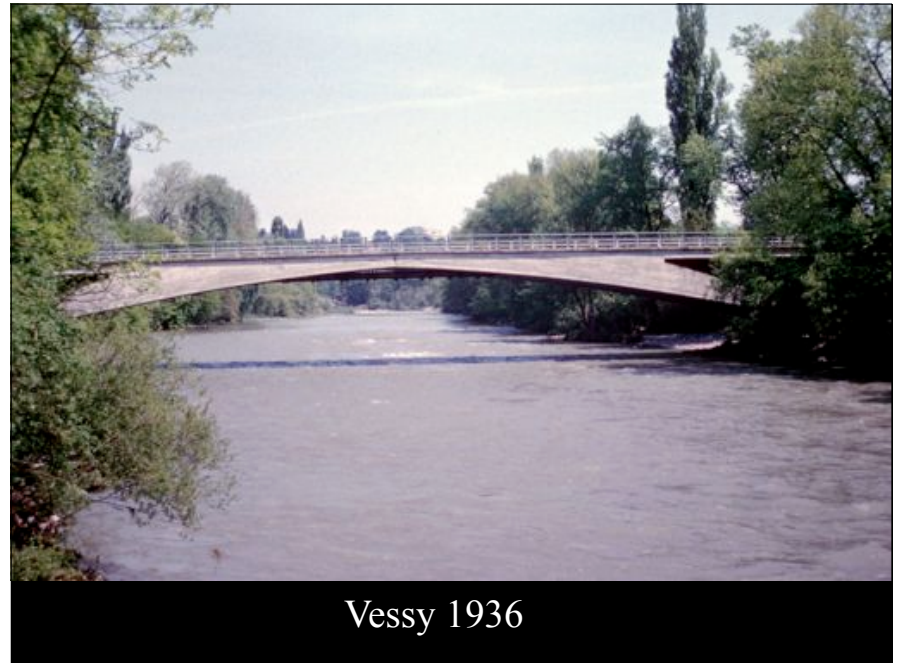
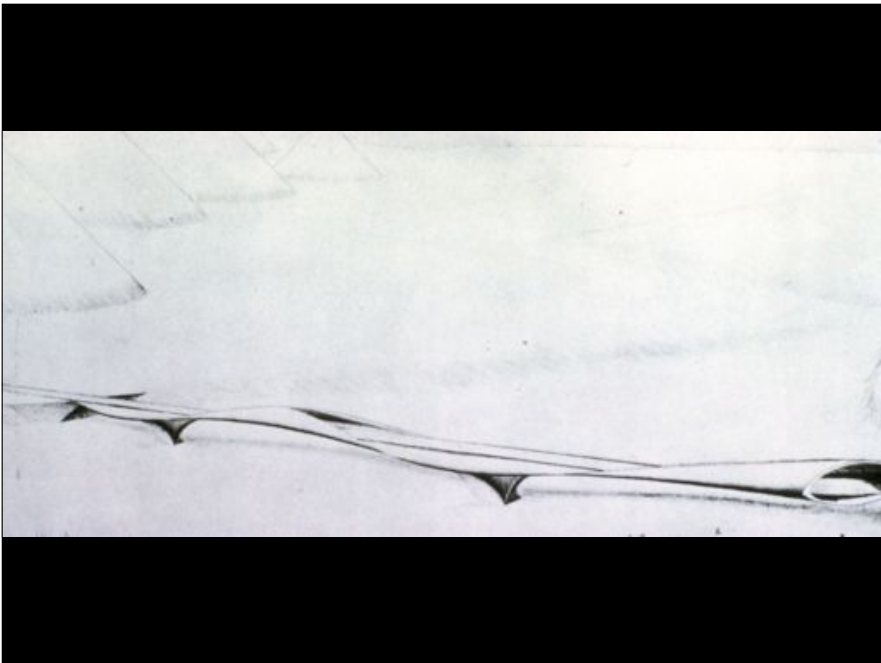


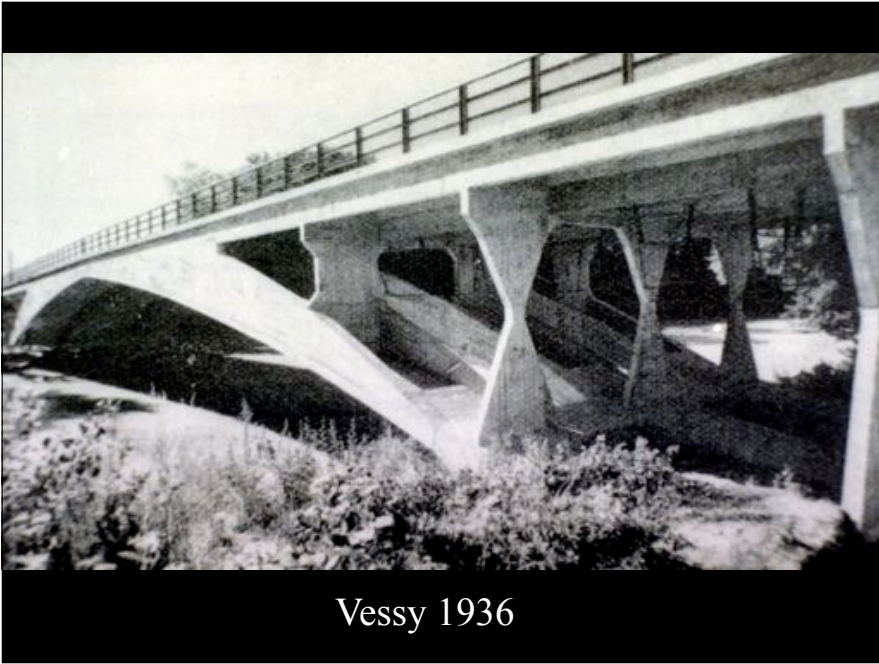




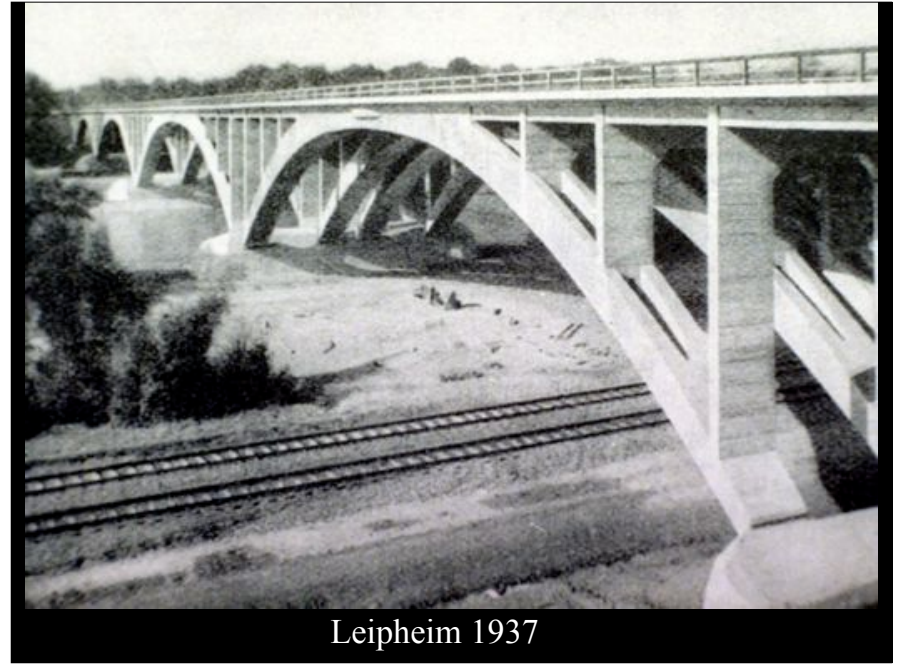




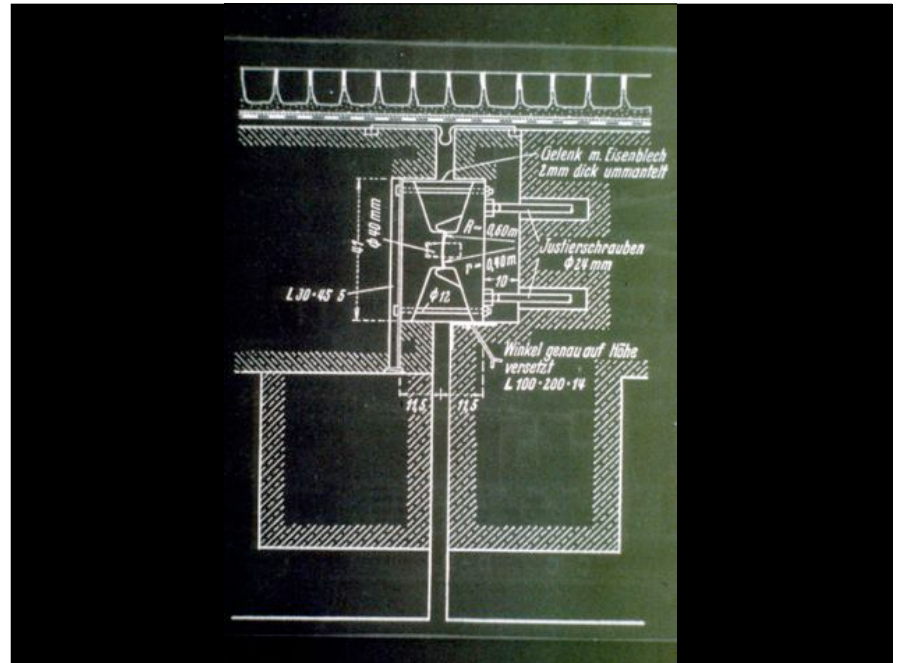
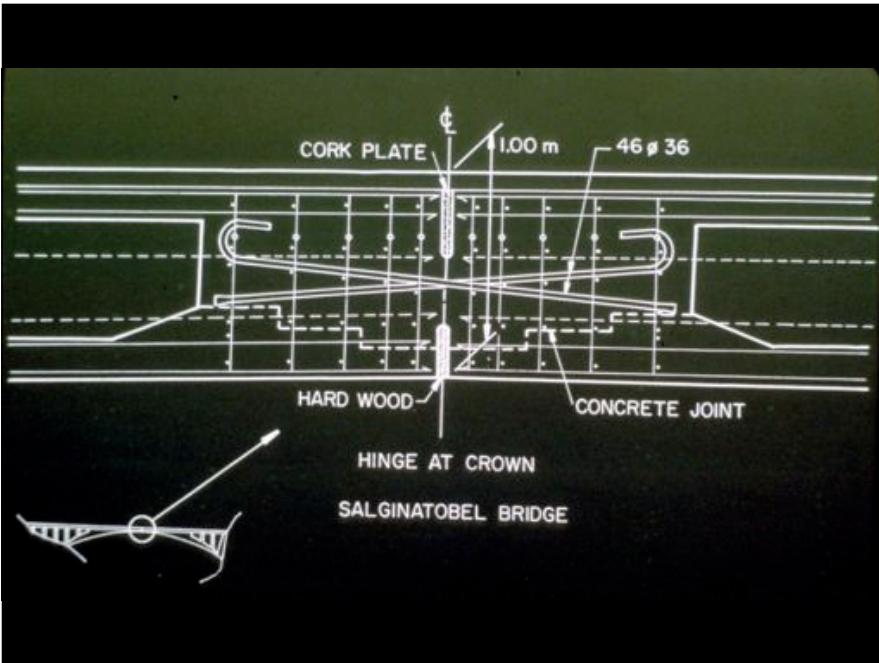


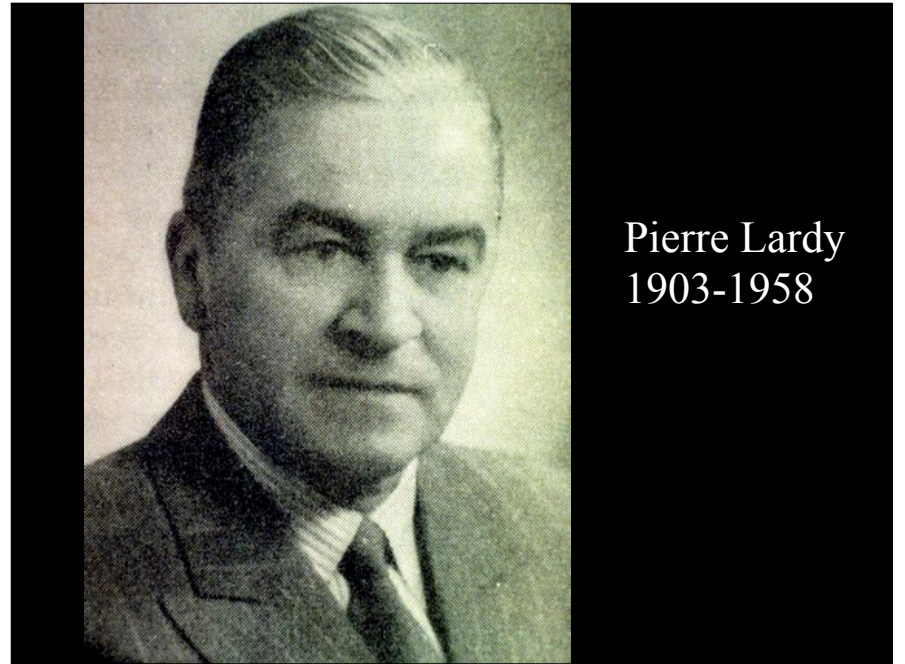
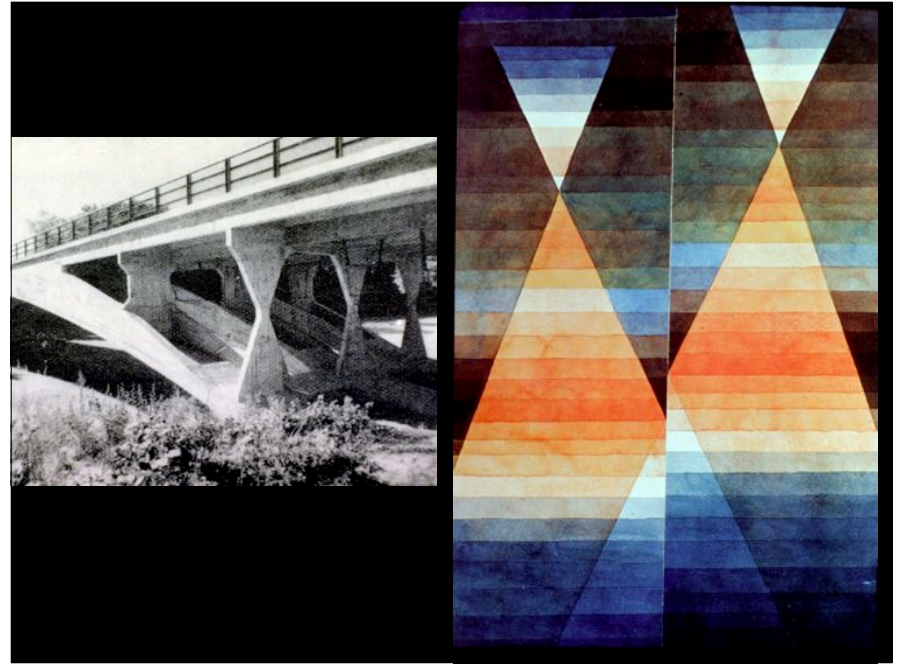
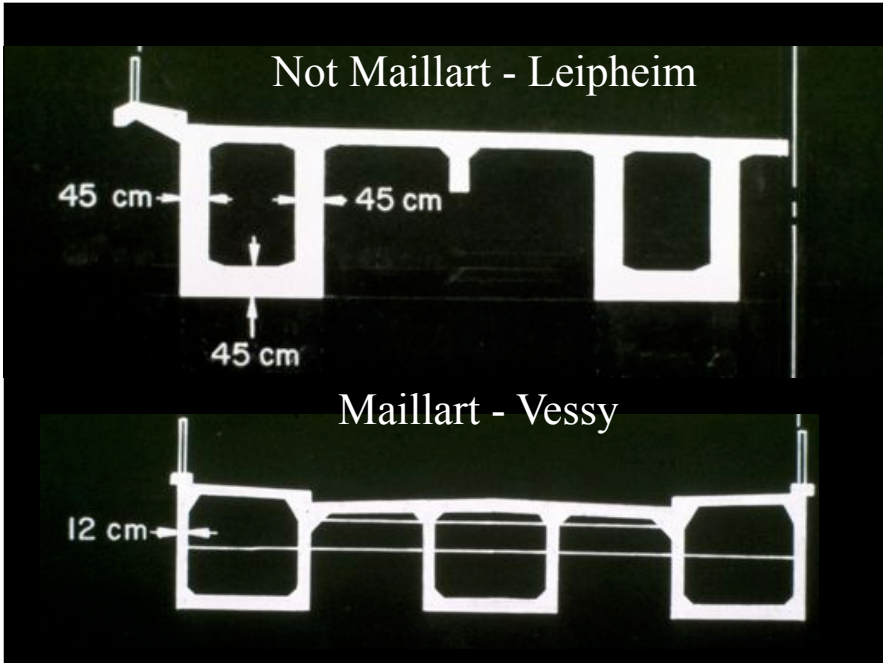


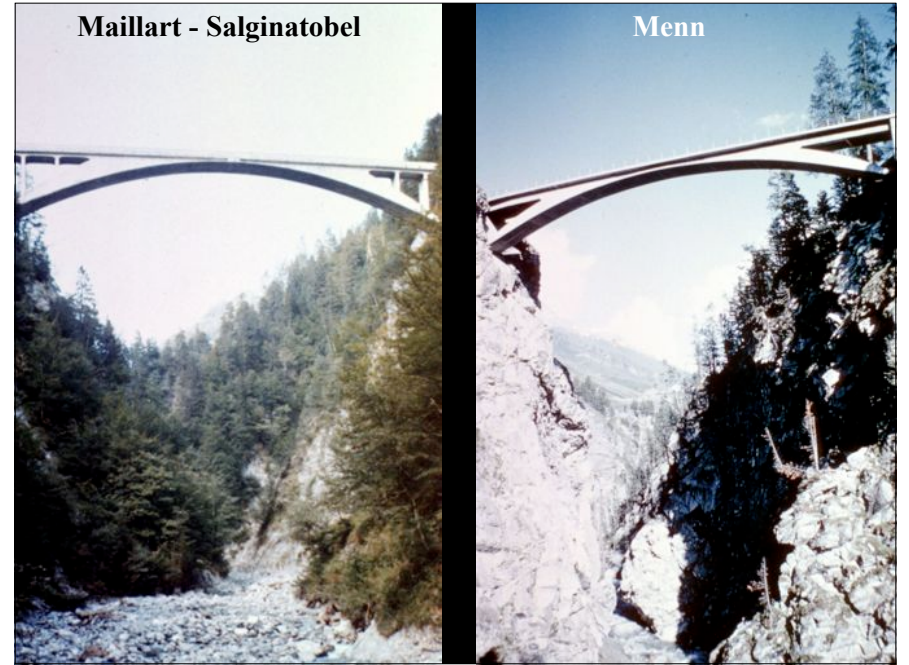
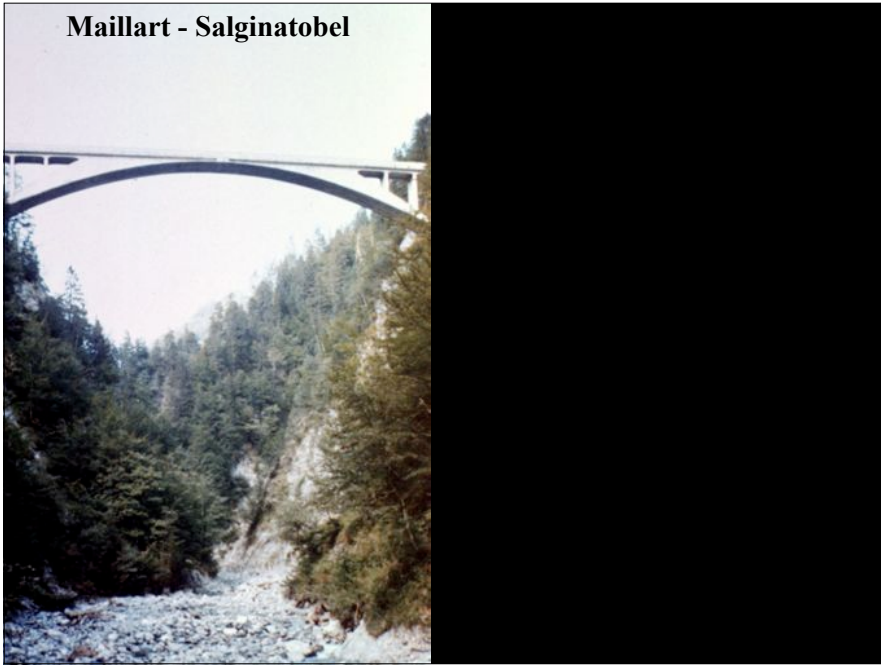
Vessy 1936

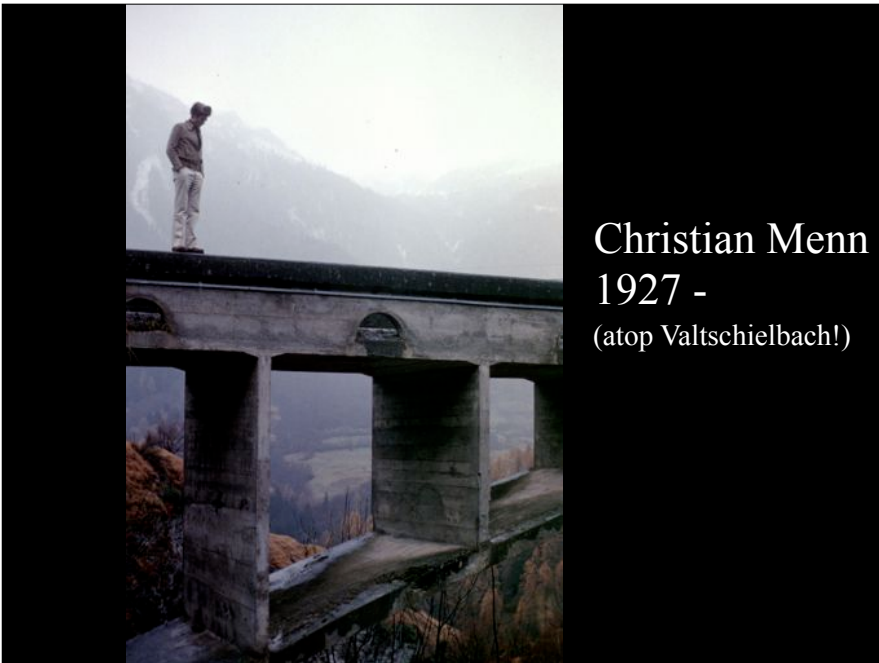
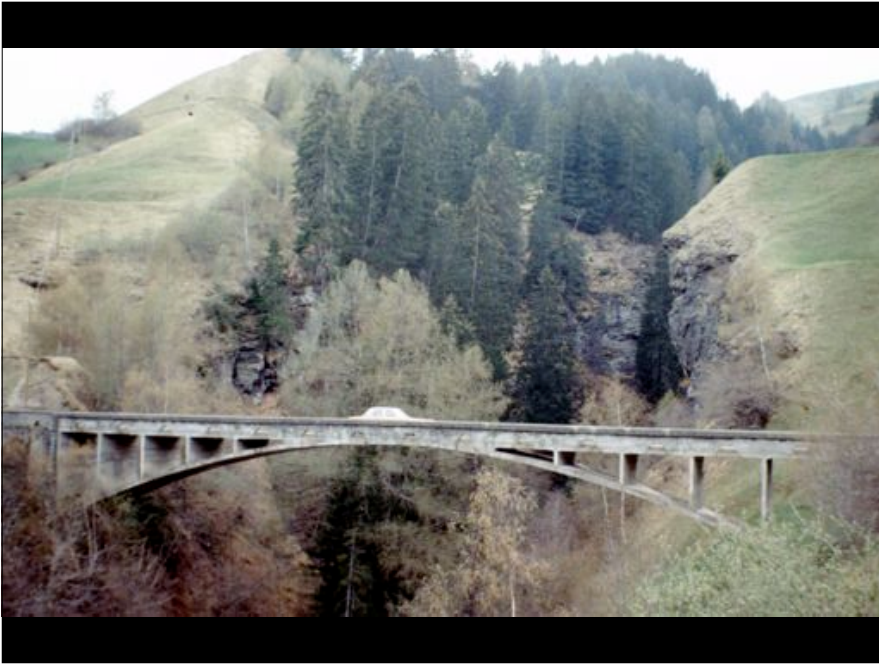


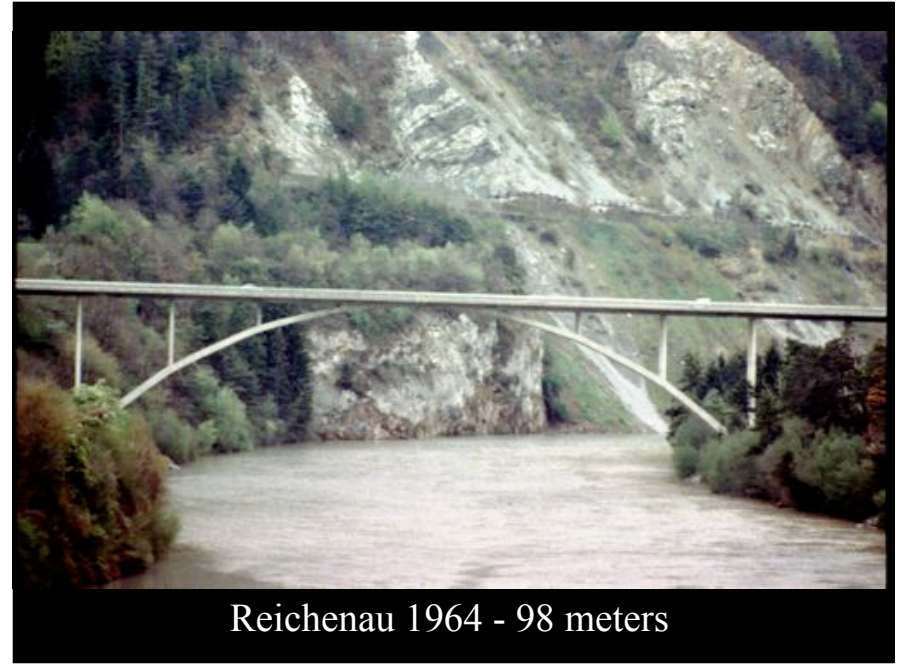
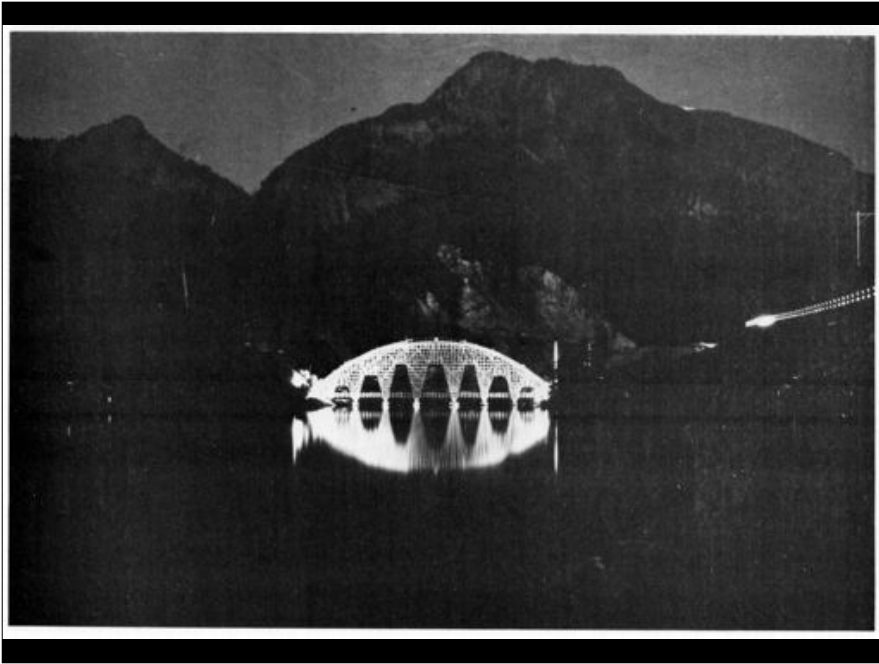
Leipheim 1937





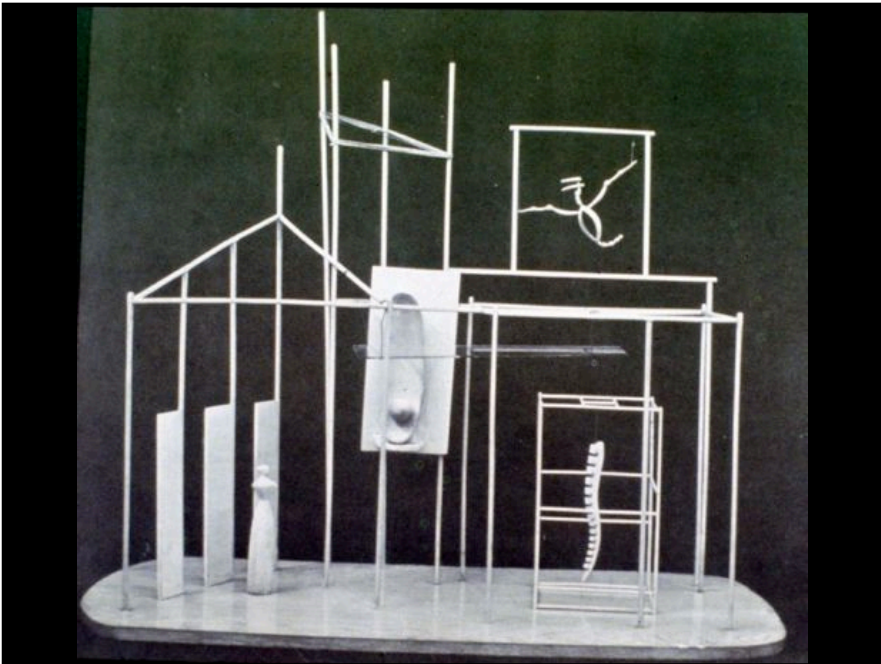






Reichenau 1964 - 98 meters



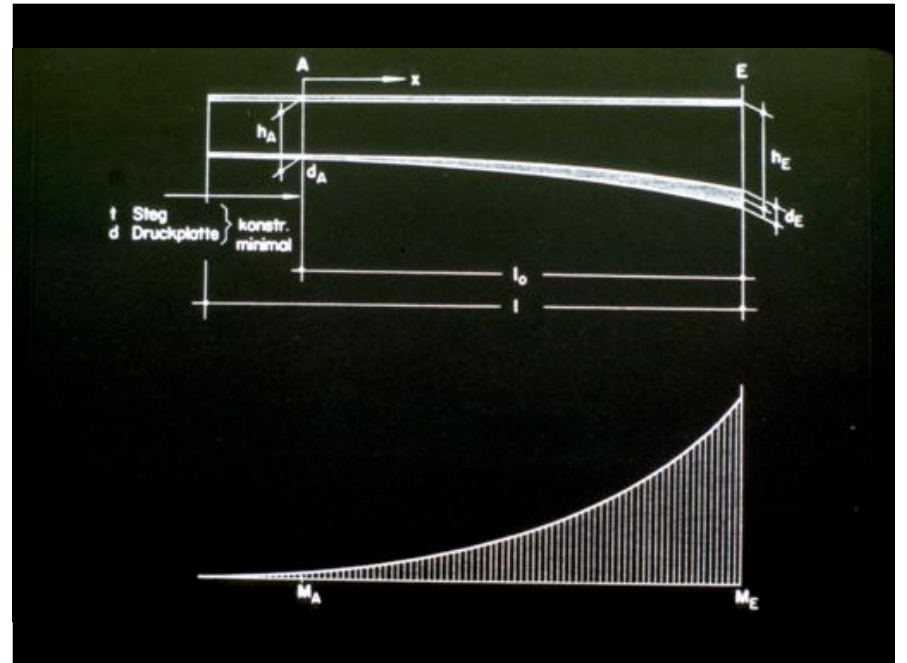


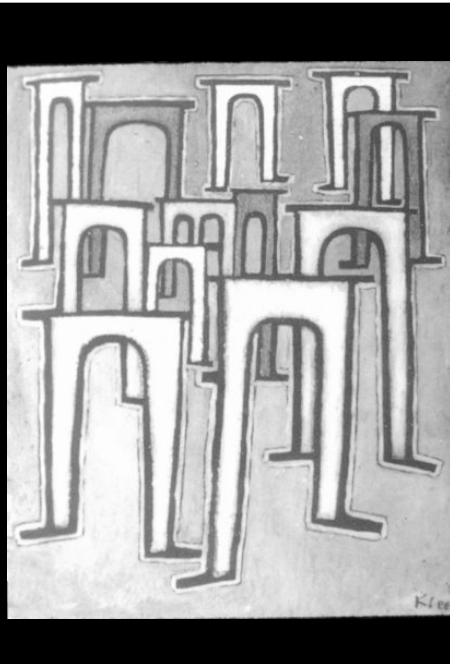
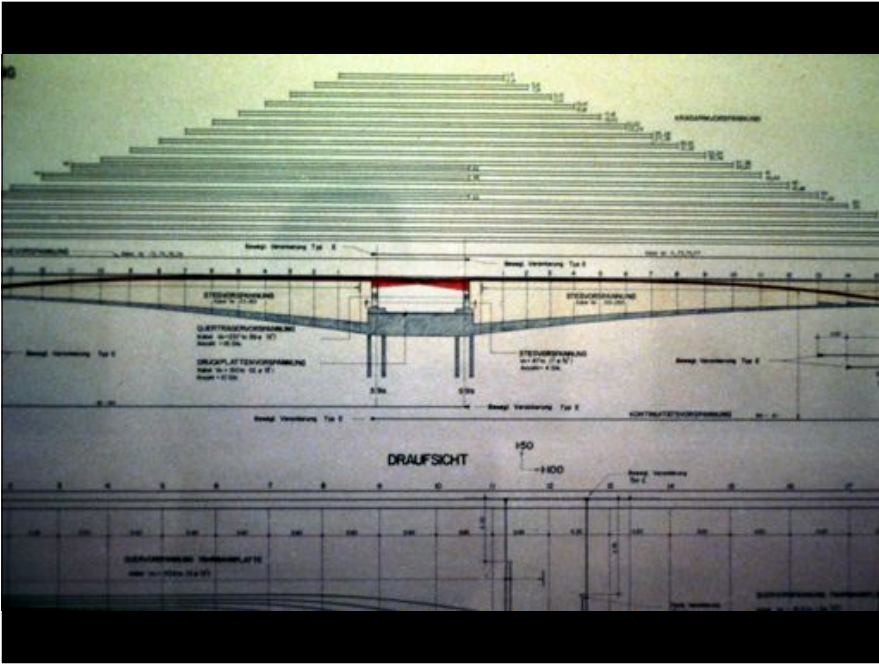


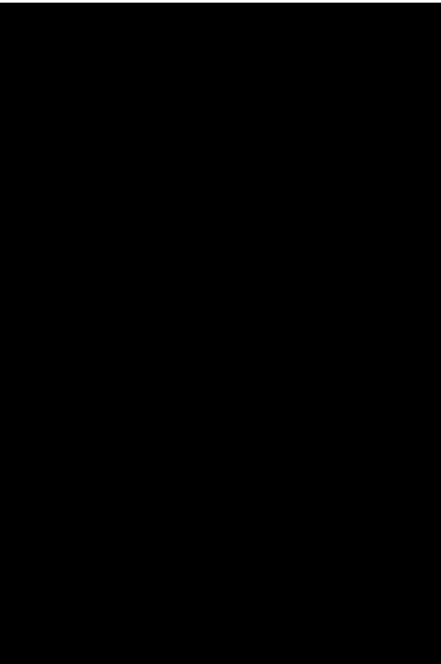
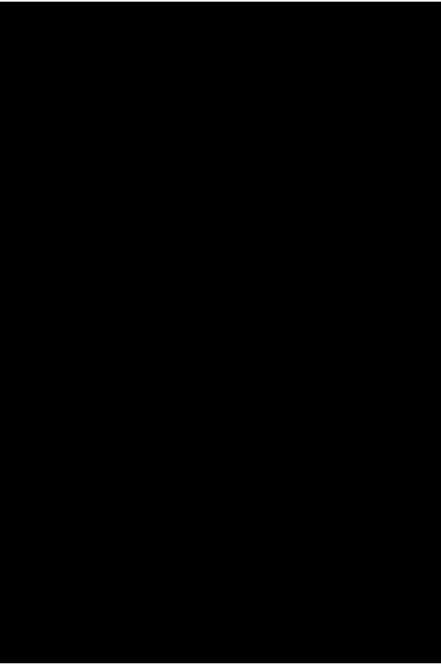
care to criticize?

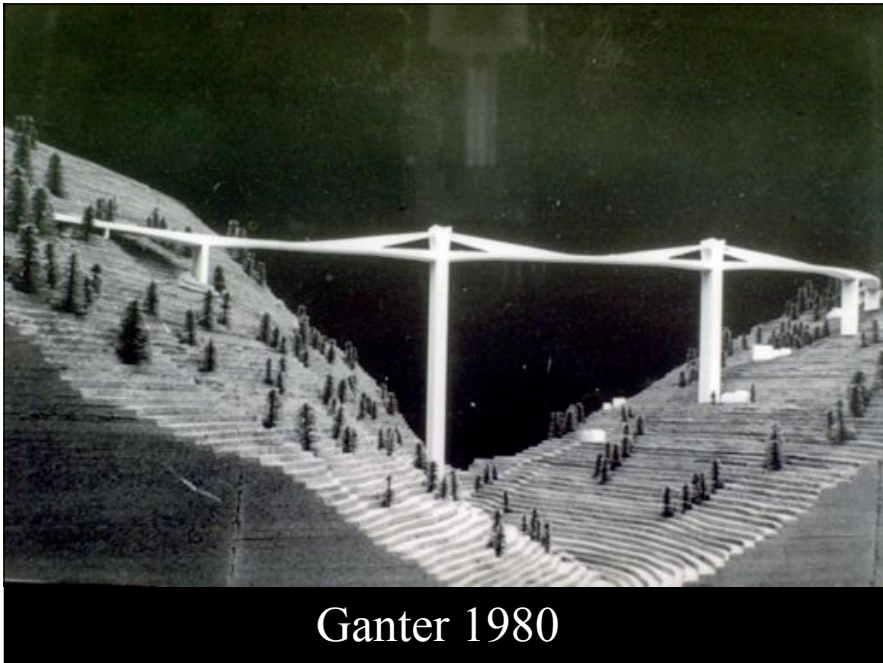


Felsenau 1970















Menn's continuing evolution
in cable-stayed forms
1980's-2000's







La ingeniería es siempre creativa, porque
si no lo es, no es ingeniería

-Leonardo Fernández Troyano





Final Project (UMass)

- To be done in pairs, self-selected
- Important dates:
 - Thursday April 10th: Groups finalized
 - Tuesday April 22th: Peer editing of thesis/outline
 - Tuesday April 22: Bibliography/outline/search results due
 - Tuesday April 29: Project presentations
 - Monday May 5: Final papers due

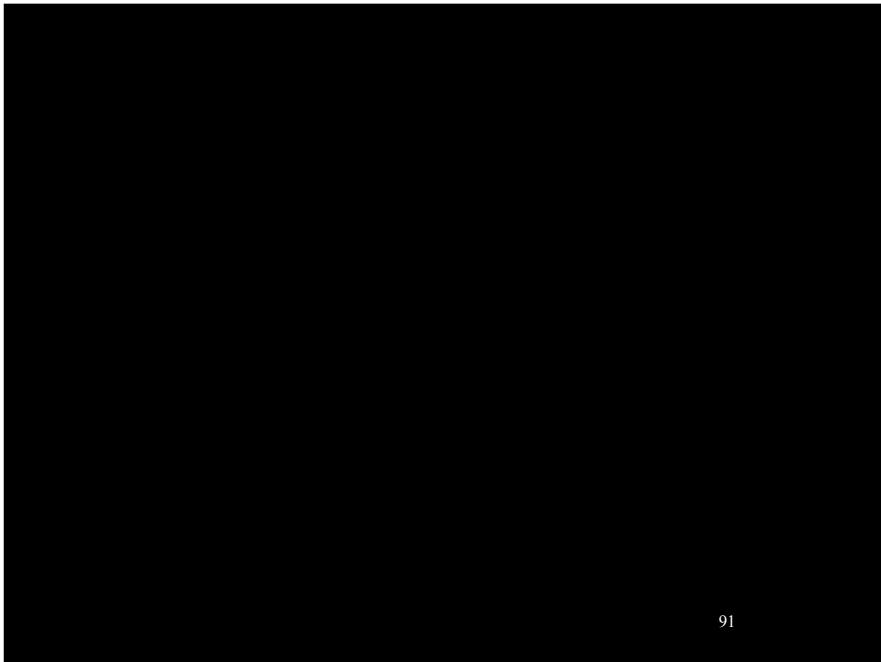
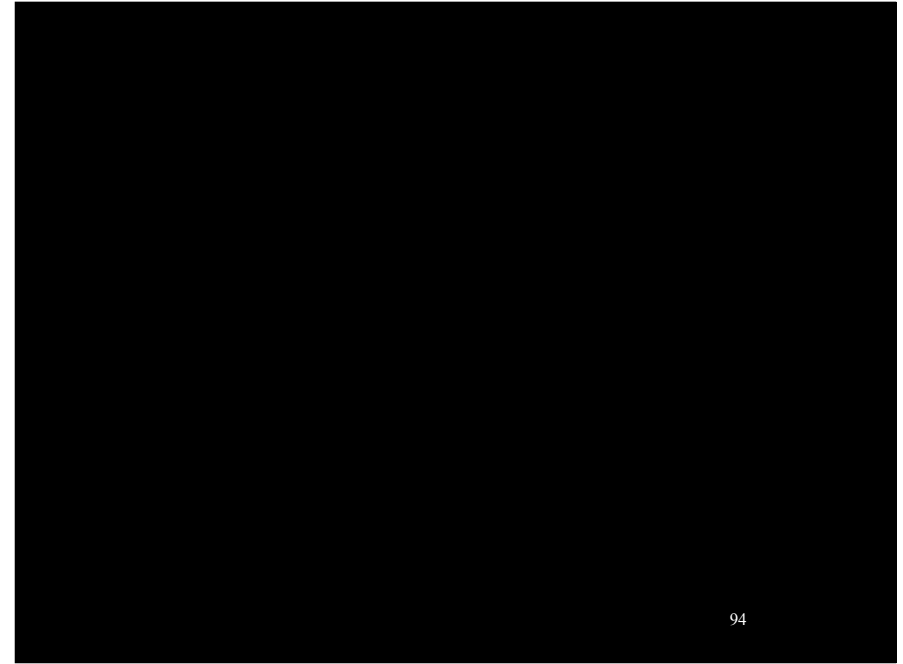
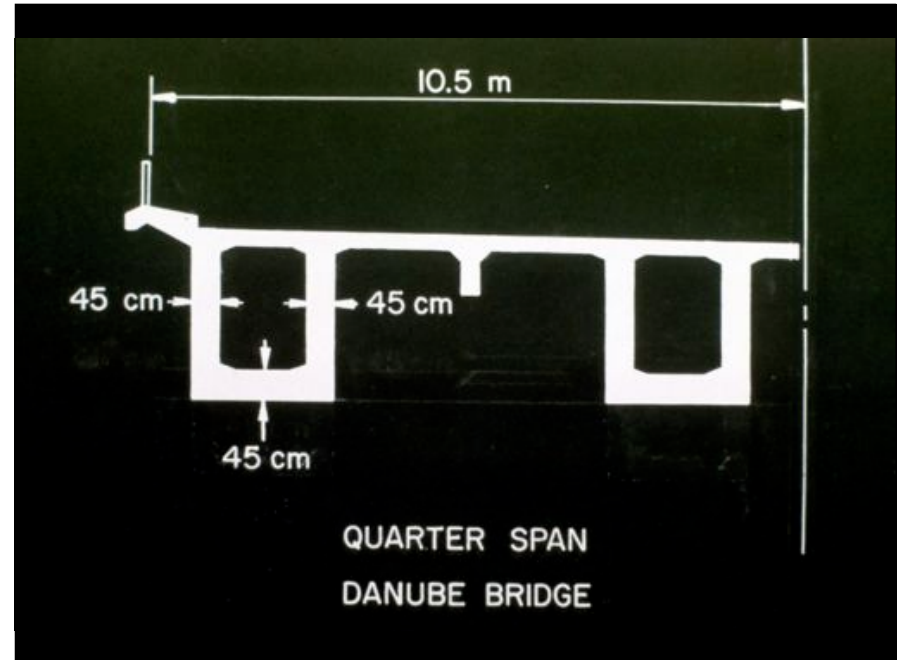
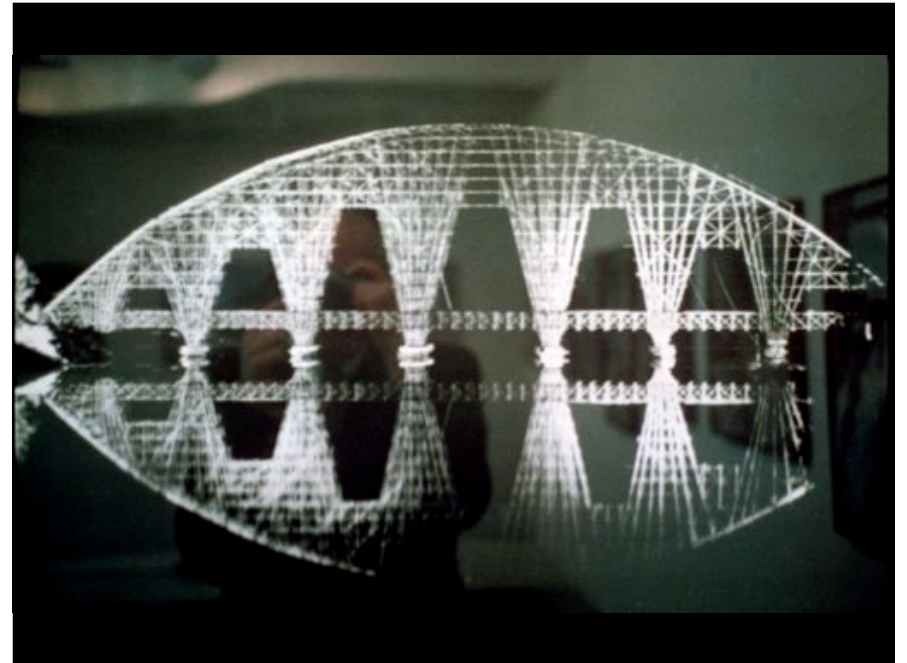
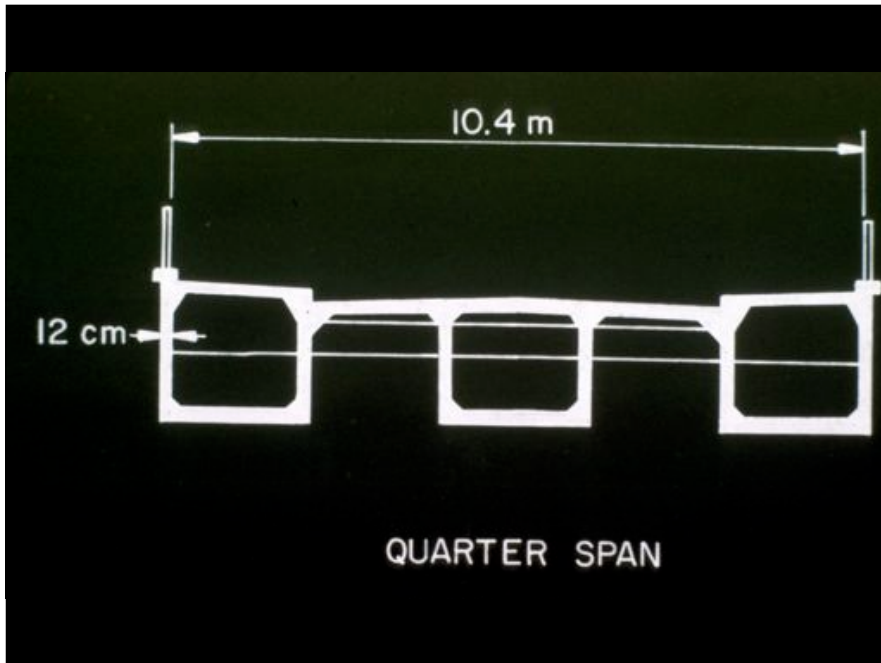


photo from Structurae.de J. Mathis



Midterm Survey Response Summary Discussions Organize around specific topics and use images Too much focus on the engineer vs. the architect More discussion! Calculations Mixed reviews on whether more time is needed Not always clear what/why we are calculating Questions sometimes not worded clearly (5) It seems that the formulas are just given right at the end of class with little or no explanation (3) Too much explanation, making the HW into busywork General Prof. Arwade's personal opinion seems too strong and blocks open discussion Aesthetics are judged from a one-sided perspective. Anything other would be incorrect. Why are we not being told the S's and E's anymore? Provide a glossary of bridge and building vocabulary. More diagrams to explain the forces Should go over concepts behind calculation assignments in class, before we see the pictures Would like to see fewer structures and spend more time with each one Not clear why the lectures are presented in the order they are Lectures very fast! Hard to take notes It would be nice to make more use of calculations during MT lecture





Special Lecture

Four Towers: The Story of the Redevelopment of Times Square

Eli Gottlieb, Associate, Thornton-Tomasetti Engineers

Tuesday, 4:00-4:50, Maryland 110