

Perspectives on the Evolution of Structures

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Lecture Themes (Write these down each class!)

Social, Scientific, and Symbolic meaning in structures
Evolution of form in the work of Eiffel
Compare and contrast Washington Monument and Eiffel Tower

Pre-course survey

- Demographic questions (race, sex) optional
- Data being collected at multiple universities
- Anonymous
- Data will be used in proposals for funding to improve the course and engineering/liberal arts education
- 5 minutes

Washington Monument

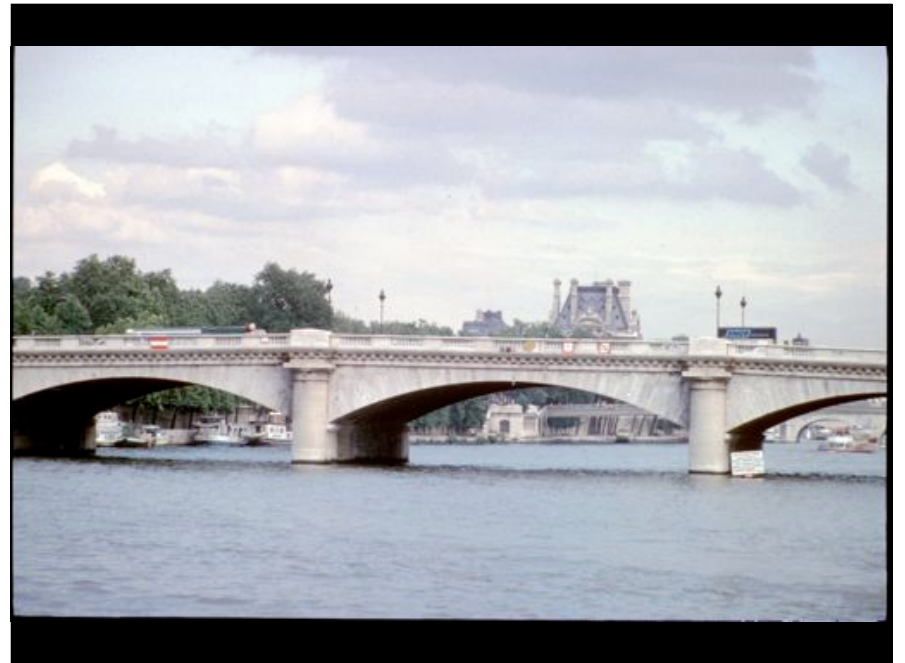
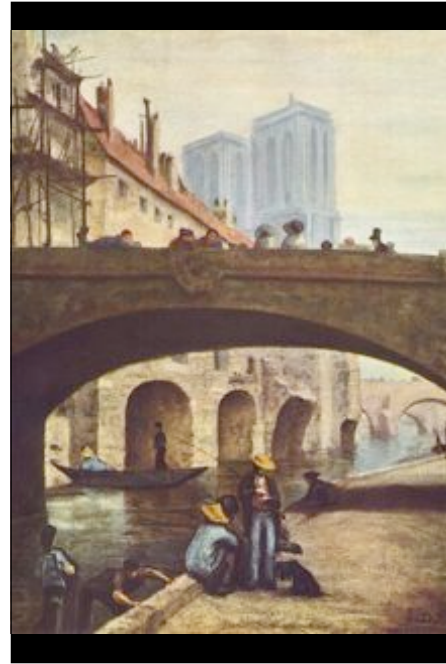


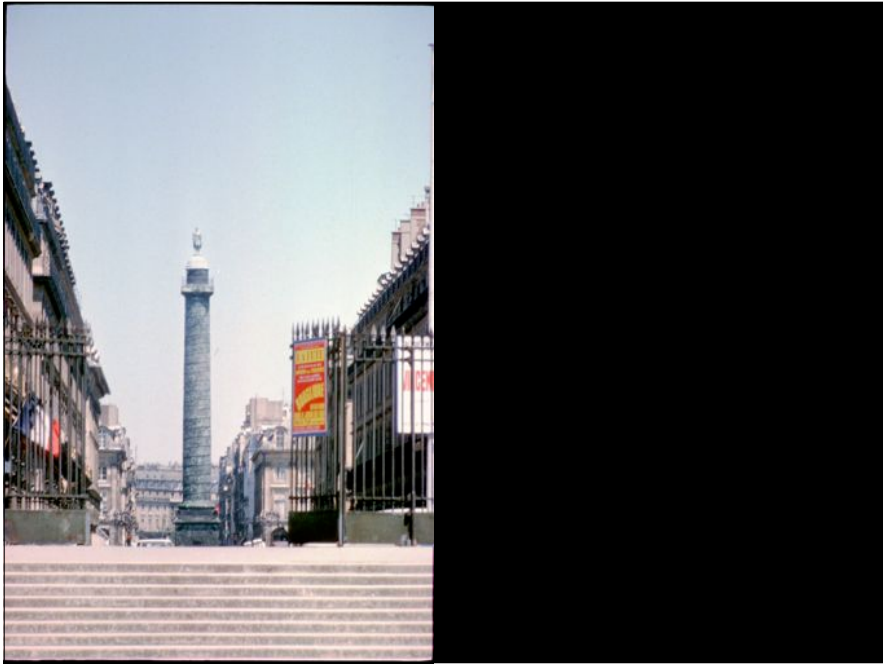
Washington Monument

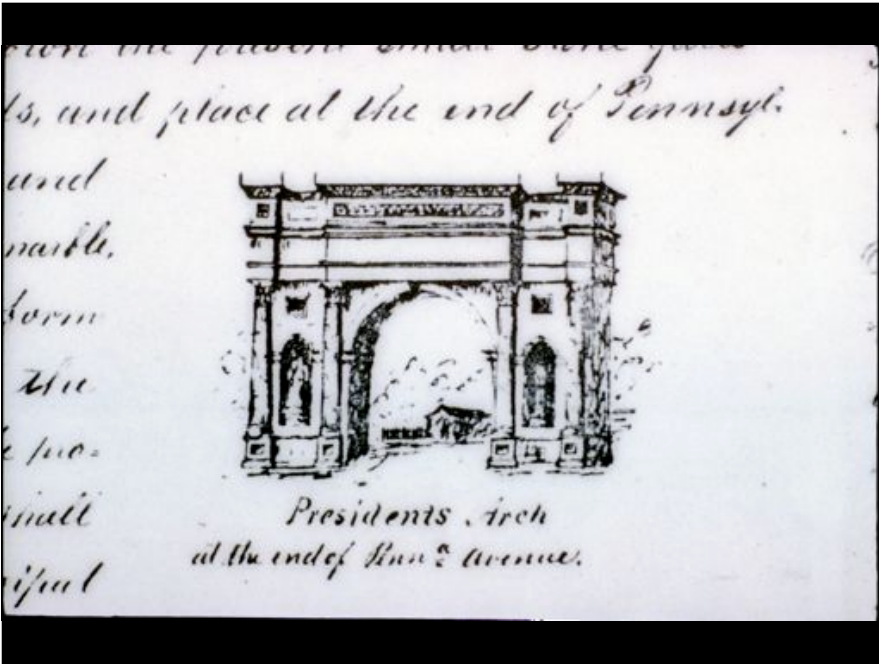
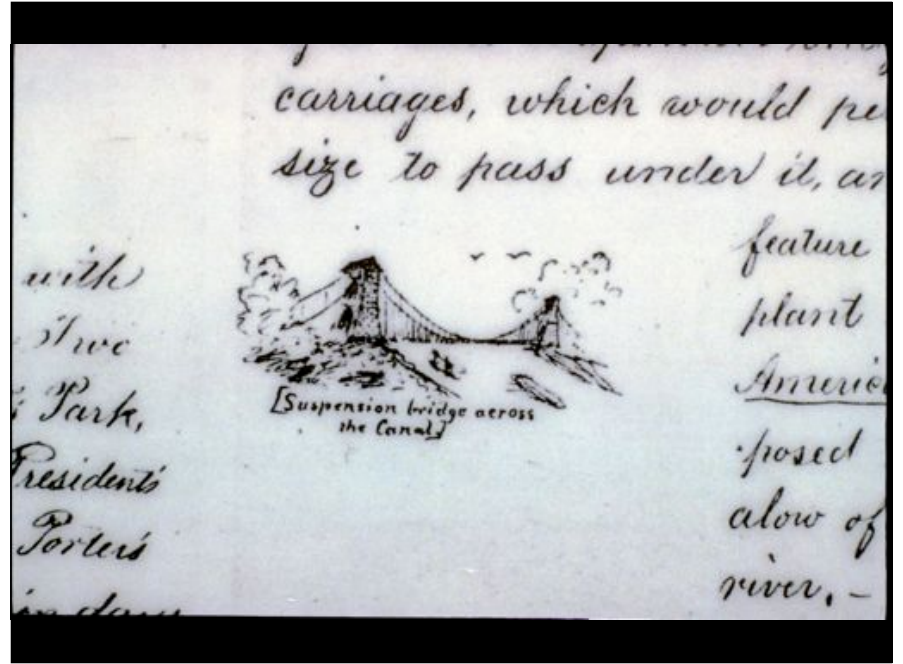
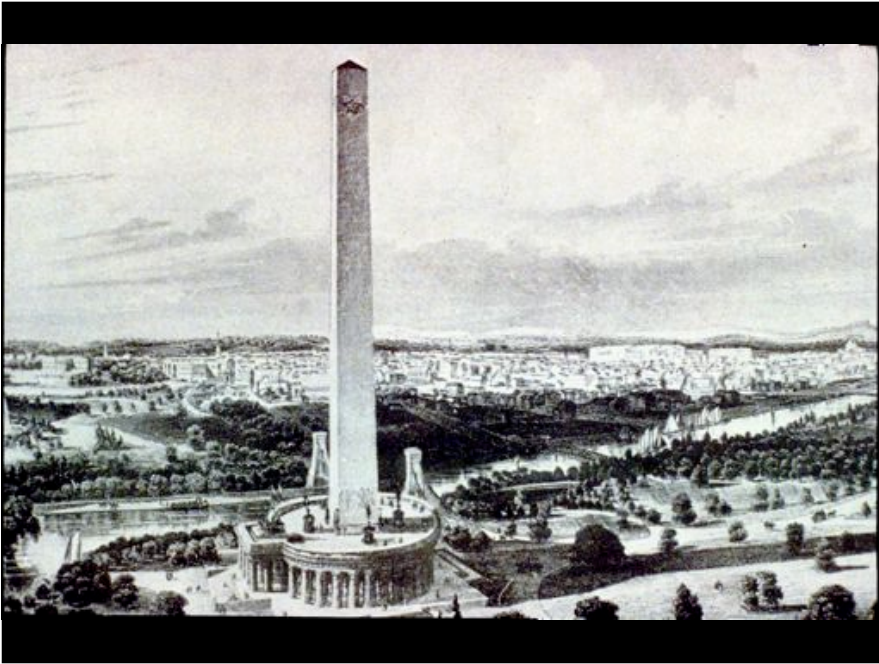


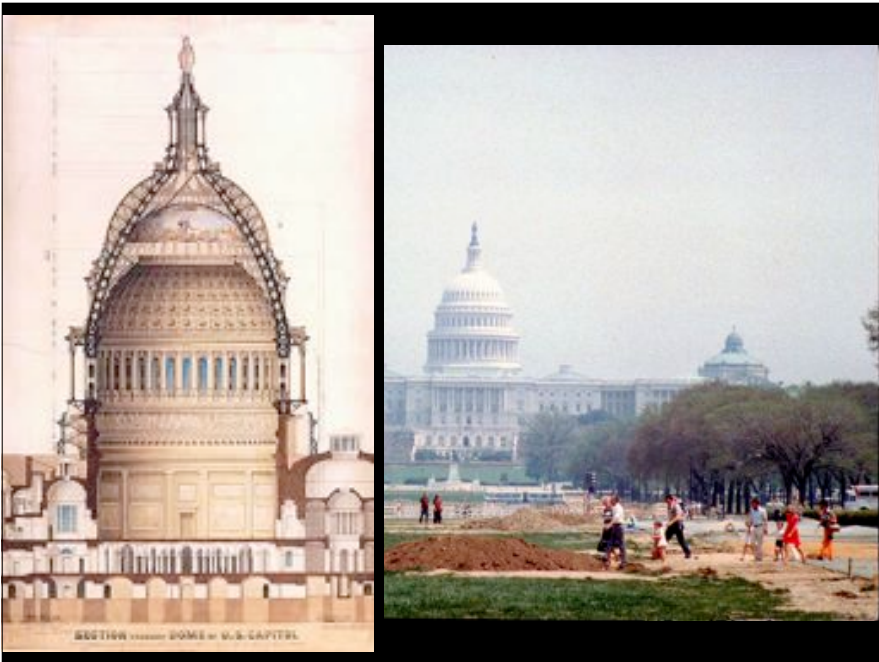
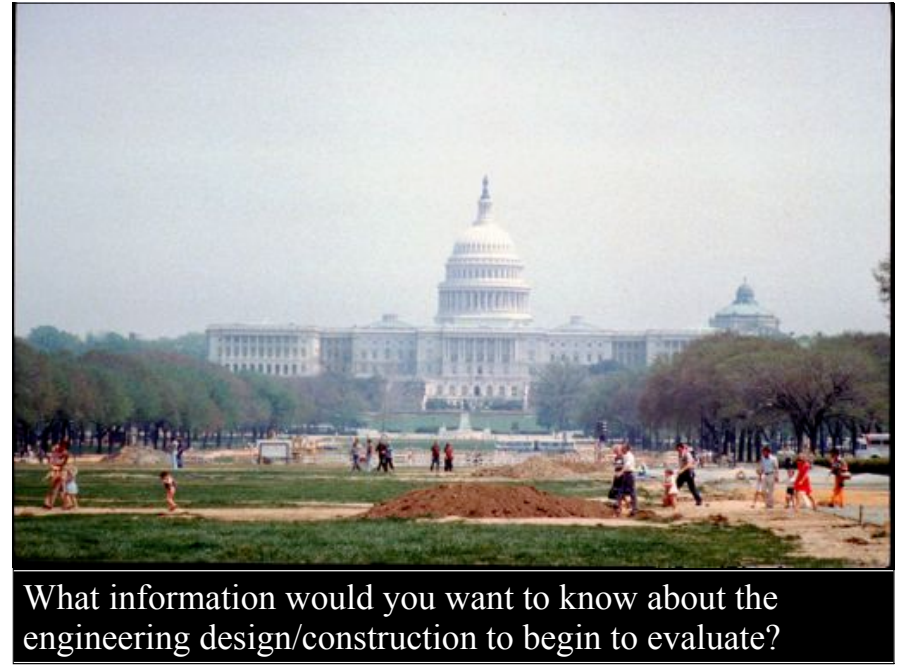
Eiffel Tower

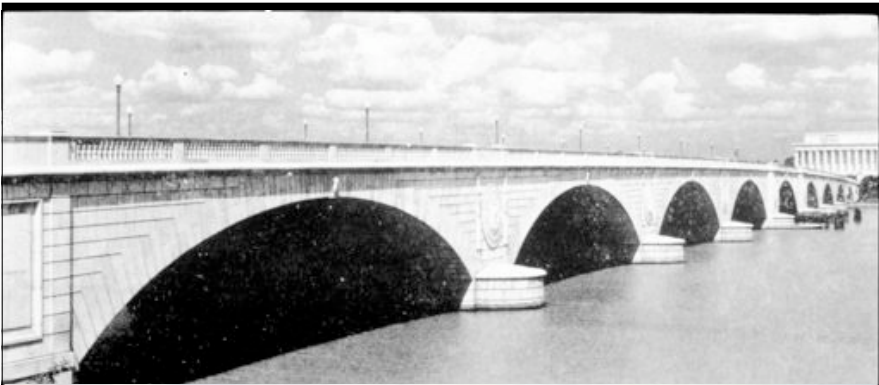
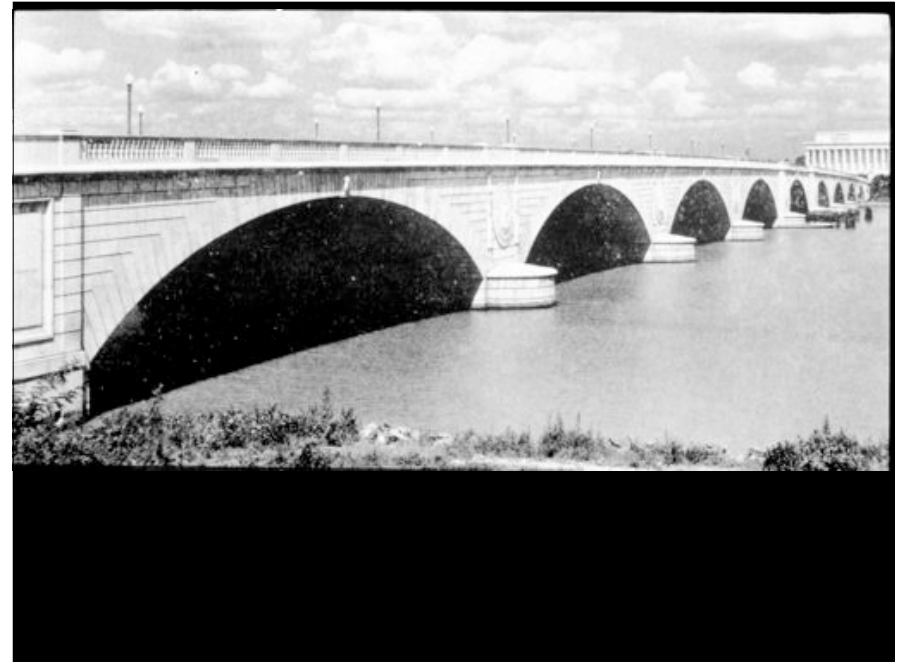


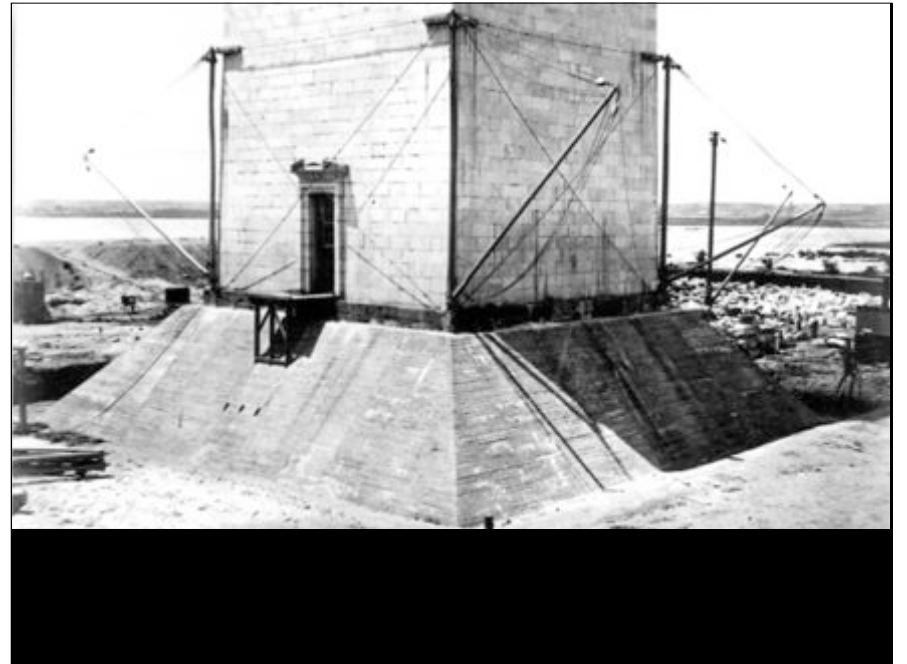
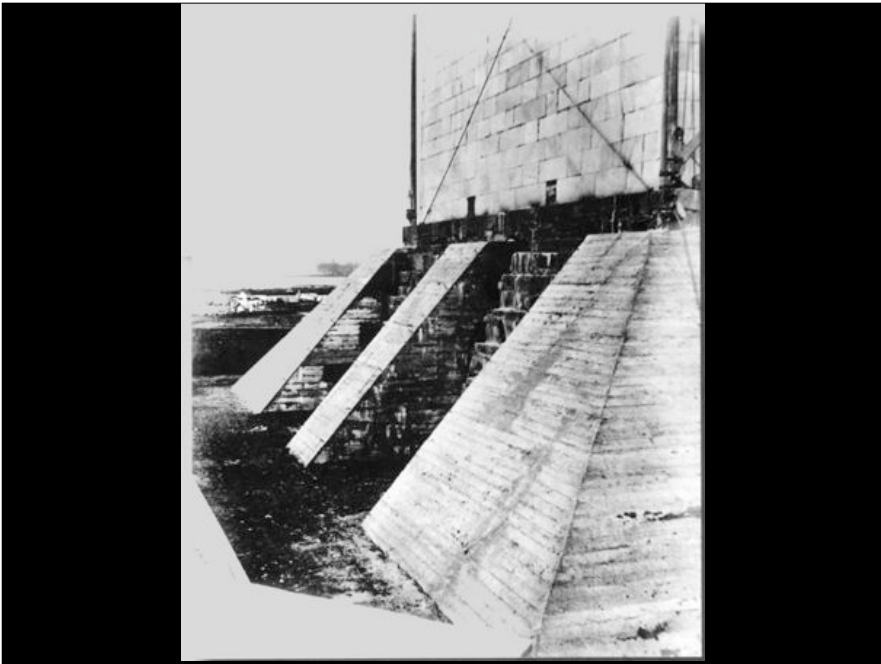
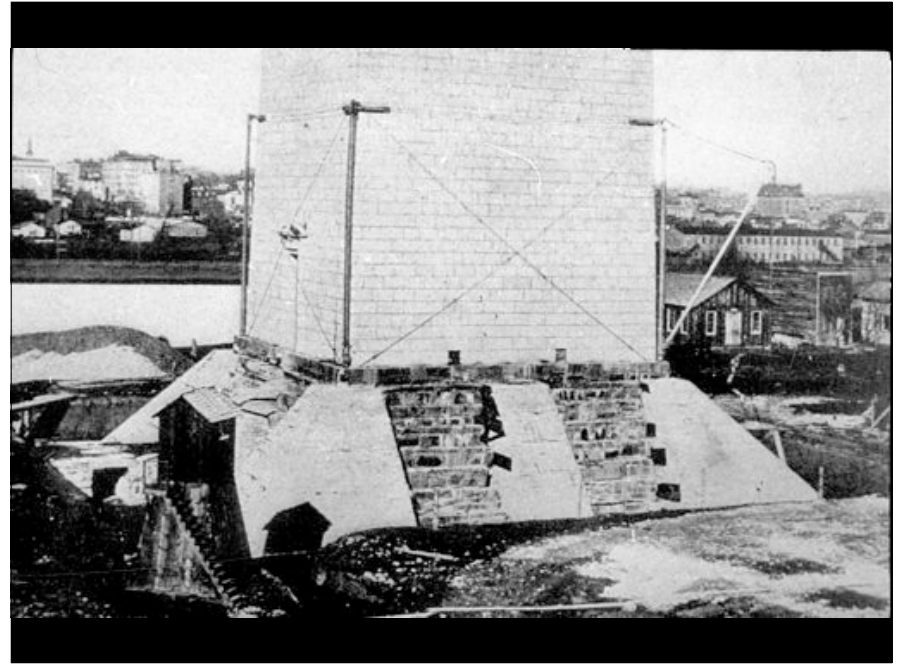
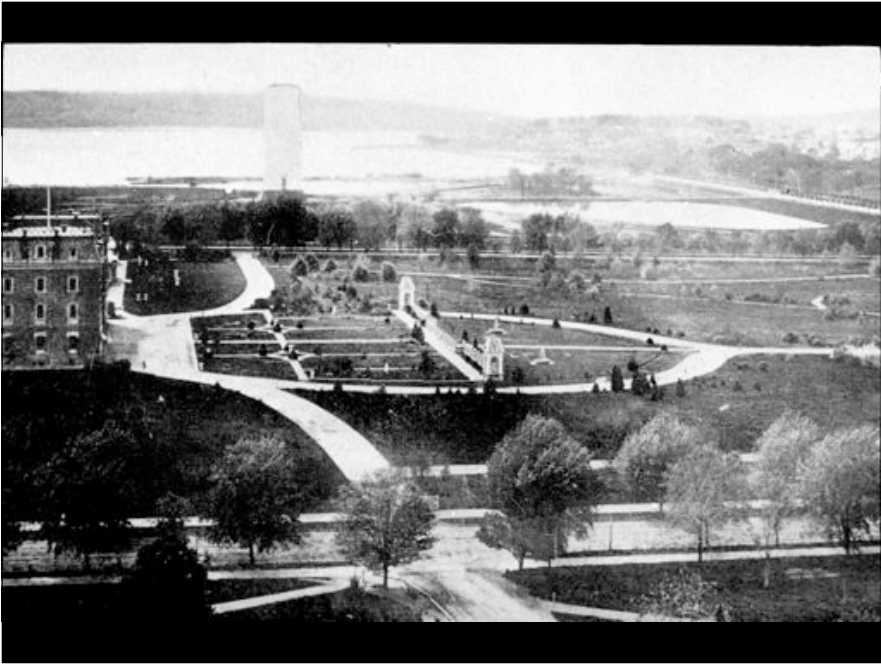


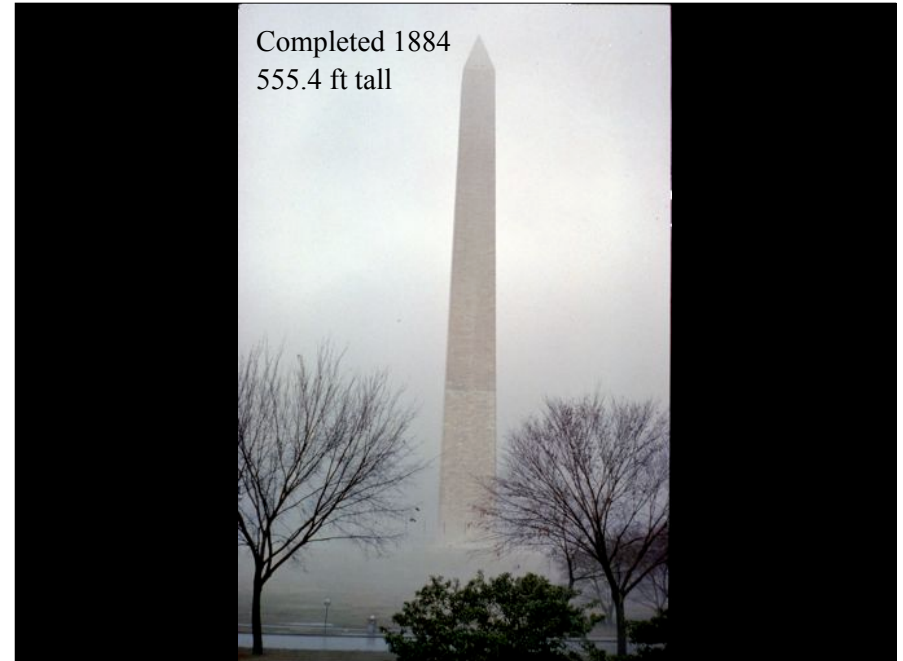
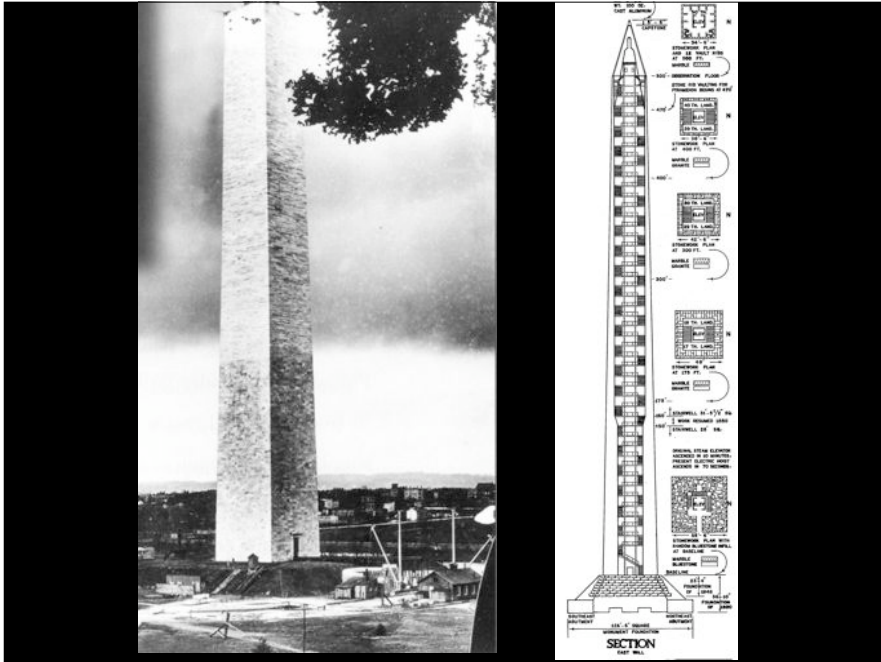












washingtonpost.com

Here's Looking At You, America

A Washington landmark is put to work for Big Brother.

Sunday, February 15, 2004; Page B08

Tomorrow America will celebrate the life of George Washington and other American presidents. On Sunday, although few people may realize it, it also will mark the anniversary of the monument built in Washington's name, which has become one of our nation's most cherished landmarks.

A few years ago the Washington Monument underwent a multimillion-dollar renovation, which included cleaning and repairing the exterior marble; refurbishing the memorial stones lining the interior; installing a new elevator; and improving the observation deck at the 500-foot level. All this work was done with much fanfare.

Done much more quietly was the more recent addition to the monument: surveillance cameras.

Last year the U.S. Park Police installed video cameras in four of the monument's eight windows to keep watch on the people on the Mall below -- a purpose never envisioned by the monument's designers and builders.

Washington Monument

Scientific: Efficient form of a masonry column, tallest masonry structure to date

Social: An enclosed trip in which you look out over the city (4/8 windows lost to security cameras)

Symbolic: An elegant example of a pure form which makes a grand landmark for the city with a unique view of formal Washington

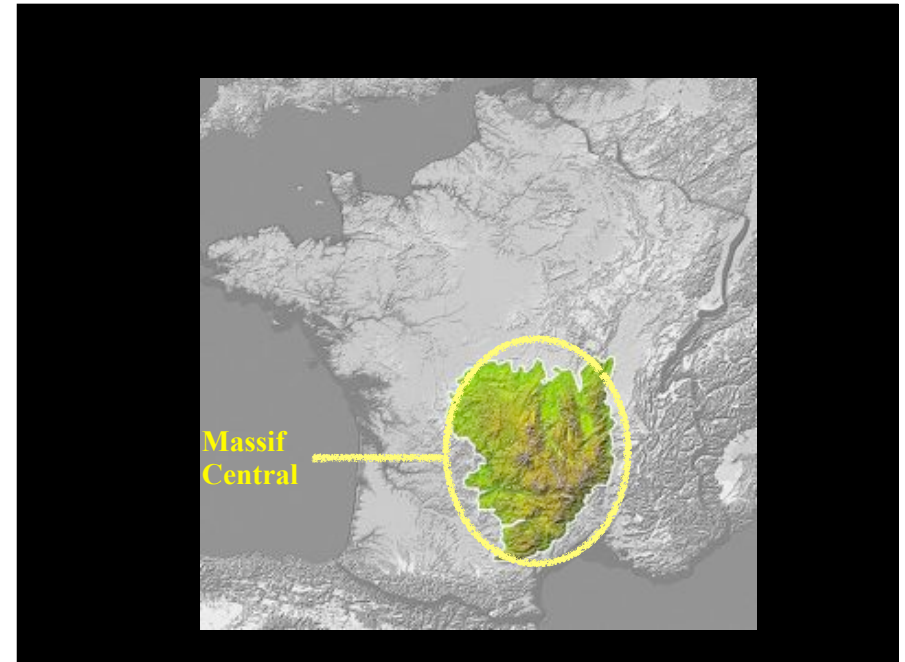
Washington Monument

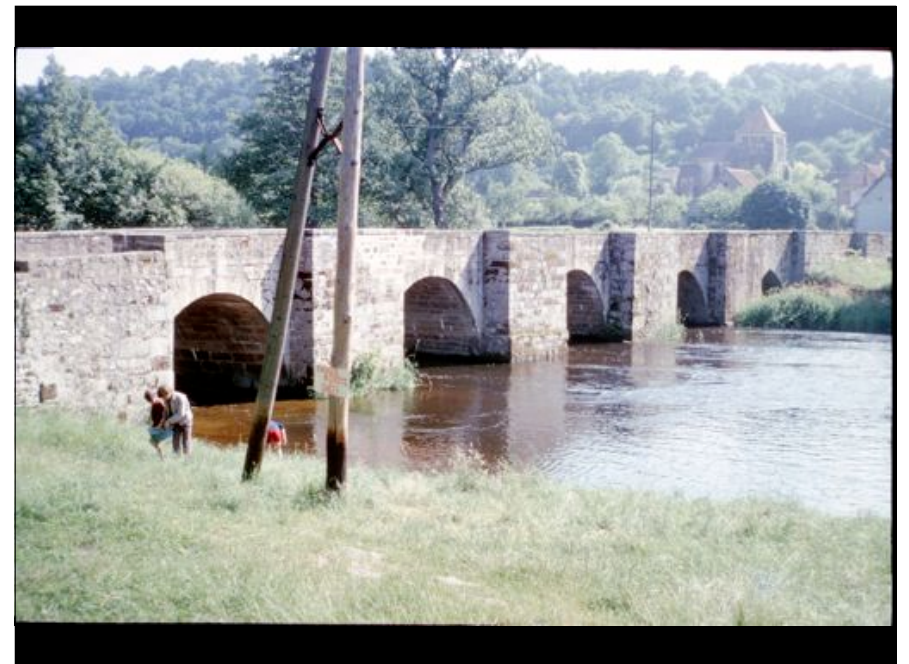
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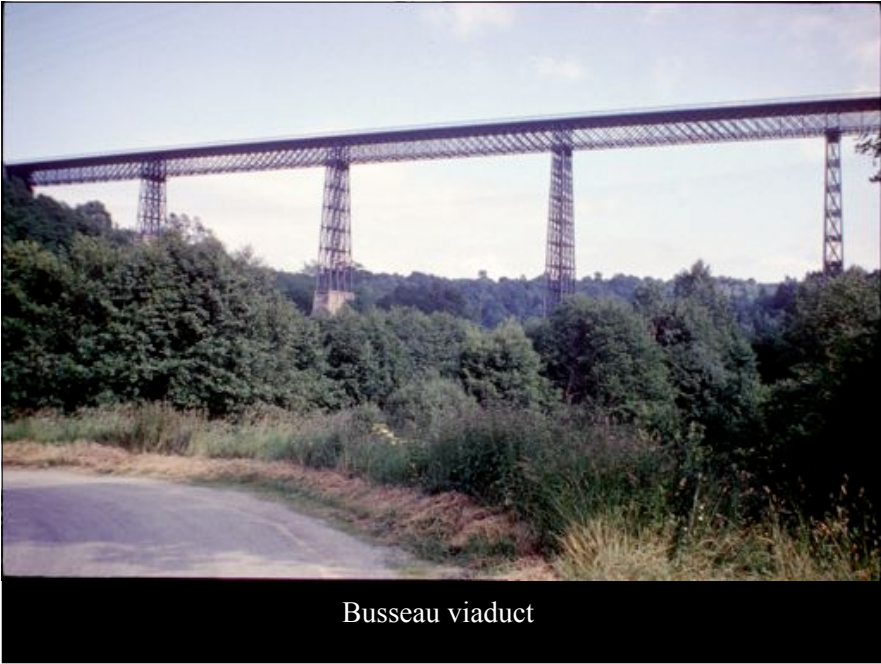
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Symbolic: An elegant example of a pure form which makes a grand landmark for the city with a unique view of formal Washington

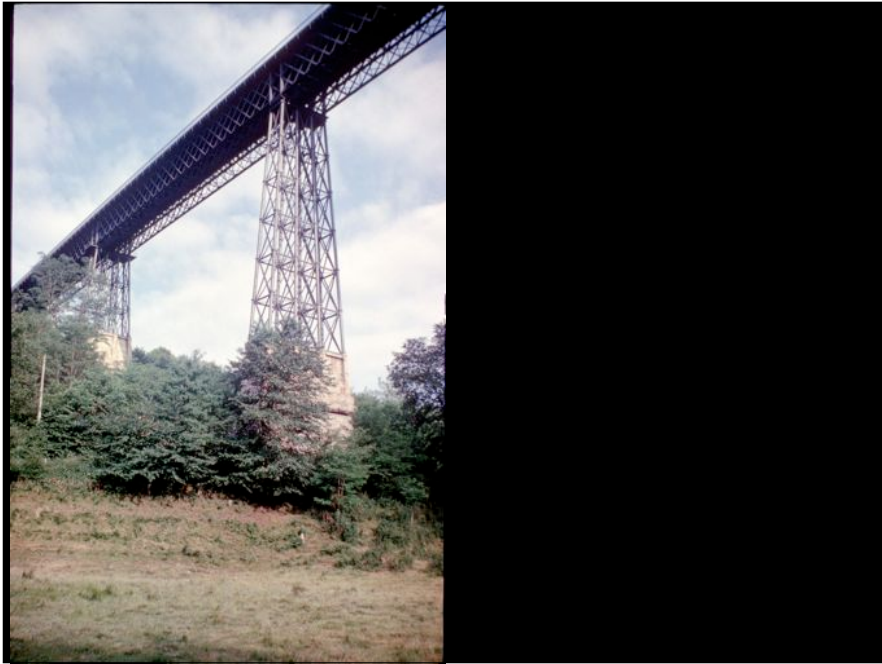
Q: What would we need to know to take these further?
What other items should be added to this breakdown?







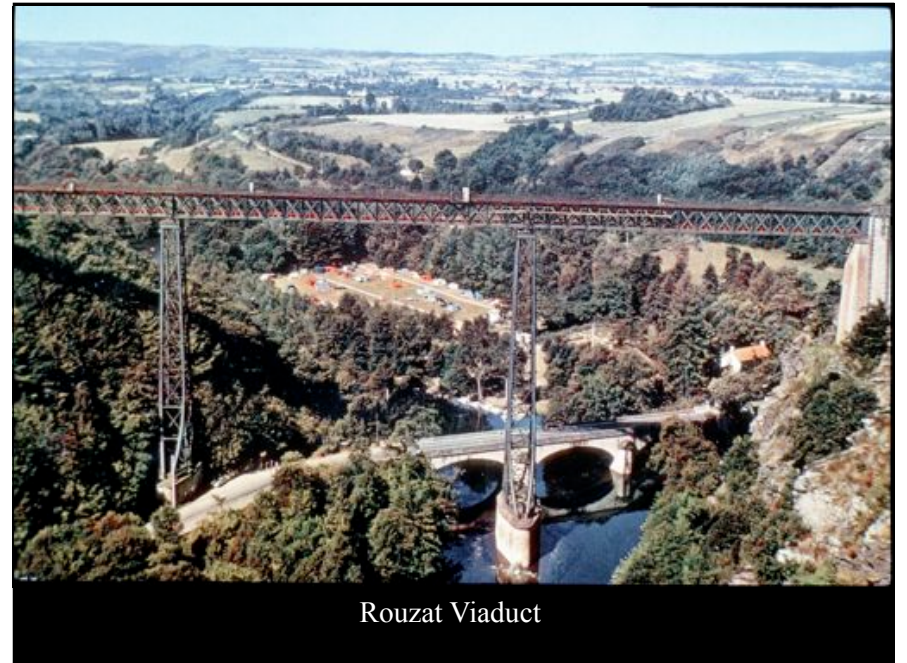
Busseau viaduct





Busseau "towers"
Perspectives
scientific, social and symbolic
scientific: light with new material; taper to resist wind
social: efficient transportation in remote area
symbolic: early expression of lightness in metal

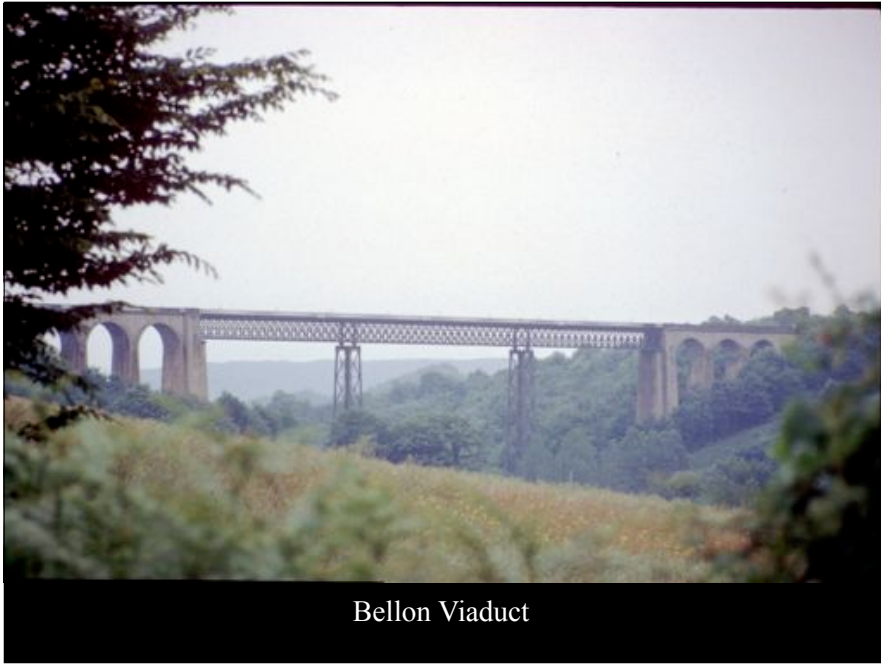




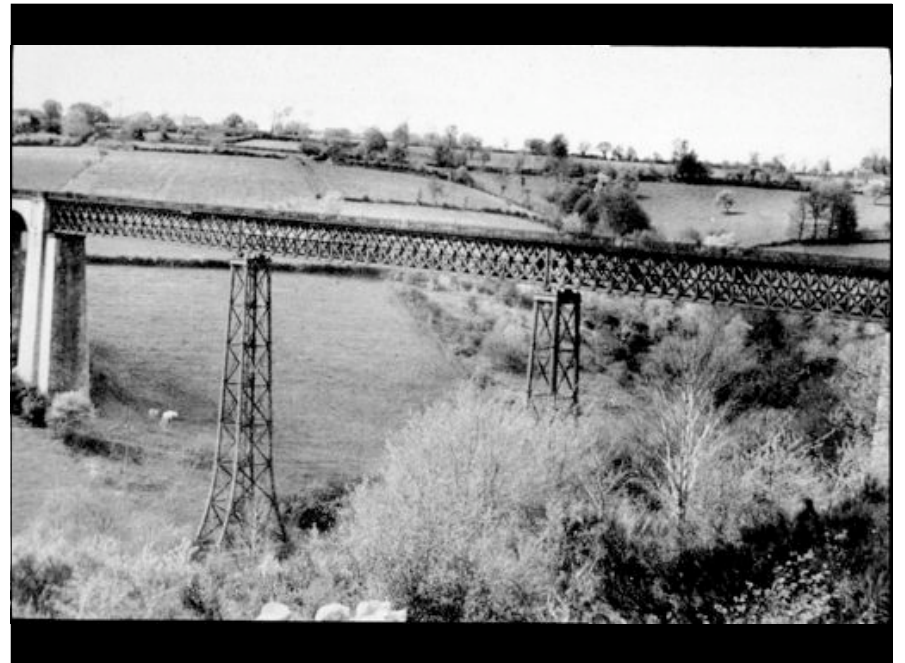
Rouzat Viaduct

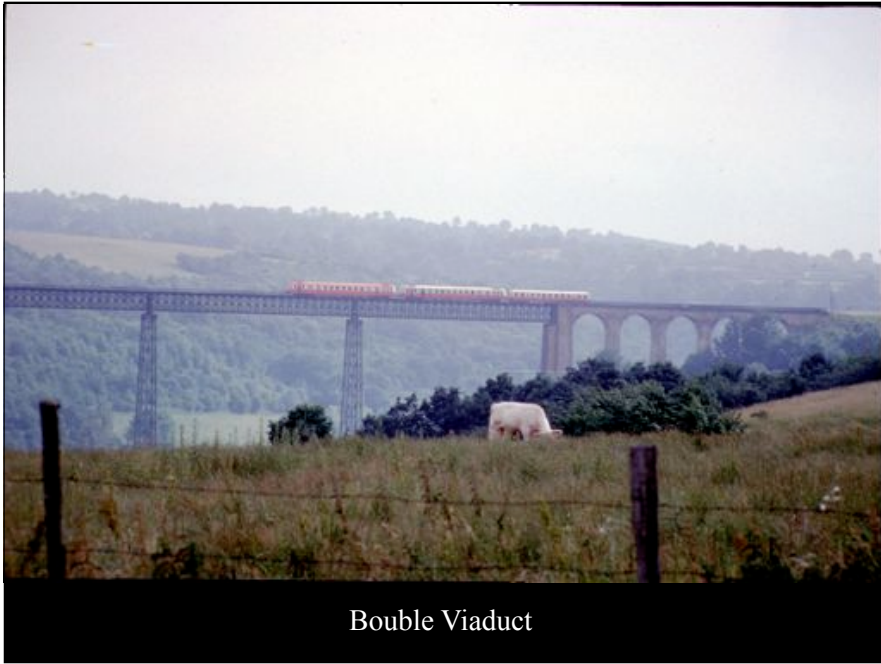




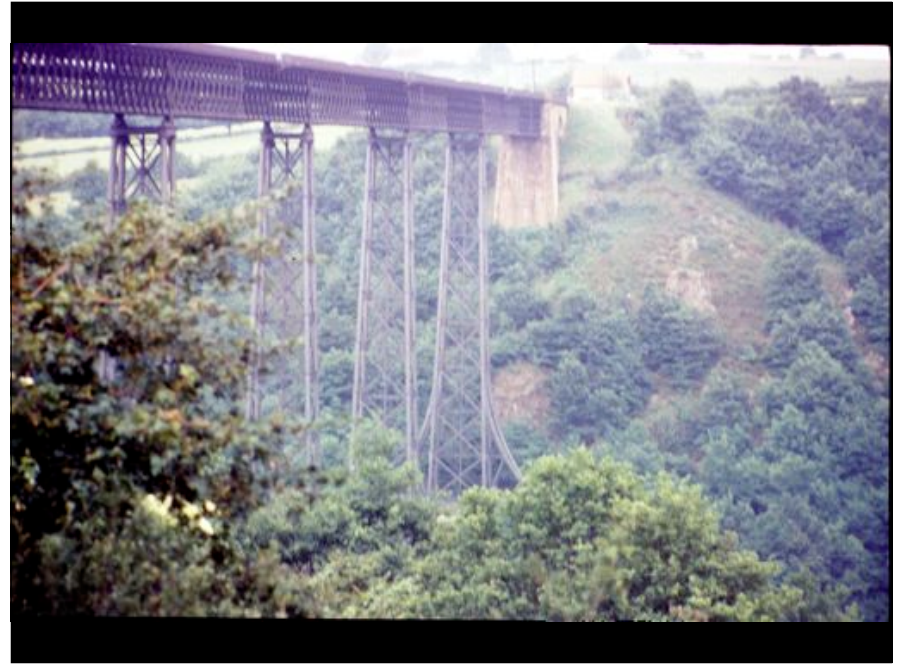


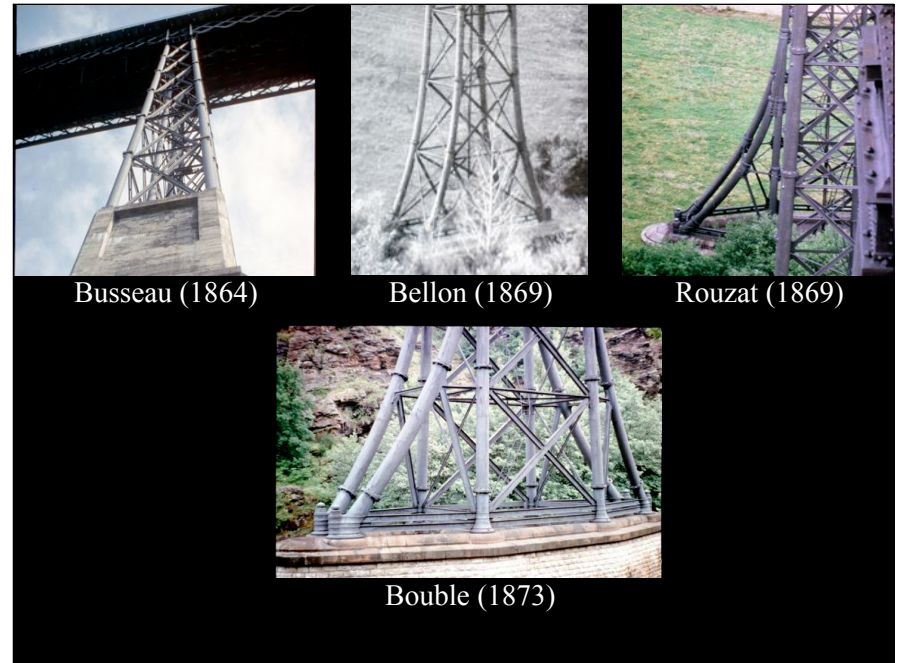
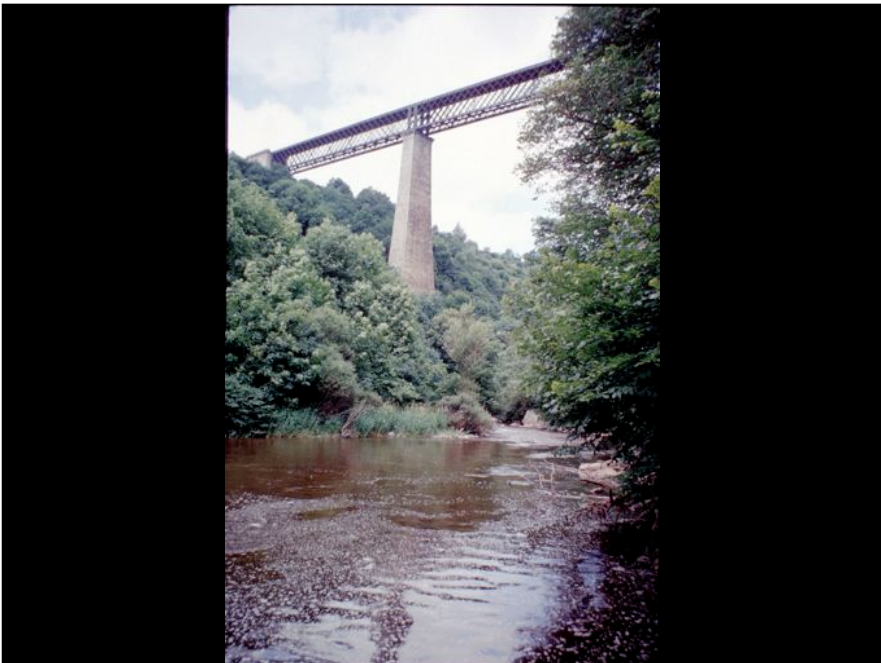
Bellon Viaduct

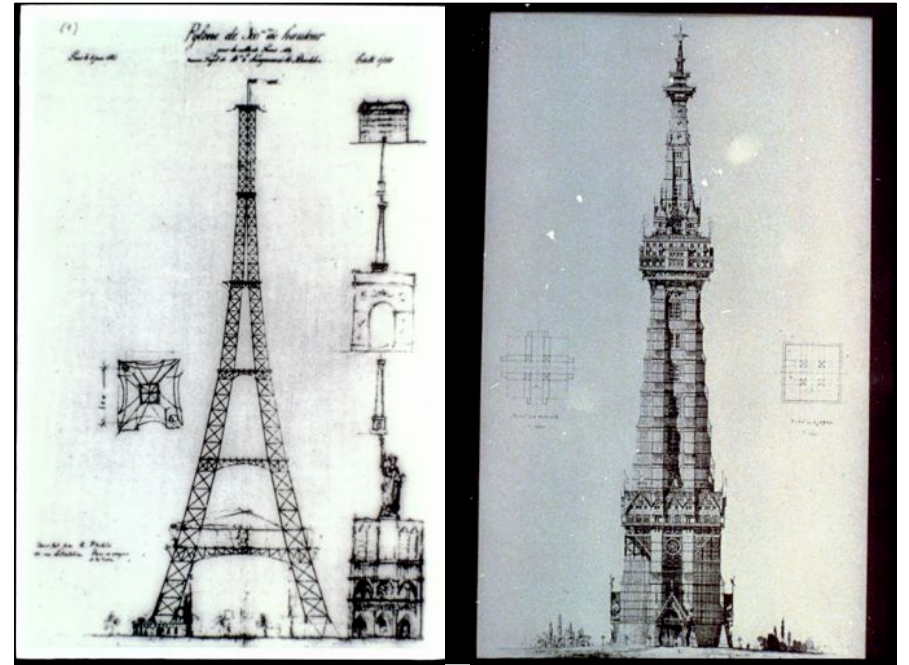
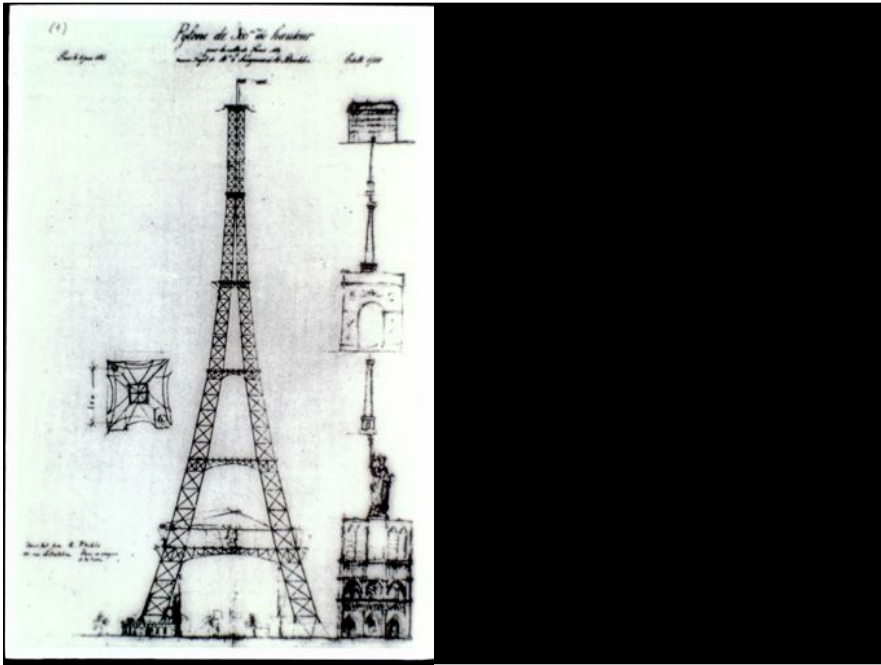


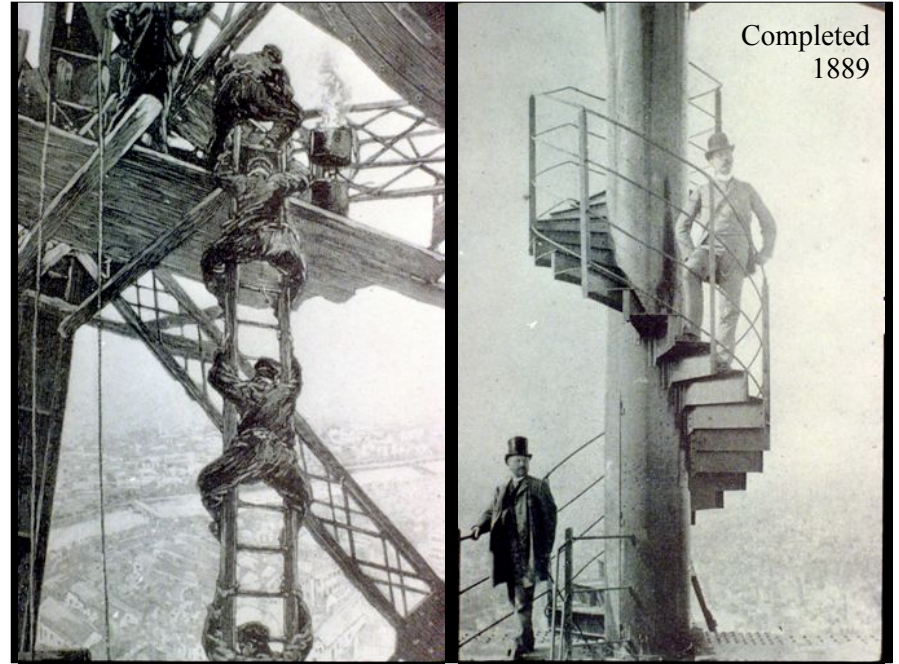
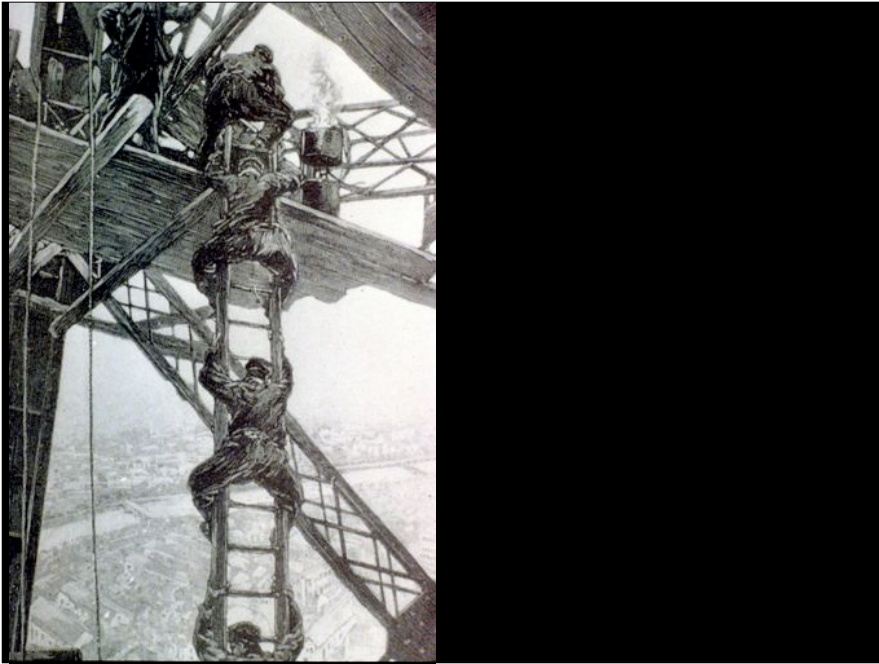


Bouble Viaduct

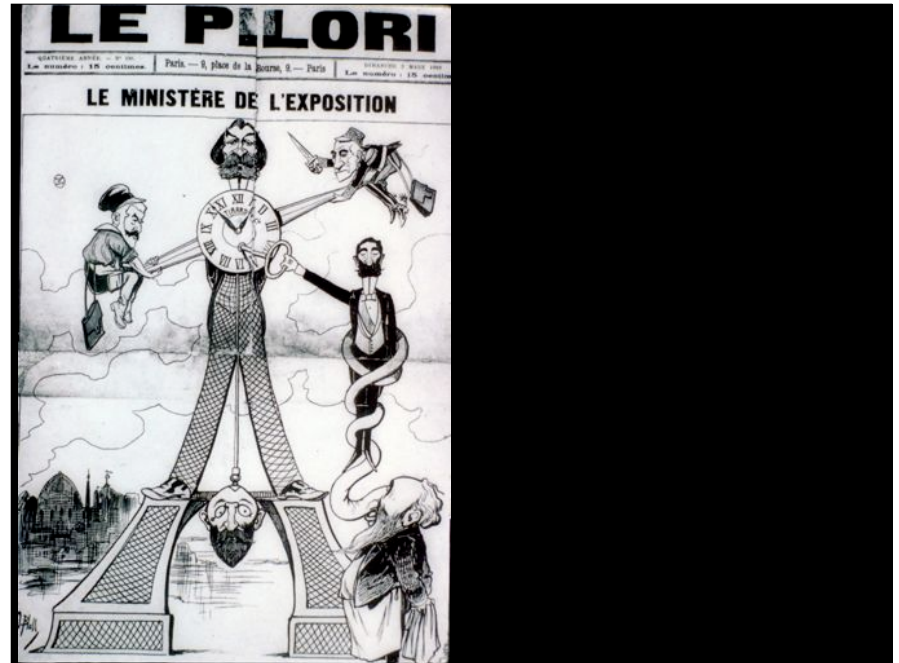


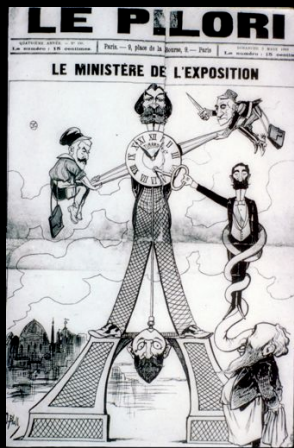






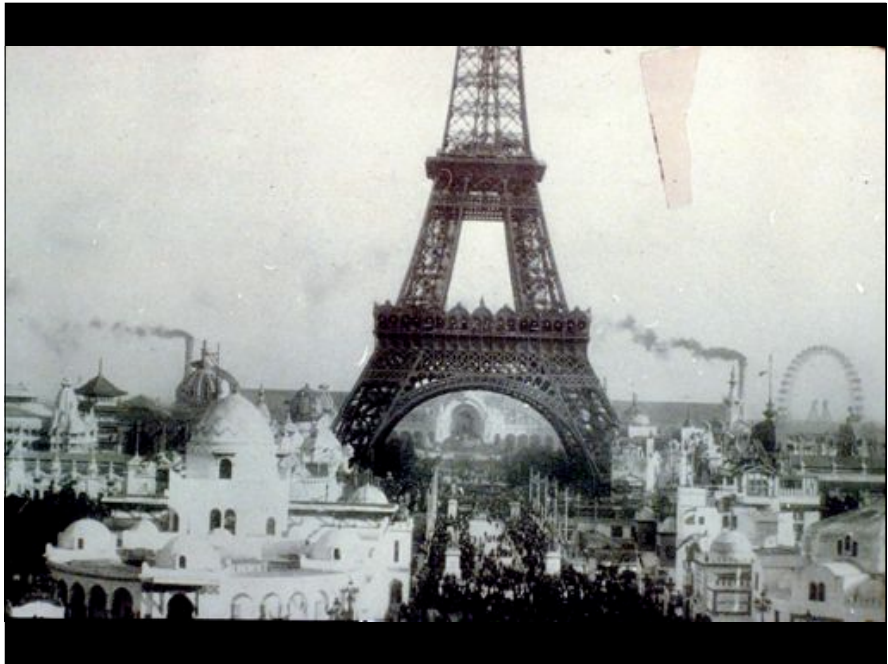
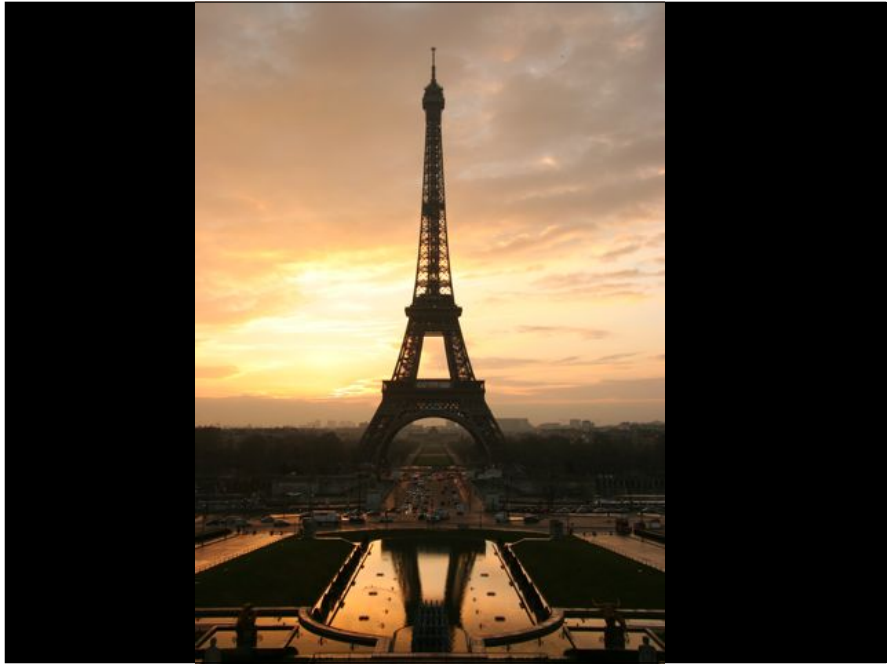
Londres	1851	6 000 000 environ
Paris	1855	5 160 000
Paris	1867	11 000 000 environ
Vienne	1873	7 255 000
Philadelphie	1876	10 165 000
Paris	1878	16 100 000
Paris	1889	25 750 744 ¹

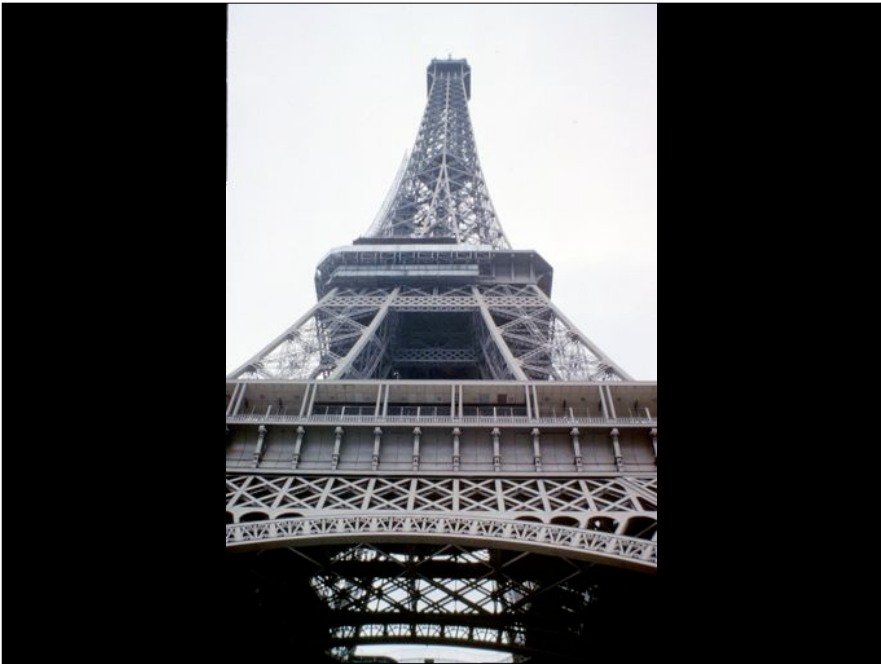
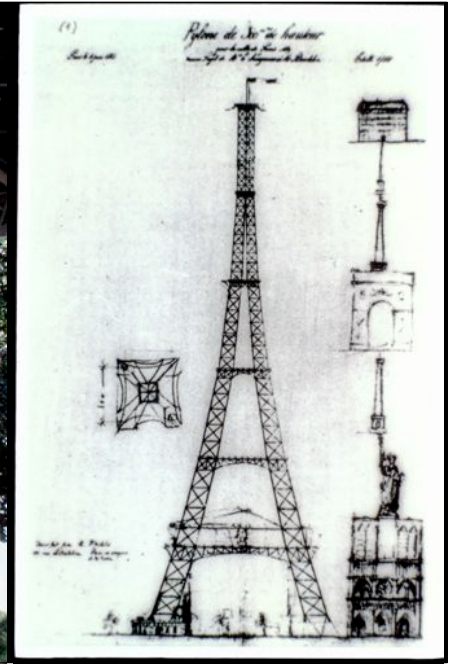




Writers, painters, sculptors, architects, passionate lovers of the beauty, until now unspoiled, of Paris, we come to protest, with all our strength, with all our indignation, in the name of disregarded French taste, in the name of art and French history presently in danger, against the erection, in the very heart of our capital, of the useless and monstrous Eiffel Tower...will this city of Paris continue to listen to the baroque, mercantile fancies of a builder of machines, and irreparably lose its honor and beauty? For the Eiffel Tower, which even the commercial America would reject, means, without any doubt, a Paris dishonored. Everyone feels this, everyone says it, everyone is deeply hurt, and we are only a weak echo of the universal opinion, so legitimately alarmed. Indeed, when the people of other countries finally come to visit our Exposition, they will cry in astonishment: "What? -- is this horror what the French have brought forth to give us an idea of their famous taste?" They will be right in mocking us, for the Paris of sublime Gothic art, the Paris of Jean Goujon, of Germain Pilon, of Puget, of Ruse, of Barye, etc., will have become the Paris of Monsieur Eiffel.²⁰

20. Barthes, R., *Structures Implicit and Explicit*, 1973, p. 163. The French text appears in Braibant, *op. cit.*, pp. 84-85.







Eiffel Tower

Scientific: Efficient form of an iron cantilever

Social: An enormously popular trip upwards
in a park

Symbolic: An elegant example of a pure form
which engages both from near and far



www.ce.jhu.edu/perspectives

user: perspectives

pass: structures

BB site for grades... (JHU)

Moodle site for grades/journals (UMass)

Day 1 warm-up exercise

- Who are we?
- Pair off (2 people)
- Introduce yourself to your neighbor and record your neighbor's name, class year, major, and any structure that piques their interest.
- Be prepared to introduce your new colleague to the whole class.