

Homework 4

Perspectives on the Evolution of Structures

(Writing Assignment #2 draft for in-class peer-editing)

Assignment: Take the information and preliminary thoughts you gathered in homework 1 and expand and reformat to a more thorough description, analysis, and critique of your structure. You may, after consultation with your professor, choose to work a different structure from the one examined in homework 1. The final document must not exceed two typed, double spaced, 12pt, 1 in margin pages, including figures but not including references.

The objective of this assignment is to present an effective argument about whether your structure does *or* does not represent an efficient, economical and elegant design. You should consider your structure from the scientific, social and symbolic perspectives. Please note that the assignment is to *critique* the structure, which includes both making claims (e.g. The structure is efficient in its use of materials) and supporting those claims with facts (e.g. The structure uses less steel because of its innovative design as can be seen by comparison to this other structure). Either of these aspects alone is not enough to make an argument; do not simply present facts or make unsupported claims. The tools of comparison/contrast are likely to be your most powerful weapons.

Guidance: In thinking about the scientific qualities of the structure, consider the following: Of what material is the structure made? What loads act on the structure? How do the structural members transmit loads to the ground? What technical purpose does the structure serve? Some social/economic considerations include: Is the structure expensive (in consideration of the time and location in which it was constructed and the society which constructed it)? How is the structure used by society? In considering the symbolism of the structure: How is the structure thought of? Is it an emblem of a city, state, or country or is it named after a person, a war, a cultural movement, etc.? If so, why? What qualities of the structure make it elegant and attractive as a symbol? Elegance and Symbolic meaning are the most difficult topics to write about. Elegance does not mean 'pretty' or 'attractive' or 'beautiful', but rather means expressive of the structural function in a way that leads to beauty.

Use the following format to organize your thinking and writing. Your assignment must be written in complete sentences, not bulleted lists.

Introduction/Thesis statement: A brief introduction to the structure and a clear, concise, and defensible thesis statement.

Structural description: Dimensions, loads, dates, designer, etc. Be as quantitative as possible.

Comparison structures: Brief description of at least one structure that you will use as a basis for comparison. Explain why you have selected this (these) structure(s).

Qualifications as structural art: The meat of the assignment. In separate subsections (social/economy; scientific/efficiency, symbolic/elegance), argue for or against the structure's qualifications as a work of structural art.

Conclusion: A brief summarizing sentence or two.

References: References cited according to the style of the journal *Engineering Structures*
http://www.ce.jhu.edu/perspectives/searches/citation_style.pdf

Other assignment notes:

1. You must clearly cite all sources, including sources for images.
2. Figures, images and tables must be numbered and have captions
3. If you feel you do not have enough information to complete an adequate assessment of the structure, state clearly what you are missing, and how you would proceed if the information was available.
4. We will peer-edit this assignment in class. Bring with you on the due date 4 printed copies of the assignment.

Grading rubric: The final draft of this assignment (HW6) will be graded according to the following rubric:

Category	Points
Correct sections	2
Correct length, typeface, and margins	2
Complete and correct citations/references	2
Use of images and illustrations	2
Thesis statement	2
Structural description	2
Social/economy argument	2
Scientific/efficiency argument	2
Symbolic/elegance argument	2
Overall style and quality of writing	2
Total	20