The primitive hut

In his writings, Semper talks of the theoretical primitive hut and the observable equivalent; the Caribbean hut. Theorists considered these to be important because they are the beginnings of architecture. Everything that came after derived from these huts. Hermann Wolfgang, in his 1984 book *Gottfried Semper: In Search of Architecture*, writes, “In another lecture and later in Der Stil, he [Semper] returned once more to the Caribbean hut in which ‘all elements of ancient architecture appear in their most original and unadulterated form: the hearth as center, the mound surrounded by a framework of poles as terrace, the roof carried by columns and mats as space enclosure or wall.’” (p169) The prevailing notion of the day was that the Greek temples looked the way they did because they were versions of the primitive hut, made in marble. However, Semper disagreed with this oversimplified view. “According to a well-known thesis, going back to a passage in Vitruvius and often repeated by writers on the classical theory of architecture, the archetypal wooden hut had been the direct model of the Greek stone temple. Semper rejected this thesis. In one of his first lectures in Dresden, he declared that “The question whether the human races... lived first in caves and from there derived the motifs of their later buildings or whether they built leaf-covered huts and tents’ was a futile controversy and that he was not going to discuss at all ‘because these different means of protection could at the most have had an influence on the construction for the later buildings but not on their basic forms.” (p165) So Semper recognized that architectural ideas and values were derived from the very first basic shelters and even as far back as caves, but he rejected the idea that it was a direct evolution. The idea of the primitive hut, however, gives us the four basic elements of architecture.

Hearth

From the primitive hut, we derive the idea of the Hearth. “The hearth is the germ, the embryo, of all social institutions. The first sign of gathering, of settlement and rest after long wanderings and the hardship of the chase, is still the set of the fire and the lighting of the crackling flame... The hearth has kept its age-old significance up to the present. In every room the center of family life today is still the fireplace.” (p198). While the use of actual fireplaces has fallen out of style, especially in today’s multi-family residences, there is still a center to every living space. The lack of a physical fireplace and the necessity of its warmth makes it somewhat more difficult to visualize, but it is there. It is best described as a spatial directionality; the place where we are inclined to place the sofa. The sofa provides the necessary gathering space around the hearth, replacing a thing to sit around (the fire) with a thing to sit on (the sofa). Modern architecture, in order to have a successful living space, has kept the hearth in place while finding ways to remove the actual physical manifestation of the hearth. In a loft or other building conversion into a living space, creation of the hearth is what transforms the space into something residential.

Fence/Enclosure

The enclosure, expressed in light, woven material terms, offers the hearth protection from various environmental factors. “Protection of the hearth. There is no need to prove in detail that the protection of the hearth against the rigors of the weather as well as against attacks by wild animals and hostile men was the primary reason for setting apart some space from the surrounding world.”(p199) The author is claiming that, once people began to gather and create a hearth, the impulse to surround and protect the hearth was formed. Semper also concluded that materials must be expressed in unique ways, not used to stand in for- or appear to be- another material. “Immediately following these observations came the statement that ‘brick, timber, especially iron, metal and zinc have replaced stone blocks and marble,’ and that to imitate the latter would be wrong...This means that Semper’s demand for material, including iron, to be true to itself related to the English domestic house and English interiors.”(p175) When new materials arise, as have done over the centuries and also more rapidly in the last century, new forms arise to express their materialities. The Eiffel Tower looks the way it does because of its steel construction; it does not mimic a stone monolith even though it fills the same purpose as a stone obelisk. Enclosure is wrapping space in material, something that has resonated throughout the history of architecture, and remains one of the key elements of a successful project.
Roof

The roof provides protection from the rain and other weather and is derived from the roof of caves. “Only the climate was a powerful enemy; a solid, warm roof was needed for protection against it. Originally this roof rose directly from the ground; only later, when combined with the protective wall, did it take on the form of a house.” (p200) Whether Semper is right about the exact timeline of architecture’s evolution or not, the roof relates intimately to the enclosure. Enclosure protects and encloses the space around the hearth, while the roof further encloses and protects against weather. The roof is another assembly that has remained relatively stable throughout the history of architecture. Though modern methods are more sophisticated and materials have changed, the essential idea of roof remains strong. Even in pavilions, where enclosure is not necessarily important, the roof is expressed as a main element.

Mound

Finally, there is the mound. The mound is derived from the floor of cave, expressed in earthworks and masonry. “Mounds were needed to make it safe from flooding and also to espy the enemy from afar.” (p199) While enclosure and roof have remained relatively unchanged, modern architecture has experimented with the expression of the mound. Le Corbusier’s Villa Savoye uses its form to elevate the living space, while Mies’ Farnsworth House sits on delicate legs, an extension of the system that holds the glass enclosure in place. Semper’s idea of mound being built of earth, stone, or masonry has been challenged.
Bio-Mimicry

Tectonics is an important facet of Semper’s four elements. The elements each have a series of materials and therefore construction methods and tectonics assigned to them. In Semper’s writings, tectonics also relates to bio-mimicry. “Tectonics is an art that takes nature as a model-- not nature's concrete phenomena but the uniformity and the rules by which she exists and creates... The sphere of the tectonics is the world of phenomena; what it creates exists in space and manifests itself through shape and color.” (p219) In Design 8, all three projects have used a variation of bio-mimicry as the inspiration for the process. Bio-mimicry and using a physical or diagrammatic generator are well-suited to exploring the Semperian elements of architecture because the process can be used to generate a system of making.

Bio-mimicry also allows for a loosening of the rigid rules that govern some architectural styles. Semper spoke of allowing for a non-symmetrical plan. This idea, “he called the ‘lyricism of spatial proportions,’ by which he meant loosening the massive body of the building and giving the ground plan a more varied form.” (p155) By not forcing the plan to adhere to strict rules, you allow it to follow the tectonics and inspiration that it derives from much more closely. Taking nature as a model is in line with the other Semperian ideas of architecture, and is one observed across all three projects of the class.
WALL- In the wall project I used topography as inspiration for both planar and sectional shifts. Interlocking is an important concept, as it expresses the Semperian idea of weaving, even though the wall is made of masonry-type units. The wall is a study of the ideas of enclosure, separate from the other 3 elements.
PAVILION - For the pavilion, I used a found object (a diagram made by tracking computer mouse movement over time) as plan diagram. Ideas of enlargement and layering to make the profile of the columns and the overall shape of the pavilion. The Semperian elements of mound, roof and enclosure are all present. In this exercise, we exclude the hearth so that we can look at the other three more intensely.