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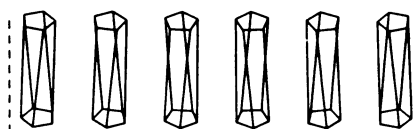
Letters

Chimeric columns: Another twist

When the pentagonal tower on the River Aare in Solothurn, Switzerland, was capped in the 15th century by a pentagonal spire, the inhabitants complained that the spire was not straight, so the architect rebuilt it. Like all pentagonal pyramids, which lean to the left or right according to the point of view, the new steeple was again a failure, and the architect threw himself into the river in shame.

The hexagonal spire constructed later does not lean, but it mismatches the tower.

A column in the form of a right pentagonal prism does not lean, but if given a 36° twist it will appear to lean when viewed from almost any direction. A facade of such columns, as in a Greek temple, could be arranged so that a viewer approaching on the main axis of the building would see the columns lean inward and appear to converge upward (see illustration), as the columns of the Parthenon in fact do. But the twisted pentagonal column allows an interesting extra degree of freedom, in that the apparent tilt angles vary as the viewer approaches.



Theories of why the Parthenon columns converge go back to the Romans. One theory is that apparent height is enhanced because the perspective vanishing point is brought closer. If this illusion exists, then a facade could be designed to loom taller on approach, or conversely.

A more subtle effect would result from heptagons or other odd-numbered polygons whose departures from the vertical would

appear less obtrusive, as is certainly the case at the Parthenon. The twisted triangular prism resembles, but is not the same as, the leaning columns described and illustrated in the recent correspondence from Jeffrey D. Mueller (Letters, SN: 3/2/91, p.131) and in "Leaning" column creates optical illusion" (SN: 1/12/91, p.23).

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Please limit letters to 250 words.
All letters subject to editing.

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Cover: Many anthropologists contend that Neandertals and anatomically modern humans lived virtually around the corner from one another in the Middle East from around 100,000 to 40,000 years ago. But controversial new analyses throw Neandertals out of the Middle East and replace them with modern humans that display considerable skeletal diversity. (Illustration: American Museum of Natural History/Chas. Knight)

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