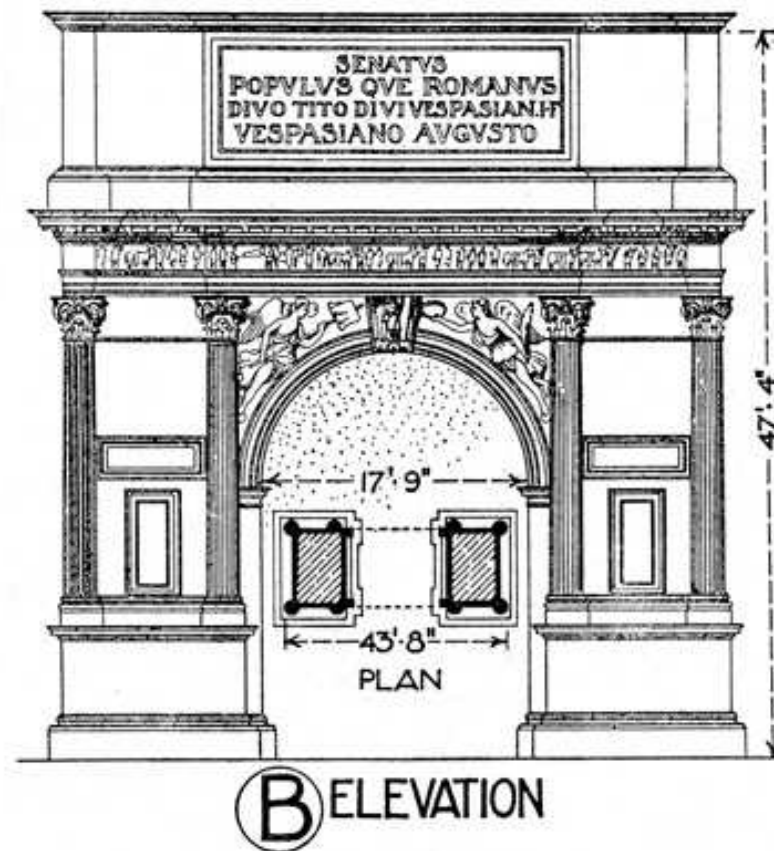
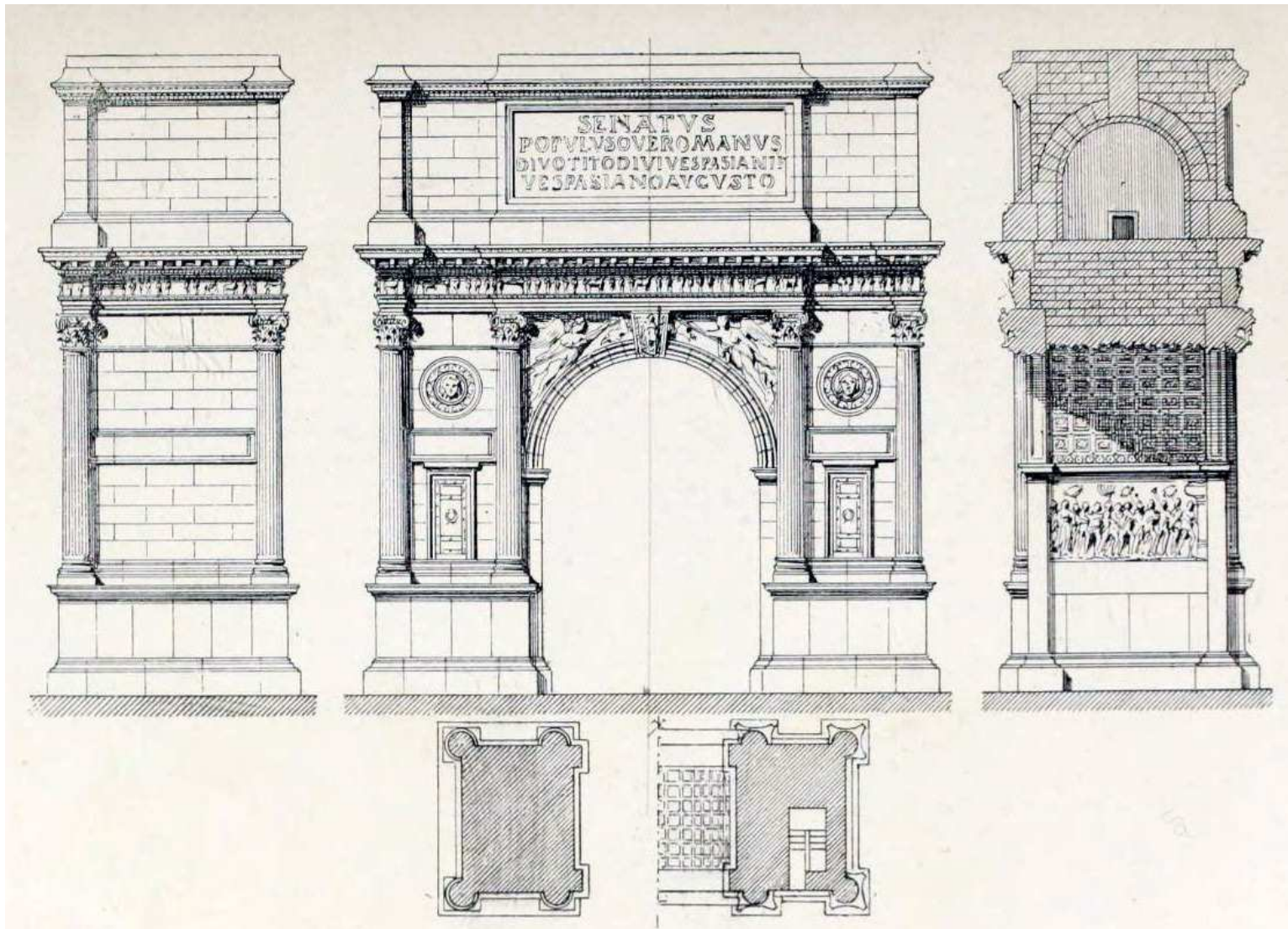


The Arch of Titus



Built of stone at the edge of the ancient Roman Forum, the “Arch of Titus” is believed to have been erected during the first century of the Christian Era.



This ceremonial triumphal arch spanned over an ancient “Sacred Road” running through the Forum. In these drawings we can see that a secret panel between two columns on one side opens as a door to a little stairway climbing up to a large empty chamber above the main archway. I imagine that hollow space was built simply to reduce the weight of massive masonry bearing down on the arch.



On the interior of arch is an ancient stone carving, depicting Roman soldiers carrying away precious loot from their destruction of the Jewish temple in the city of Jerusalem.

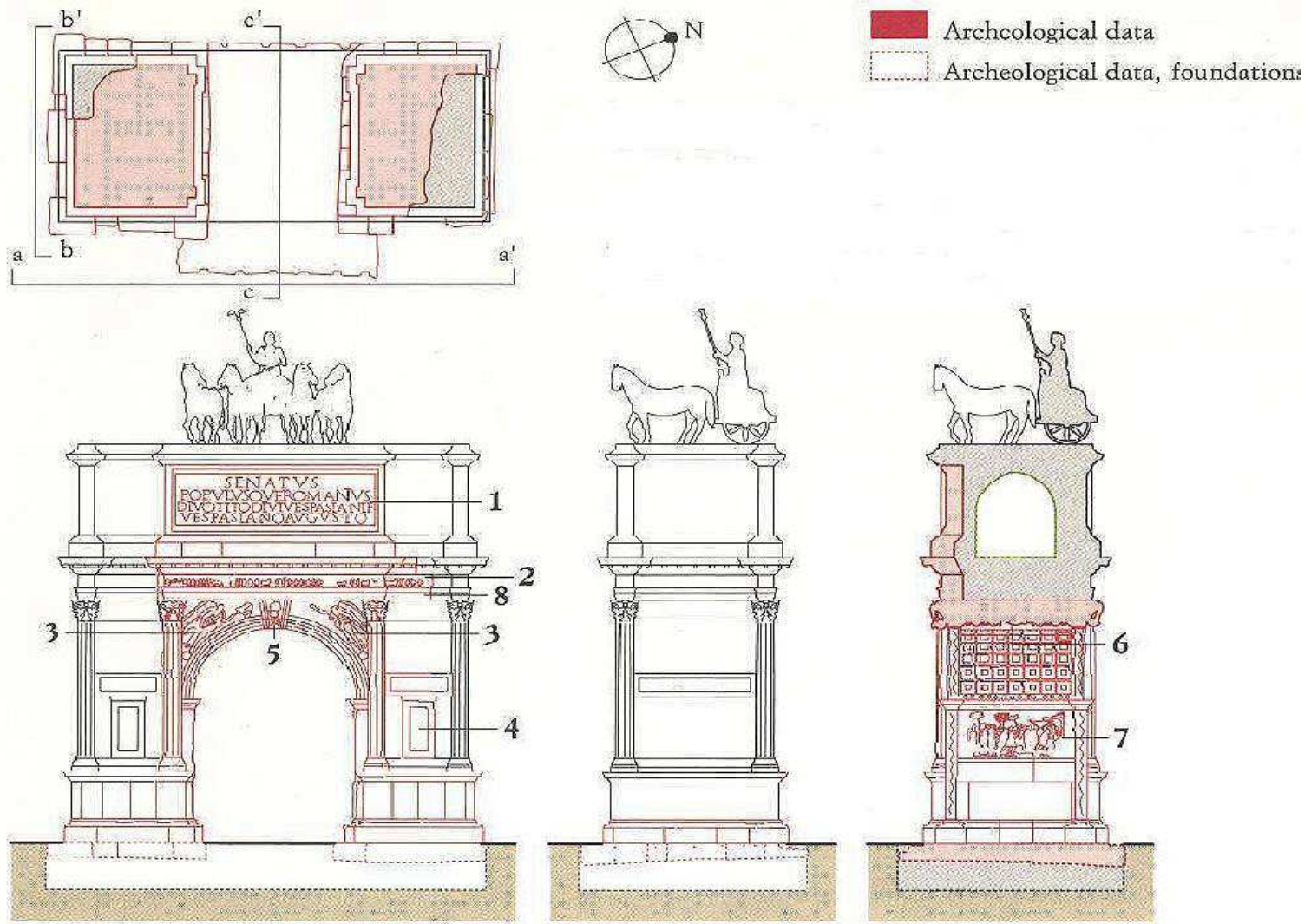


The original inscription on the east side of the Arch of Titus reads:

**SENATUS
POPULUS QUE ROMANUS
DIVO TITO DIVI VESPASIANI F
VISPASIANO AUGUSTO**

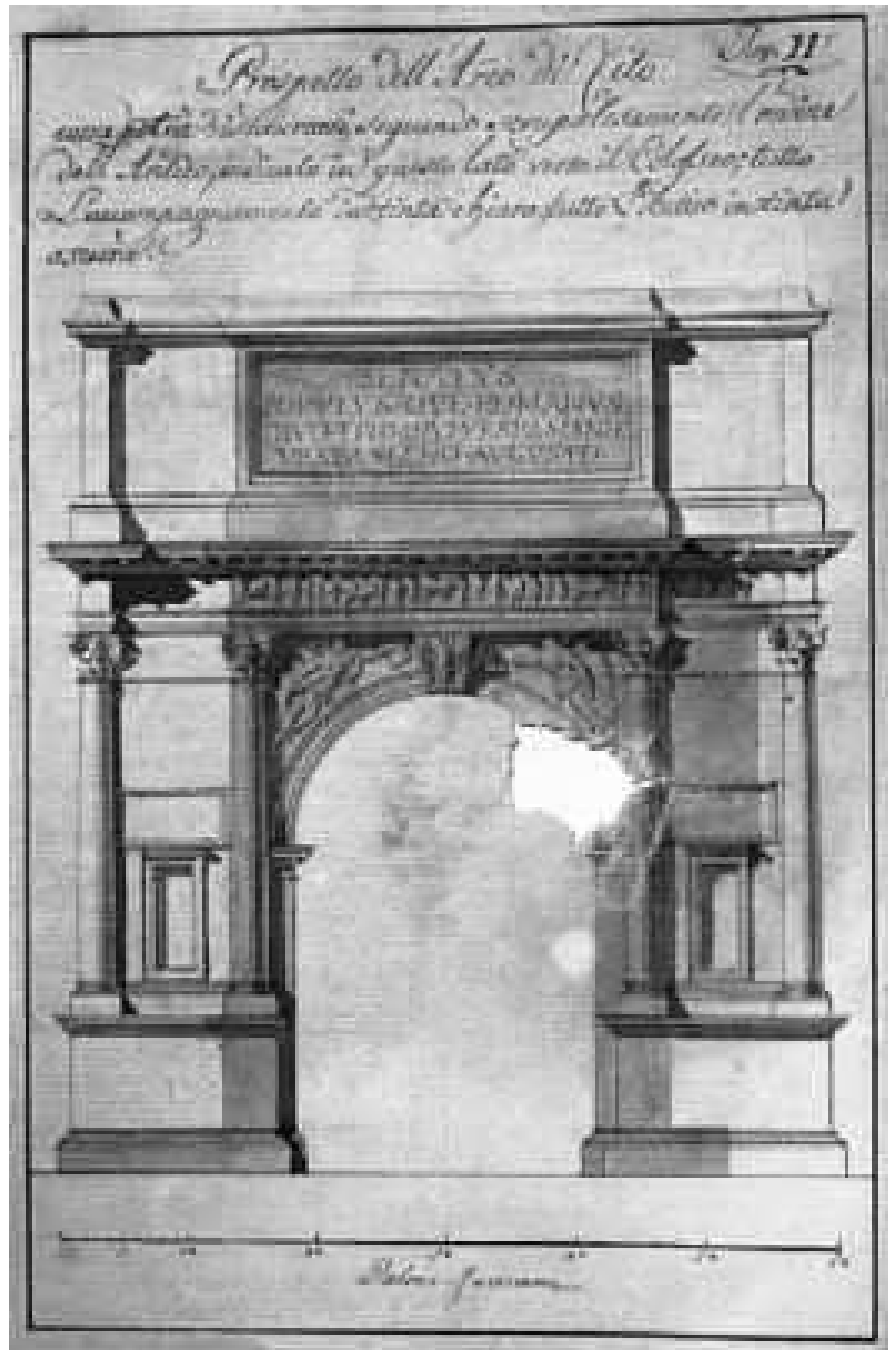
**The Senate
and People of Rome,
to Divine Titus, son of Divine Vespasian,
Vespasian Augustus**

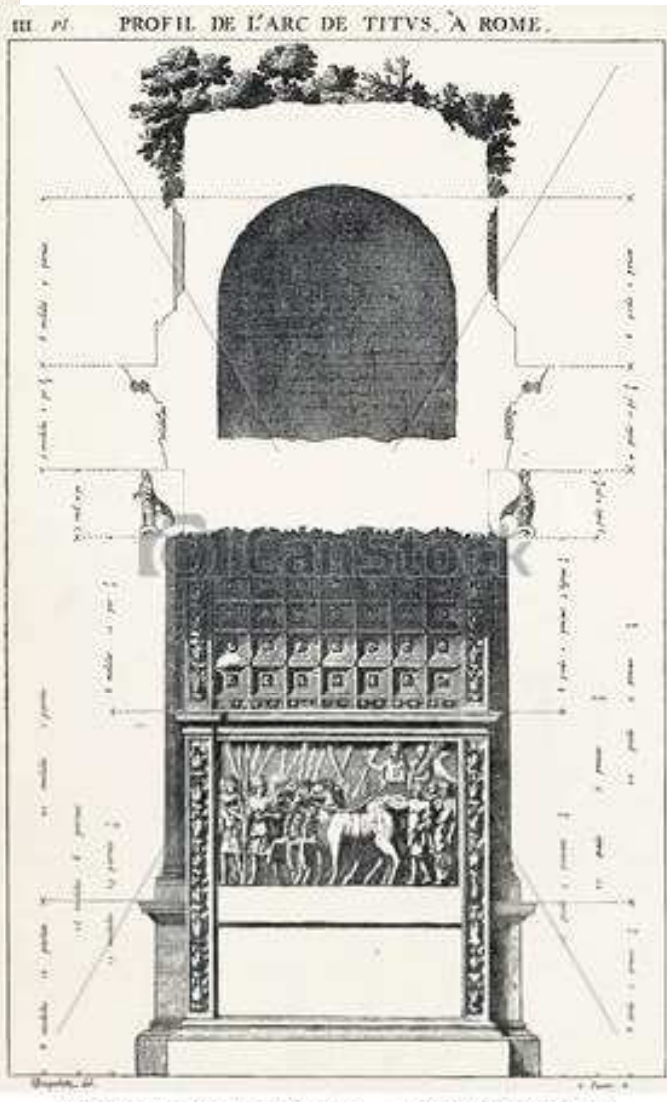
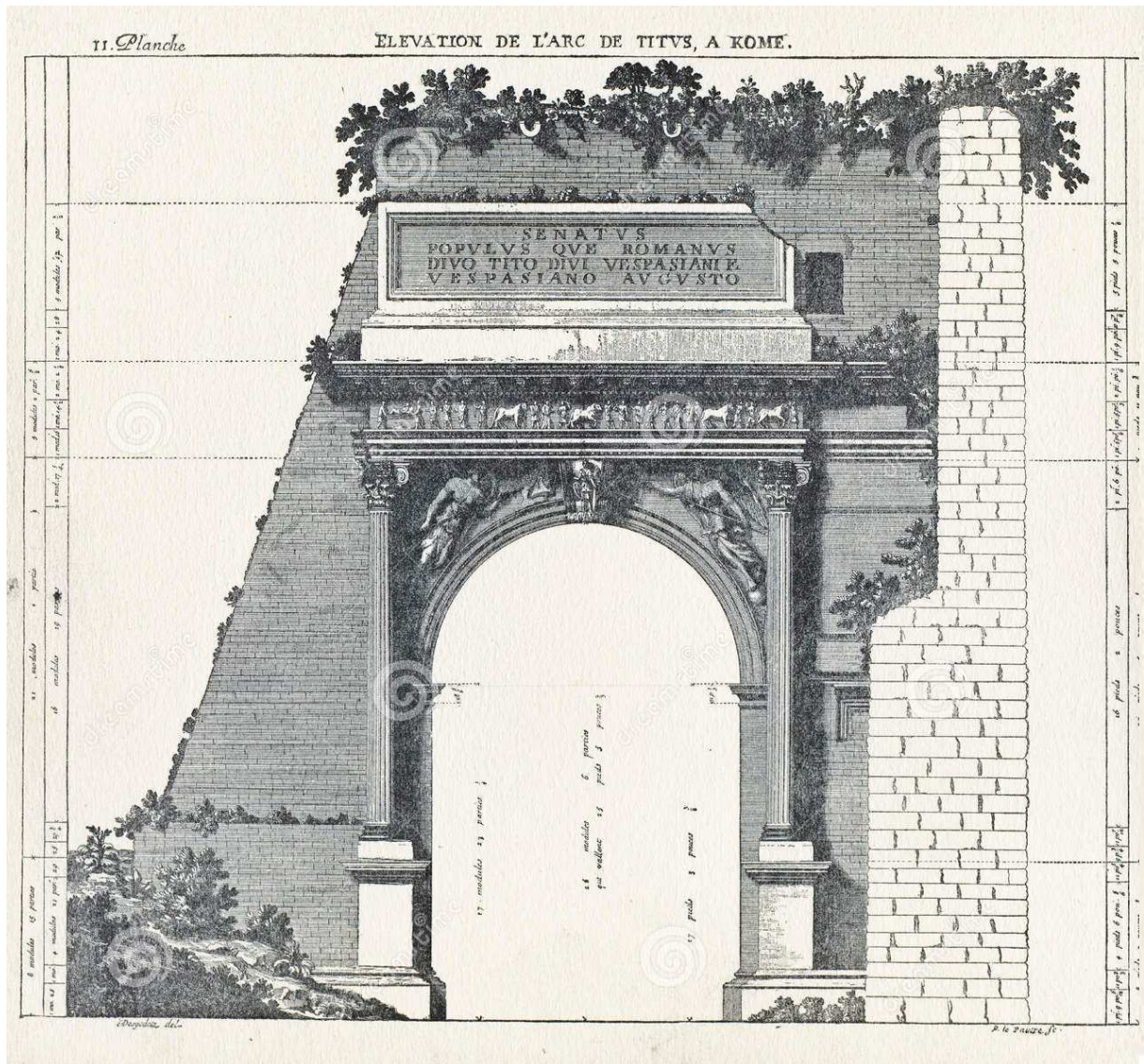
The use of 'Divo' for Titus is believed to indicate that the arch was erected after the death of Titus in 81 CE.



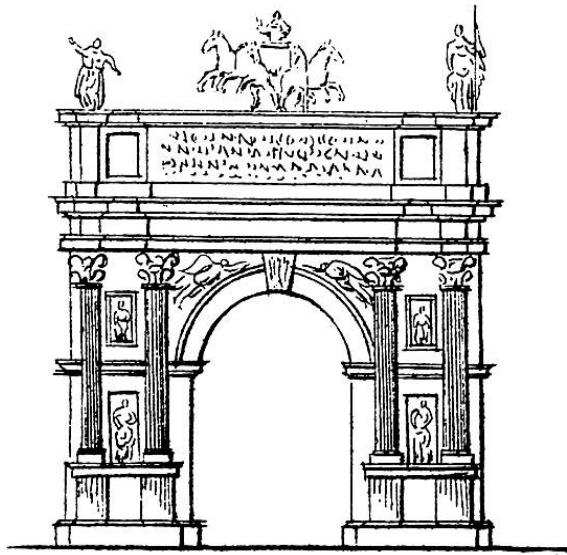
Putting together this little presentation I was surprised to learn that much of the Arch of Titus is a *restoration* -- only the central portion (shown here in red) was still intact at the end of the 18th century.

This old drawing shows, with shading, the portions original to the “Arch of Titus”.





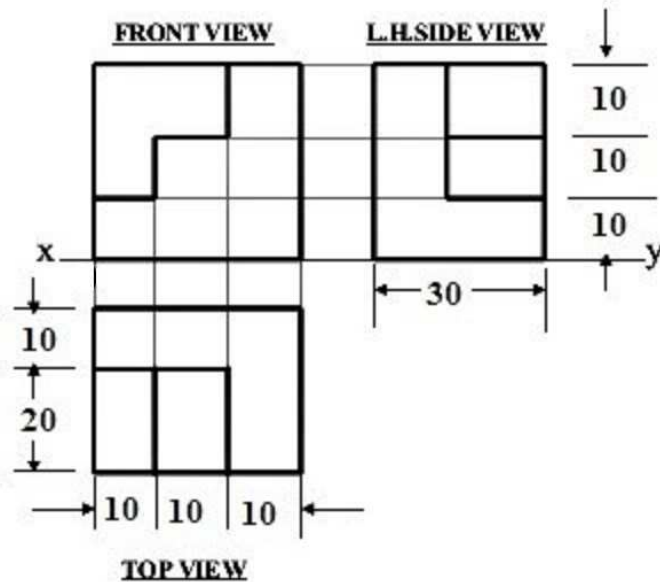
These old survey drawings show what the “Arch of Titus” looked like before restoration work began, around two hundred years ago.



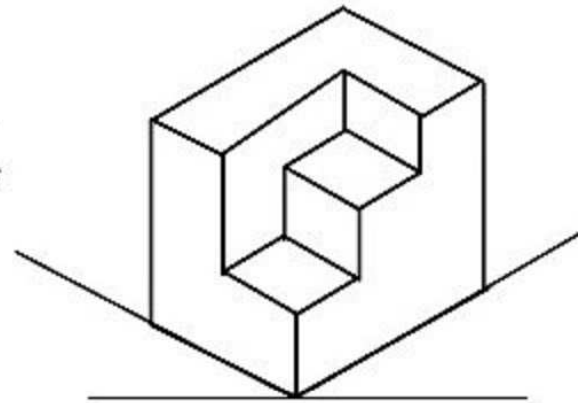
The restoration is educated but conjectural, and what the “Arch of Titus” originally looked like is still a subject of artistic speculations.

But the point of this little presentation has nothing to do with the ‘Arch of Titus’ -- it’s about the ability of your brain to *visualize* things.

Orthographic Projections



Isometric Projection



None of the drawings you have been looking at match the geometric configuration of rays of light your eyes would receive naturally. They are all pure abstractions -- “*orthographic projections*”-- wherein perpendicular rays are projected in parallel lines out onto a single flat picture plane (which is scaled down in size to fit into this presentation space).

By using only my words of description and these two-dimensional orthogonal projections, your brain has somehow given you an overall three-dimensional mental visualization.



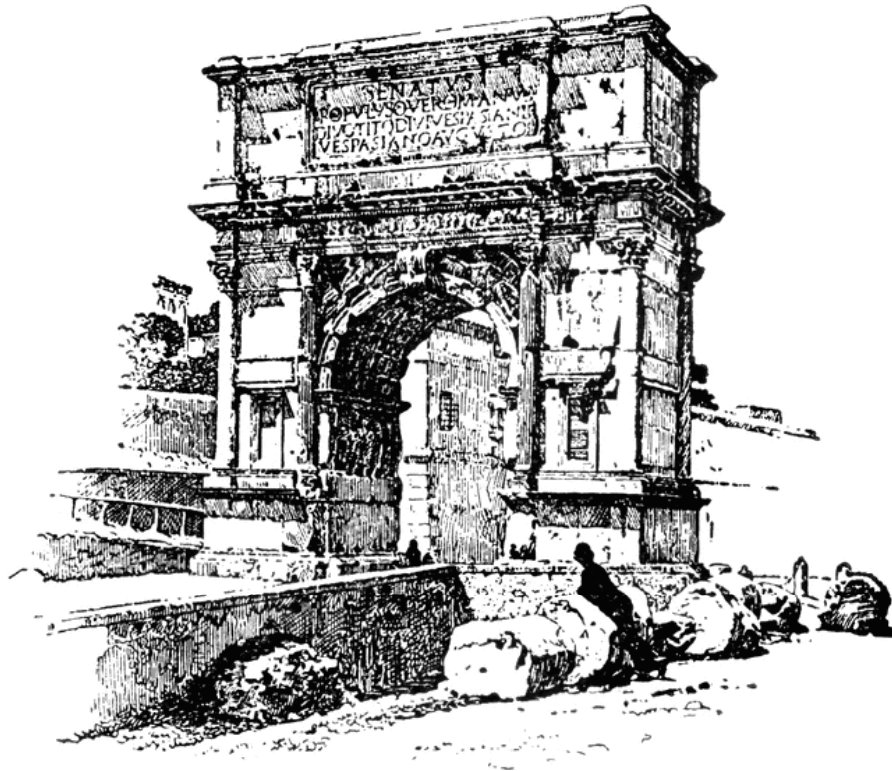
And when you see this 18th century Perspective drawing, giving a more optically natural view of the appearance of the Arch of Titus before it's restoration, you are perhaps a bit better informed, but I expect that your brain is not especially surprised.



Artistically detailed reconstructions, showing how the Arch might have originally looked, may help refine your previously held mental visualization ... but ...



... your brain is not especially surprised to see an “optically natural” perspective view corresponding to one of the purely abstract orthographic projections it was previously shown.



And this hand-drawn Perspective drawing differs only minutely from a photograph (and might possibly be nothing more than an ink tracing over a camera's view).

How your brain is able to visualize things when stimulated only by words, by abstract diagrams, or by mathematical expressions, is unknown.

Photograph of part of one of the relief sculpture panels high inside the Arch of Titus.



Complex geometries can be imagined inside the brain -- without any Perspective light or prior experience of the specific subject – your brain can “see” by its own imagination alone. It is an human ability that has long been utilized, but how the mechanics of your mind’s “inner eye” work are still today close to being a complete mystery.

The ancient Sacred Road through the ruins of the Roman Forum with the Arch of Titus far in the distance.



I believe that normal eyesight employs this “inner eye” of the brain (more or less constantly); that this power of visualization is (to some degree or other) learned, developed, and trained; and that (to some degree or other) the brain’s acts of visualization are voluntarily controlled – consciously turned off and on. The search for a science of human vision is far older than the Arch of Titus, and as that search continues, to achieve a clearer understanding of a brain’s ability to visualize might become be a great triumph of the future.

(The End)

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Jim Barnes, architect (James David Barnes); Oklahoma City, Oklahoma, United States of America; (7Ladders.com) ; 29th July 2018