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The Role of Archives in the Graphic Restitution of Monuments: The Case of the Roman Bridge over the Ofanto River near Canosa di Puglia, Italy

El papel de los archivos en la restitución gráfica de monumentos: el caso del puente romano sobre el río Ofanto cerca de Canosa di Puglia, Italia

investigación
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Abstract

The current structure of the Roman bridge over the Ofanto River near Canosa di Puglia (southern Italy) is the result of numerous reconstruction and restoration efforts that transformed its appearance several times over the centuries.

The documents preserved in the archives have proved to be an essential tool for the graphic restitution of the monument, integrating archaeological research with new data and outlining new perspectives on the history of architecture and multidisciplinary fields.

Keywords: bridge, Roman architecture, Canosa, archives, graphic restitution, ancient architecture

Resumen

La estructura actual del puente romano sobre el río Ofanto cerca de Canosa di Puglia, en el sur de Italia, es el resultado de numerosas reconstrucciones y trabajos de restauración que transformaron su apariencia varias veces a lo largo de los siglos.

Los documentos preservados en algunos archivos probaron ser una herramienta esencial para la restitución gráfica del monumento al integrar investigación arqueológica con nuevos datos y al perfilar nuevas perspectivas sobre la historia de la arquitectura y los campos multidisciplinares.

Palabras clave: puente, arquitectura romana, Canosa, archivos, restitución gráfica, arquitectura antigua

View of the bridge from the west bank (detail), Canosa di Puglia, 2019. Photograph: Germano Germanò

The word "monument" derives from a Latin verb that literally means "to remind," "that carries memory with it," implicitly conveying the idea of being preserved and therefore handed down to future generations.

The beginning of human history coincides precisely with the moment when writing was able to leave behind the testimony of a gesture, an action, a meaning. What the text represents for the word, the drawing represents for the image. The archives are the place where these precious documents are kept, a sort of cerebral cortex of society. It is from them that *a posteriori* investigation can proceed to find those memories that have been lost or destroyed, thus reconstructing them.

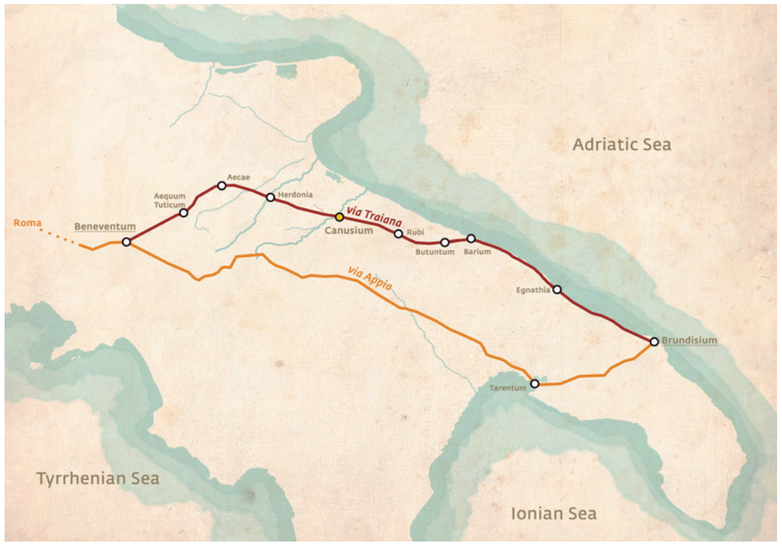
This procedure has been applied in the research into the original appearance of a Roman bridge over the Ofanto River, near the city of Canosa di Puglia in southern Italy, which had been altered and restored several times over the centuries.

The bridge, 170 m long and 4.5 m wide, currently consists of four piers of different sizes, ranging from a minimum of 6.2 m to a maximum of 8.4 m. These are composed of square blocks built in *opus isodomum* and equipped with triangular starlings and pyramidal cones upstream and downstream. Five arches of different widths (from east to west: 6.5 m, 13 m, 12.1 m, 12.1 m, 13 m) and morphologies – i.e., segmental and rounded arches – are grafted onto them, defining a humped profile.

Of great interest is the presence of a *platea*, a foundation slab paved with trapezoidal limestone flagstones, whose layout reveals traces of restoration work done in ancient times.[1]

Only the pillars, the abutments and the foundation slab remain of the original structure of the bridge.

Due to the precarious condition of the structure after the last war, especially from a static point of view, vehicular traffic was transferred a short distance downstream to a newly-built bridge on State Route 98.



Via Traiana map, southern Italy. Drawing: Germano Germanò, 2020

The latter, created in 1928 but only extended from Canosa to the adjacent city of Cerignola in 1953, definitively supplanted the movement of people, vehicles and goods over this ancient bridge that carried the weight of poets, kings and emperors.

Between 108 and 109 A.D., the Roman emperor Trajan decided to build a faster route[2] to the sea than the Via Appia, the famous road leading from Rome via the city of Benevento to *Brundisium* (Brindisi) on the Adriatic Sea, the main port that connected the heart of the empire with its east, giving it fundamental strategic importance, especially for the supply of goods and soldiers during wartime. This new road was named the Via Traiana (Trajan Way) and already-existing infrastructure along its route was reinforced, including many bridges – the bridge over the Ofanto among them.

This road, which was connected to the older route, was also exploited in later periods to reach the ports of Apulia from Rome and the rest of Europe. In the Middle Ages, these ports were the jumping-off point for the Crusades and pilgrimages to the Holy Land, playing a fundamental role in the road network until the spread of railways in the nineteenth century.

Because of the wear and tear caused by the continuous passage of wagons and men, as it was the main crossing over one of the major rivers of the Tavoliere delle Puglie, and due to several earthquakes and the work of the river's flow over time, which have compromised the structure, the bridge has been subjected to numerous restoration and reconstruction efforts: in particular during the Middle Ages, under the Kingdom of Naples with interventions by Vanvitelli, and after World War II.

In Roman times, these interventions were documented through inscriptions[3] that attest to repairs under Septimius Severus and Caracalla, in the Tetrarchic period, between the end of the third century A.D. and the beginning of the fourth century A.D. and in the Constantinian age. Yet there is no such evidence from the medieval period.

This gap is probably due to a much more tragic event than a natural disaster: On September 30, 1943, the retreating Wehrmacht set fire to an anti-aircraft deposit in San Paolo Belsito, near Nola in the Campania region, where the most important documents of the State Archives of Naples – the capital of the kingdom that, for centuries, included all of southern Italy – had been temporarily transferred. All of the institution's oldest documents were lost in the fire, including 378 volumes of parchment containing the registers of the Angevin and Aragonese chanceries (which covered a very broad period of time, from 1265 to 1505),[4] as well as the only surviving register of the imperial chancery of Frederick II, to name just a few. The presence in this vast documentation of a nod, a reference or perhaps even a graphic record of the reconstruction of the bridge during this important period of time would have filled an important gap in the history of this monument.

Although this event is marginal in the history of architecture, it offers an opportunity to reflect on the importance of archives in the transmission of memory to future generations and on the need to preserve, digitize and divulge their contents as much as possible.

This is the case with another institution, the State Archives of Foggia, in Apulia, geographically closer to our monument, which preserves key documents for the reconstruction of the history of this bridge.

In the Middle Ages, shepherds engaged in seasonal migrations with their animals from the heights of Abruzzo and Molise to the plains of Tavoliere, with its milder climate, over the so-called *tratturi* ("mountain grassy paths").

Transhumance was a much older practice, common throughout the Mediterranean area, dating back centuries before the advent of the Romans. Frederick II (1194-1250) supported this system in his constitution *De annalis in pascuis assegnandi*. In 1447, under Alfonso I of Aragon, this activity was subjected to a strict fiscal regime, modeled after the Spanish Mesta, with the institution of the Regia Dogana della Mena delle pecore di Puglia (Sheep Customs Office), which assigned pastures and collected taxes from the shepherds.[5] Along the paths, they established *riposi* (resting places) for the herds, where they could rest for up to three nights before being taken to the *locazione* (literally, "lease"), the parcel assigned for them to keep their flocks during the winter. These plots of land were registered in large descriptive atlases for present and future reference, drawn up by special technicians known as *compassatori*, surveyors who prepared well-documented maps reproducing all elements present within the *locazione*, whether natural or not: shelters, taverns, mills, castles, villages, churches, mountains, rivers and, therefore, bridges as well.

This impressive store of documents, covering the period between 1536 and 1806, has been collected and preserved in the Sheep Customs Archive of the State Archives of Foggia. Although it has also suffered numerous losses (there is a complete lack of documentation regarding the fifteenth century, for example, and a 1731 earthquake still further reduced its material[6])

Map of the Locatione di Canosa, Antonio Michele, 1686. On the lower left, the bridge is represented with three arches. Archivio di Stato di Foggia. Dogana delle Pecore di Foggia - Atlante delle locazioni del Tavoliere di Puglia di Antonio e Nunzio di Michele di Rovere

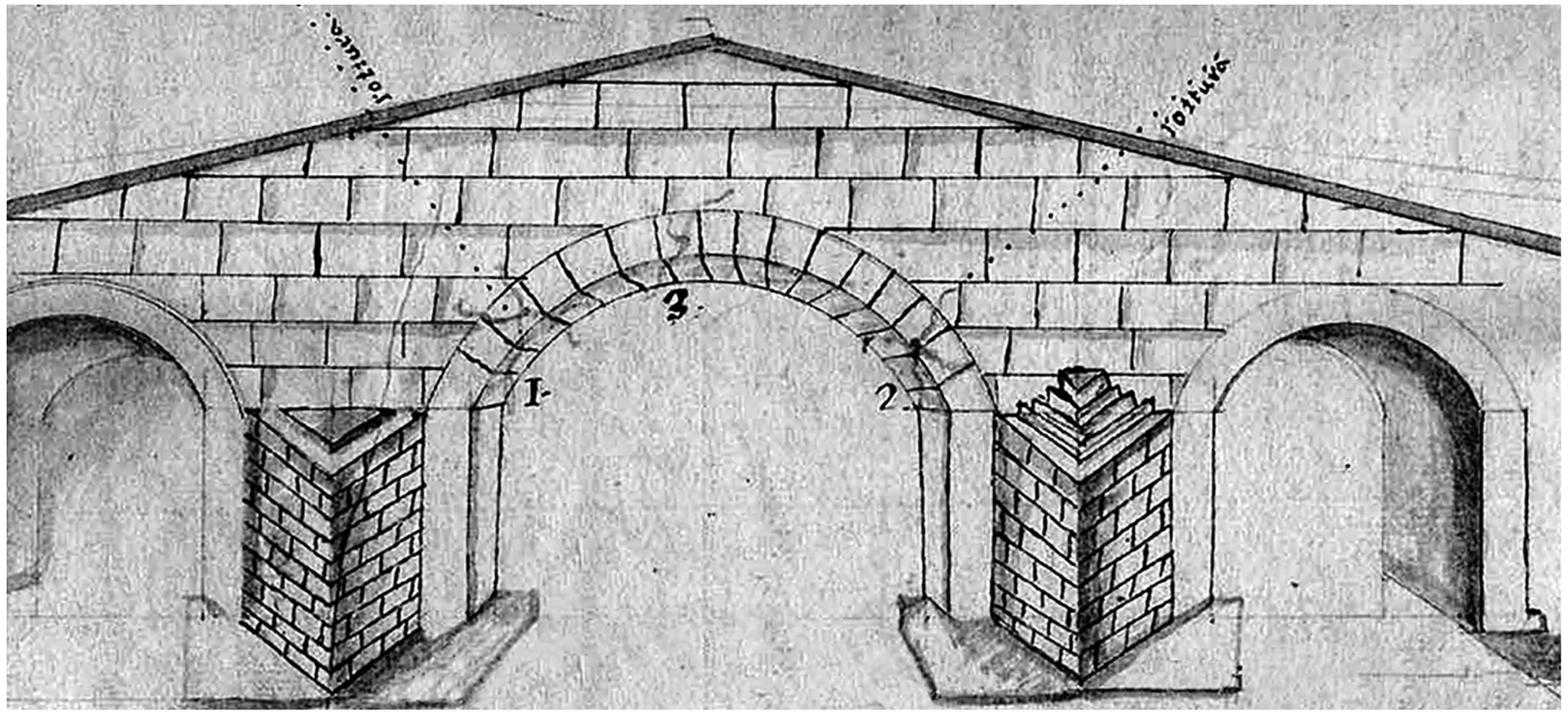
this archive is still an essential reference for the reconstruction and remembrance of the territory's ancient landscape. One of these atlases contains a map of the *locazione* of Canosa drawn up in 1686 by the *compassatore* Antonio Michele, in which there is the oldest existing representation of the bridge over the Ofanto. Even if stylized – like all the other elements on the map, which are often more ideographic than realistic[7] – it is interesting to note that the bridge is represented with only three arches.

Between 1751 and 1773, works of many types were carried out by a variety of entities, as is well documented in the State Archives of Foggia, in the Sheep Customs Office section: *Volumi degli atti per la formazione, ristaurazione ed altro del Ponte di Canosa* (Volumes on the Formation, Restoration, Etc. of the Canosa Bridge).[8]

Toward the end of the eighteenth century, the river changed course. Its turbulent flow had significantly modified the lay of the land near the bridge, to the point at which the river consumed a large part of its bank on the Canosa side while creating new land formations elsewhere, such as a wooded island that is similar to what can be seen today. As the river was no longer flowing along its traditional course – that is, under the arches – but against the lateral embankments, it ended up causing subsidence. In 1749, the Customs Administration sent a master mason, Francesco Delfino, to evaluate possible remedial measures. In addition to his report on the size and composition of tuff elements, he described the dimensions of the arches in great detail.

Although the report highlighted the threat to the structure's stability, it was not given the maintenance required and the central arch collapsed shortly afterward in 1751. Delfino was sent back to assess the damage, producing a new report indicating its breaking points. In his sketches, the technician depicted the look of the bridge before its collapse, indirectly confirming the three-arch configuration, in which the central arch is much larger than the other two. Although this is not a true survey but is instead an almost incidental representation of elements that were known and taken as a given at the time, these details take on historical and architectural value when they are critically compared with archaeological data in a synthesis that sheds new light on the reconstructive hypotheses regarding the elevation of its Roman *facies*.

The technicians in charge of this restoration project arrived in March that same year to verify the causes of collapse, which they attributed to the excessive length of the arch compared to its width. They proposed rebuilding



Drawing by Francesco Delfino (1749) of the bridge, showing its aspect before collapse.
State Archives of Foggia, Italy, elaboration by G. Germanò

the central span with two arches resting on a central pillar, thus halving the width of the spans and decelerating the flow of the river, which they considered to be dangerous going into the future. This work also included the rectification of the river's course and the restoration of the foundation slab, which began in 1755. This phase was documented by the "licensed surveyor" Francesco Paolo Pacileo, who was the first to record construction details, though he was still strongly influenced by the simplified style of the atlases.

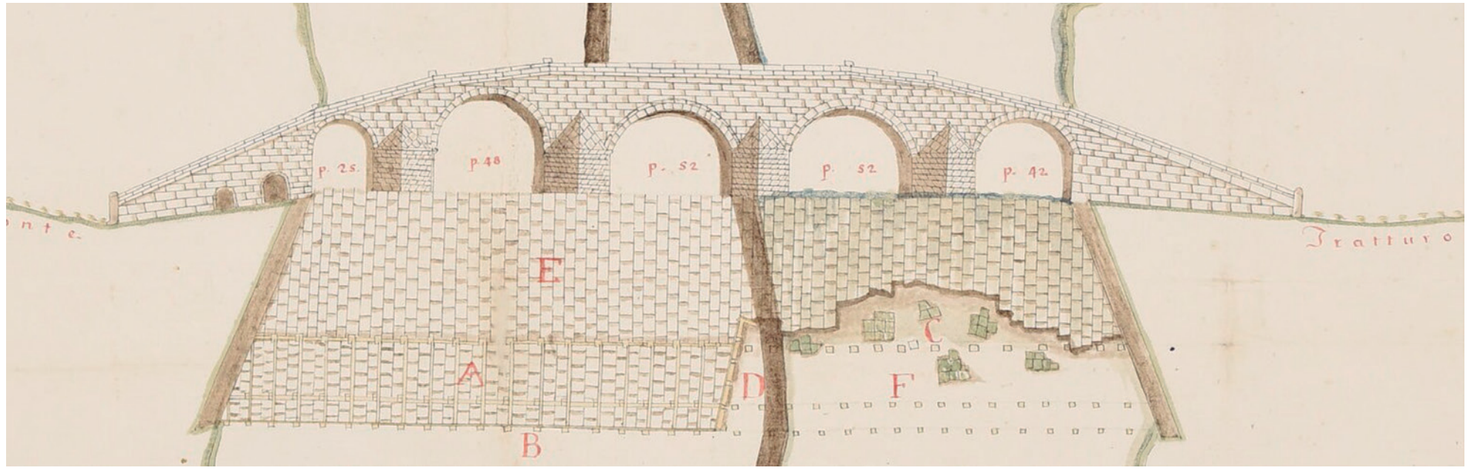
In 1756, Colonel Amato Poulet was sent to prepare a project for the restoration of the foundation *platea*. He appended a detailed plan that constituted the oldest existing architectural survey of the bridge.

His drawing is substantially comparable with current surveys, not only demonstrating the military engineer's technical skill, but also highlighting those elements that are no longer visible today. Such is the case with the opening in the first span on the Canosa bank, a sort of drainage mechanism frequently found on the spandrel wall of ancient bridges[9] to facilitate the flow of water and the discharge of weights. Even the shape of the arches and the angle of the upper parapets show divergences with the bridge's current state, evidence of the huge changes that the structure underwent following the bombardment of the retreating Germans during World War II, whose sad legacy also includes the destruction of the lateral retaining walls (built to limit the impact of floods and thus made ineffective) and the construction of a concrete walkway above the *platea* that has irreparably altered its integrity.[10]

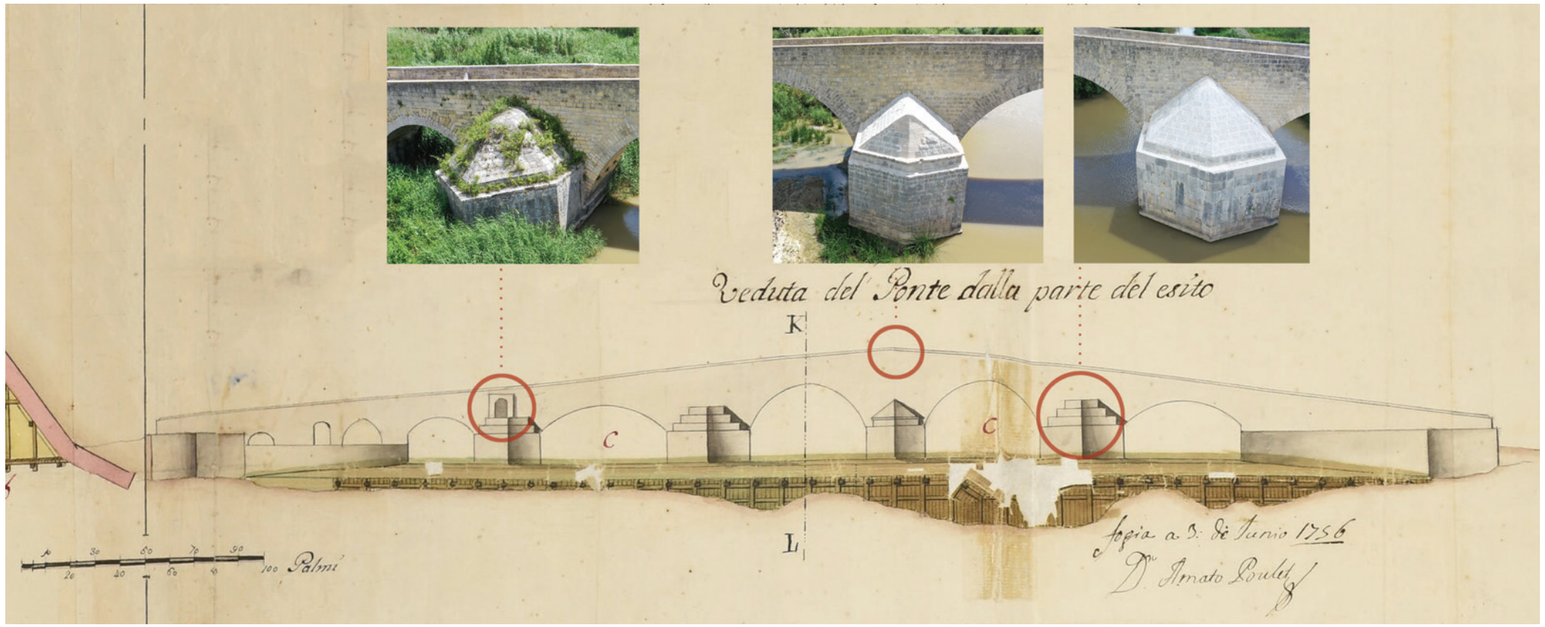
The antithesis of this destruction lies in nothing else but conservation, in which the archives are indispensable. A few maps, a sketch and an ancient survey may seem like nothing compared to volumes of written records and land registries, yet the power of the image lies precisely in the synthesis it provides compared to the word, its ability to restore the dignity of a lost memory of a giant of the past.

Archival preservation has always faced the challenges of time and wear, not to mention the uniqueness of some documents, which, if they go missing or are destroyed, can be lost forever. In this sense, technological and computer systems for archiving and cataloguing, which can be consulted from any corner of the world, remain fundamental for preserving and handing down even the very material vividness of the *documentum*, thus becoming itself a *monumentum*.

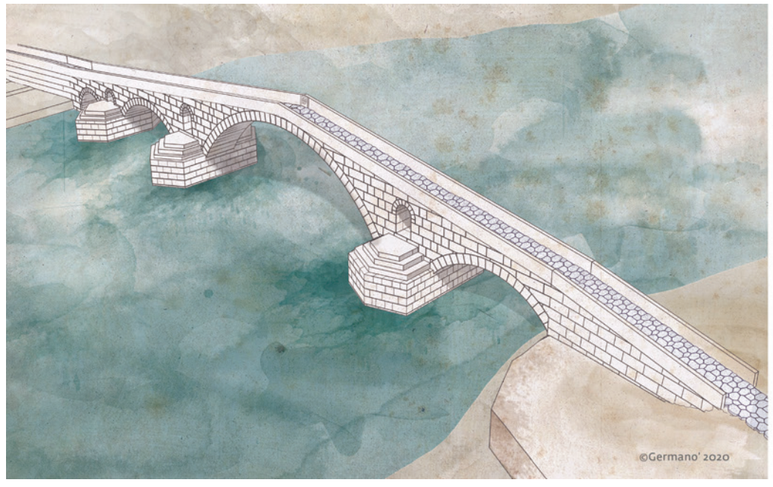
In a recent meeting with the professor Raffaella Cassano, the first archaeologist to study this bridge, whose 1985 study paid close attention to the *platea*, she affirmed the importance of the archive as an essential tool for understanding archaeological and architectural contexts, one that is sometimes even more crucial than the excavations themselves. It is also true that, despite its importance, the archive is often underestimated in the research process. It is therefore desirable that it be used not only as the starting point for research, but also as a central part of the verification and cross-referencing of data.

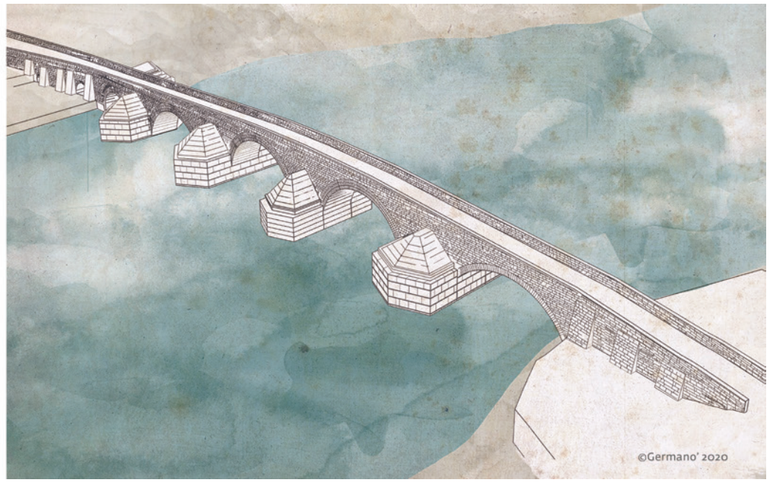


Map of the road leading from Canosa to Cerignola (detail), Francesco Paolo Pacileo,
1756. Archivio di Stato di Foggia. Dogana delle Pecore di Foggia



Survey of the bridge (detail). In evidence, the original elements that are no longer visible: the *oculus* (drainage window), the ancient inclination and the stepped starlings."Pianta del ponte di Canosa con una porsione del fiume Ofanto, che passa sotto di esso, e del bosco della Cirignola e' territori adiacenti," Amato Poulet, Foggia, 1756 (elaboration G. Germanò), Archivio di Stato di Foggia, Fund Dogana delle Pecore di Foggia, http://sast.beniculturali.it/index.php/teca-digitale?view=show&myId=e4d6ed90-d63f-47d2-b8f0-d6be487163e3





Graphic restitution of the Roman bridge, according to Germano Germanò (left) and its present appearance (right), Germano Germanò, 2020

Notes

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