

FROM *CIL* TO 2D AND 3D GIS

In *CIL* (*Corpus Inscriptionum Latinarum*) a total of 233 inscriptions of various kinds are recorded from Insula V 1 in Pompeii. The main categories are the painted electoral notices called *programmata*, and the graffiti made by scratching into the wall plaster with a sharp tool. The absolute majority of the inscriptions are not visible today and lack photographic or drawn documentation. The inscriptions can be located in space. From their texts we can pick out attributes like topic, sex of individuals, if it is a quote, if it is written in verse, etc. It is also possible to add other information, e.g. if the inscription was on a façade, in what kind of room, its state of preservation, etc. Inscriptions are thus well suited to be handled in 2D GIS.

A GIS project is never better than the data available. It does not represent the truth; it is a representation of interpretations of the different kinds of available information. The transfer of information about Pompeian inscriptions to a GIS environment can never result in a complete database and involves many decisions that affect the final result. The information given in *CIL* on their location and placement is limited to which wall and to how inscriptions are related to each other. It is very rare that details are provided on at which height, how far from an opening or any other more exact location. Therefore, texts might be interpreted in different ways.

Despite the uncertainties involved, using GIS is feasible and rewarding. Just to be able to look at a plan does improve our understanding of the distribution. The big advantage is that all data are collected in one and the same project, which makes it very easy to make queries. With appropriate data added we are able to sort out the outdoor graffiti that contain the name *Felicula* and are more than 2 cm high. That might not be the highest prioritized question, but it shows the possibilities of the technique.

In addition, an advanced 3D GIS has been recently added to the research agenda of the Swedish Pompeii Project (DELL'UNTO *et al.* 2015). One of the objectives of its implementation was to test the analytical potential of a GIS system in a fully-3D environment, in order to simulate the visual impact of a couple of wall inscriptions virtually placed at their supposedly original location.

As BENEFIEL (2010, 69) pointed out, the analysis of the wall inscriptions in their three-dimensional context would allow us to better understand their symbolic significance by quantitatively assessing the visual engagement among a sample of potential observers. The analysis, carried out by using GIS-based line-of-sight tools, was performed on an alphabet and an electoral (*programmata*) inscription that were originally placed in two different rooms

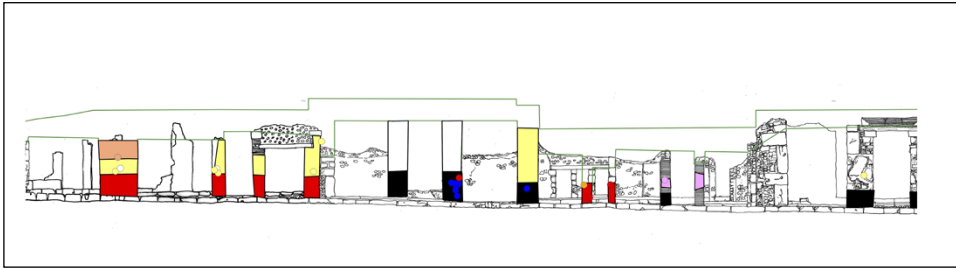


Fig. 1 – Part of the façade towards Via del Vesuvio, with the hypothetical placement of the inscriptions based on *CIL*.

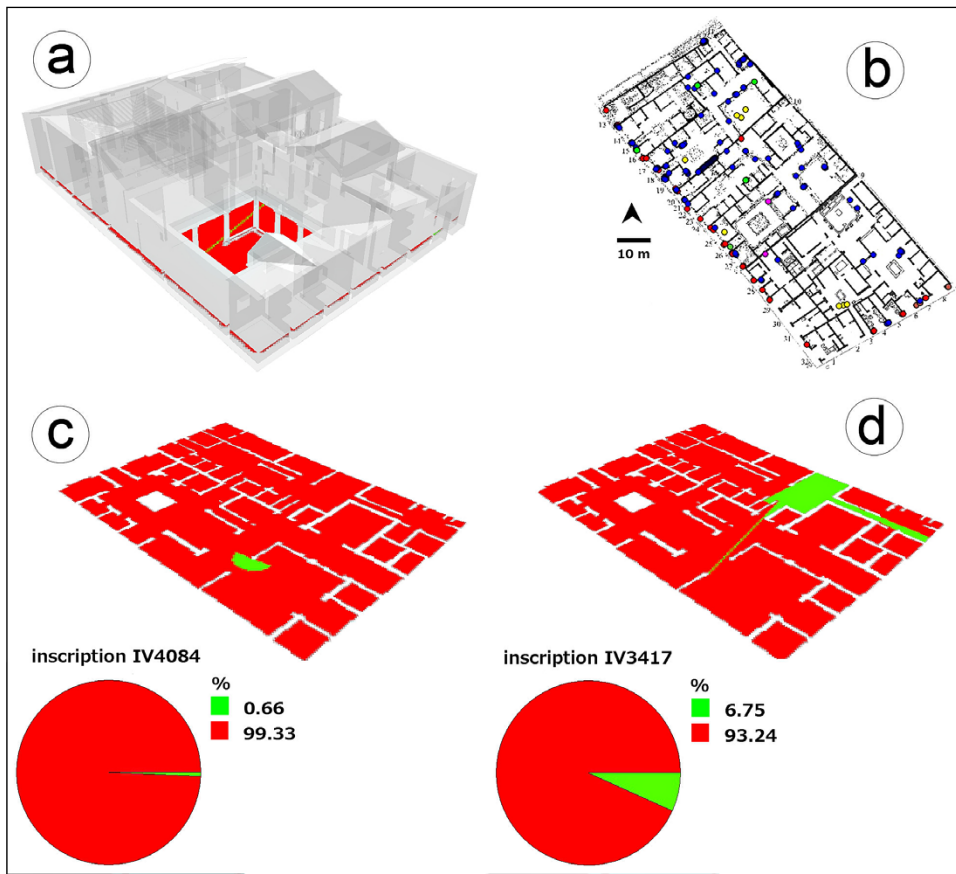


Fig. 2 – 3D reconstructed model of the house imported in GIS and used as a basis to perform visual analysis (a). Target wall inscriptions were placed based on information previously collected in bi-dimensional GIS (b). Results obtained from the analysis of the two examined inscriptions (c, d).

of *Caecilius Iucundus*' house (LANDESCHI *et al.* 2015). Expectedly, the electoral inscription gained a higher rank of visibility, due to the fact that it was intended to be on display, as a means of political propaganda. The purpose of this experiment was basically to test the feasibility of a process, to set a procedural framework to be extended on a wider dataset. The quality of the imported data, derived from a laser scanner acquisition, provided a very reliable basis to make an accurate reconstruction of the house. Such an aspect is crucial when it comes to the definition of formal methods for assessing the visual connectivity of the ancient space as the entire simulation process is based on the analysis of the way human beings perceived specific objects inside their original environment. As for the future, the integrated approach of 3D and GIS will hopefully shed new light on the usage of inscriptions inside the Roman house, by combining the study of their visual perception along with more traditional sources.

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