

Text to Map: Rooms of Possibilities

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Short abstract

In many areas of cultural heritage, there is a need to reconstruct landscapes based on textual information. However, this cannot be done unambiguously, because textual sources are always underspecified. A representation of a textual source in form of a map will be an interpretation of the source; the map can only tell one out of several possible stories. The paper will show how geometrical models can be used to keep track of sets of different interpretations. In this way, different types of interpretative practices can be separated.

Extended abstract

The lack of knowledge about the landscape we see described in textual sources goes further than what we see in ordinary map creation. While any map is a creative product, topographical maps, to take one example, are based on and testable against a physical landscape. Map surveying can in this perspective be seen as hypothesis testing and modification. A base map based on airplane or satellite images is a hypothesis that the surveyor tests against the landscape, making an improved hypothesis, eventually developed into map data used to create printed and digital maps.

In some types of mapping of cultural heritage information, the testability is as strong as in ordinary cartography. In other cases, no hypothesis testing against a landscape is possible. Examples of the former is mapping of existing social practices, such as contemporary tourism. Examples of the latter include fictitious works such as Tolkien's Middle Earth fiction. On a scale between these two extremes we find many pre-historical and historical situations, such as Stone Age habitats or roman battles.

In my PhD thesis I have shown how historical source texts in themselves are underspecified as a consequence of their being texts. This underspecification makes it impossible to create one definite map based on a textual description. However, by interpreting the context of the text, one can often find pre-existing maps which can be used in the interpretation of the text. This is what is usually done when texts are mapped.

Such pre-existing maps are often testable against a landscape which is believed to have specific similarities to the historical landscape, such as many coastlines in historical times. However, they need not be known from a physical landscape as long as an agreed upon representation exists, as in the case of Tolkien.

The paper will present evidence from my PhD research showing that underspecification is significant even in textual descriptions which seems to be very detailed. This will be used to show how significantly different maps can be made based on such description, demonstrating the high level of disambiguation involved in selecting one base map to be used in mapping. The similarities between handling underspecification in such mapping and in reconstruction of historical buildings will be noted.

Even after a choice of base map is made, a level of underspecification still remains, e.g., when it comes to unidentified place names. In the paper, I will discuss how these remaining problems of underspecification can be handled. The underspecified places can be modelled as rooms of possibilities, which are expressed in geometries which can then be used to create different map hypotheses. This method clarifies in the geometrical model what is known and what is not known due to underspecification. We then have a tool to separate problems caused by errors and

inconsistencies in the source text from situations where one is unable to make definite conclusions due to underspecification. The level to which such separation is possible will be discussed in the paper.