Handling intangible data

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Abstract: Archaeological data gives us a narrow window on the environment people lived in: only the small areas excavated give an insight of the landscape of the past. Historical research widens this vies, but still is limited since a lot of the ordinary every day lives of common people is not recorded. In order to get a better picture of the landscape of the past, influencing and (partly) formed by the people living in it we should turn to more sources.
One of those sources is the way people described their surroundings, but most of it is not recorded contemporary. But people still ‘remember’ their old surroundings: folk lore and stories tell us a great deal on the environment people of old lived in. And in old toponyms there is a great source of (sometimes hidden) information on land-use, nature and soil type.
But how can we incorporate this intangible heritage into modern, computerised research? In this paper I will give some examples of using this ‘new’ form of basic data in a GIS.

Keywords: landscape archaeology, biography of landscapes, names and stories in GIS

Introduction

Landscape has many components. The most obvious is the physical reality of the landscape; those are the things we can see, touch, measure and map. Geomorphological and soil type maps, for example, give an understanding of how the landscape is formed and shaped. The second reality is the social landscape; in this people are the central element. How do farmers use their land, what relationships are formed between urban development and agriculture. Land use and historical maps can give an insight in this reality. The third is the most difficult to grasp, but the reality we probably use most: the intrinsic, emotional reality of landscapes; how do people react to their surroundings and how do they value it. This last reality determines why people use the landscape as they use it, how they interact. In the modern discussions on landscape and landscape valuation, this reality often plays a key role. But at the same time it is hard to define, even for the present day. But it is an important element to study if we want to understand the development of our present-day surroundings.

Emotional landscape

People have always told stories about their surroundings. Stories depicted their feeling of the landscape they live in. Other stories tell of the unknown parts, the edges of the part we actually live in, and they warn the good townsfolk for the hidden dangers lurking in the moors and dark forest. Sometimes these stories show up on old maps as Here be Dragons. They function as a warning sign, much as we still use today.

Fig. 1 – Here be Dragons… Unknown parts on old maps

But stories not only tell of dangers, but also of ownership, quality of farmland, and could even explain why those huge stones were set up on the moor. To make the stories more permanently linked to the landscape, they were concentrated down into names for various locations: toponyms.

These stories might seem the terrain of somewhat vague, bearded man talking in the pub until the beer runs out, but do they have a value to researchers as well? Actually, they do. Since they are the only remains of the perception of people to their surroundings, they can tell us about the landscape of the past. Ownership, land use, soil type and soil quality, but also ancient remains as burial mounds are all valuable data held by toponyms.

Intangible data

Over the years, several enthusiastic local historians have been collecting these old toponyms to preserve them for the future. These vast collections are placed on small cards, notebooks, copied maps and whatnot.

Fig. 2 – An example of a collection of early 20th century toponyms by a local historian.

To access these sources we have to set up a database, in cooperation with linguists and archaeologists, in which these names can be collected, arranged and explained. Cooperation with several scientific disciplines is vital since the meaning of stories and toponyms is often not immediately clear or unambiguous. Toponyms, for instance, consist often of two parts, one referring to the place itself and the other to the attributed value. A name like Nieuwmaat (New Meadow) for instance refers to a Maat (meadow) and indicates that this particular Maat is (compared to its surroundings) new. Working with a multi-disciplinal team gave the additional information that the term Maat is only used for those fields that were situated in the wetter areas near brooks or rivers and were primarily use for the production of hay. Information like that should also be made available via the database. The structure of the database should, therefore, give the possibility not only to collect the names, but also to linguistically interpret them. That way you can make sub-collections of names with, for instance, a soil type annotation.

The next step was to place them in a GIS. Since toponyms are related to certain fields or landscape features it is logical to register them as regions in the GIS rather than point locations. But since they can also refer to ecological features like animals or types of tree, it is also recommended to have them as point locations in a GIS. That way it is possible to make a distribution map of for instance hazel in a particular area.

The geographical component of the toponyms often can be obtained either from the original collection, when it was collected on a map, or by comparing the plot number with the land registers. This way we get a digital collection of toponyms and local stories.

Fig. 3 – The same collection as shown in fig. 2 put into a GIS

Using intangible data

With these interpretations we can make several kinds of reconstructions of the ancient landscape. As an example I use the area around Rolde, in the Dutch province of Drenthe. Figure 4 gives a map from 1850 on which major landscape and land use features are depicted. In that same area are several toponyms with either a landscape, a land use or a soil type annotation. Combining these different annotations and mapping the areas associated with that specific annotation gives a base map of the natural landscape. Combining these toponymical data with a (modern) geomorphological map gives a rather complete reconstruction of the natural landscape (its physical reality) before cultivation.

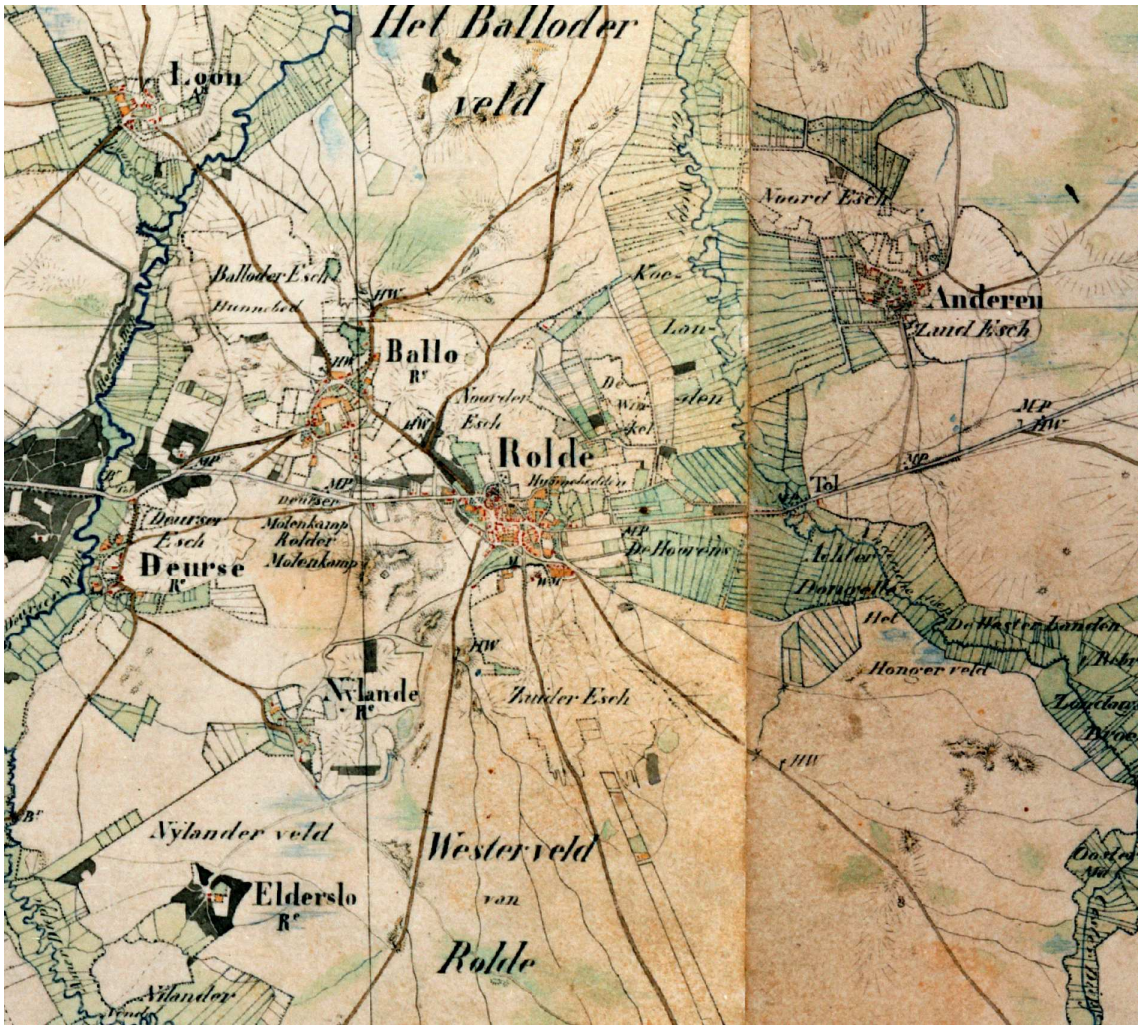

Fig. 4 – The village of Rolde on a 1850s topographical map

Fig. 5 – Physical landscape reconstruction based on toponyms and geomorphology for the area around Rolde

The same can be done for the social reality of the landscape; with some toponyms the land use, during the early stages of cultivation can be reconstructed. Figure 6 gives a map of the village of Anloo, also in the Drenthe province. This map depicts the land use according to the land register of 1832. In comparison figure 7 shows for the same area the land use according to toponymical data. This clearly shows a different phase of cultivation than the one depicted on the land register map. The toponyms used for this reconstruction date all from 19th century, so roughly of the same date as the land register, or slightly younger.

Older toponyms can often be found in tithe archives or notarial acts. This way a series of maps can be drawn depicting the social history from medieval times to the present.

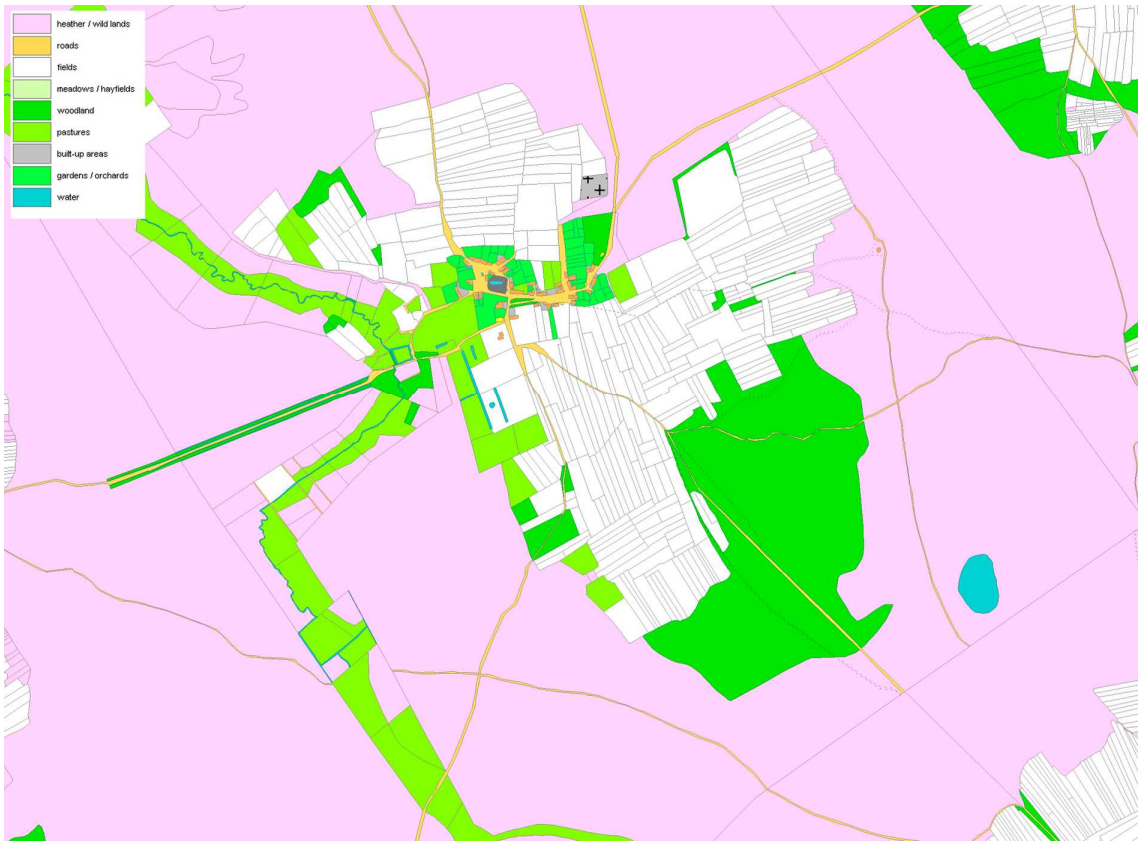

Fig. 6 – land use around the village of Anloo according to the land register map of 1832

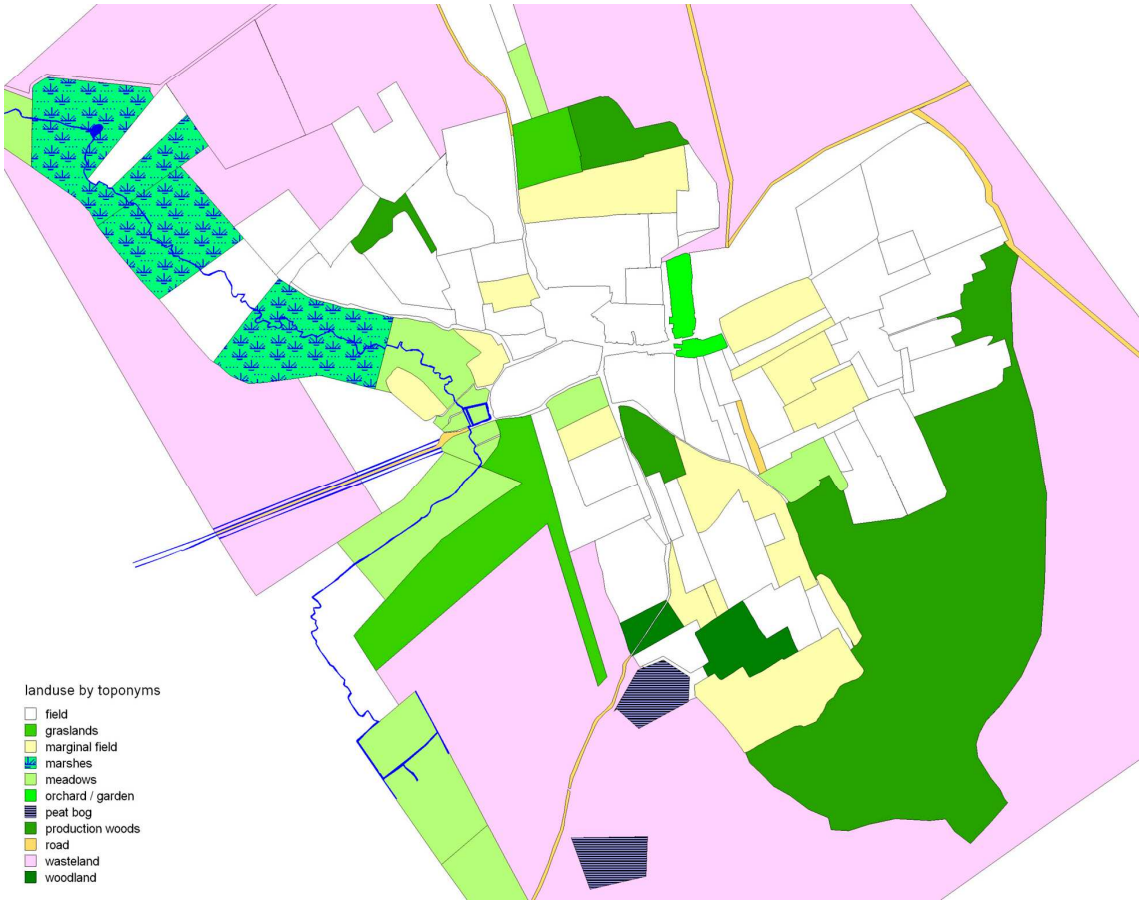

Fig. 7 - land use around the village of Anloo according to the toponymical data

And there are much more annotations. One is for example wood vegetation, several species of trees and woodland plants. Another is names of wild or domesticated animals. Combined they can give an impulse for paleo-ecological research.

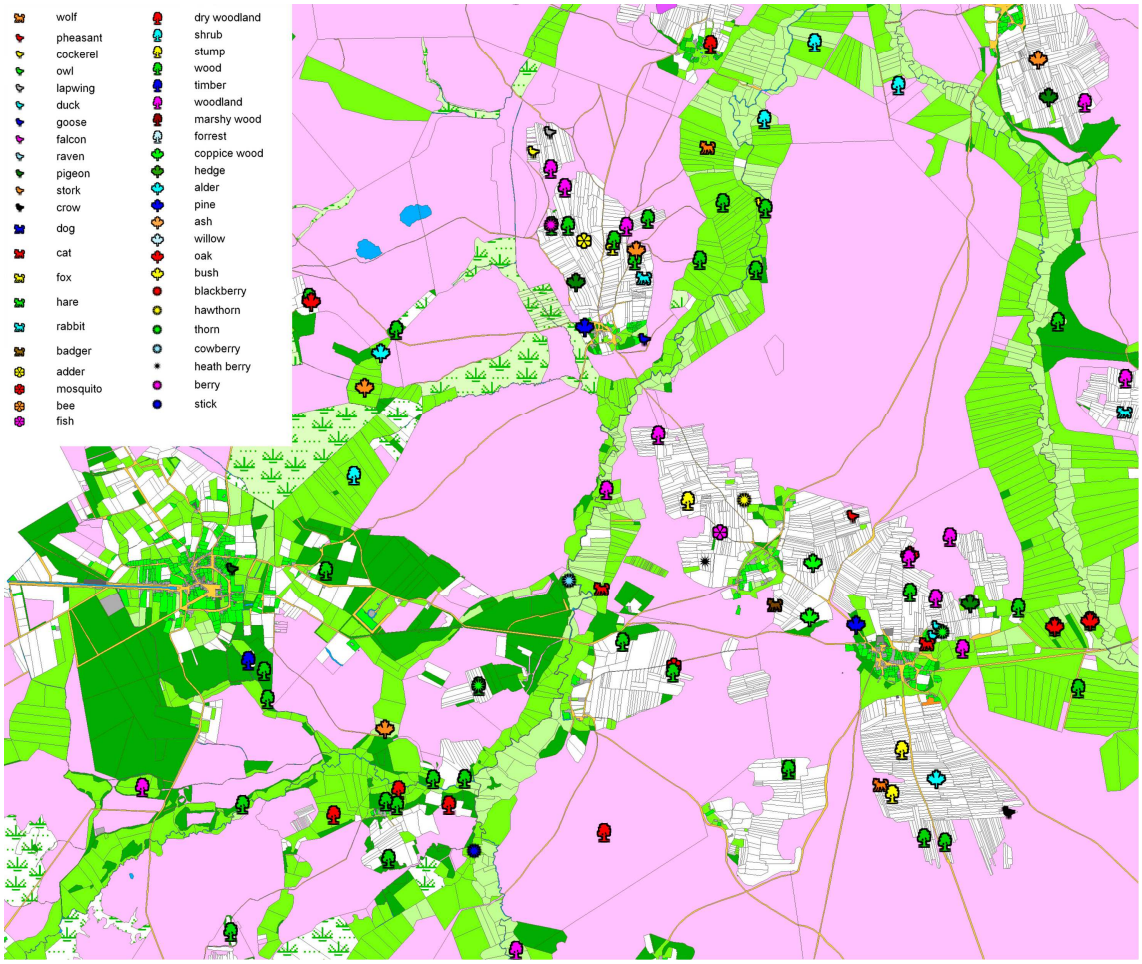

Fig. 8 – Distribution of toponyms with an ecological annotation

Conclusion

To fully understand the landscape of a particular area we cannot rely just on physical data. Important as soil type and geomorphology might be, they only give an insight in the physical qualities of a landscape. The social history can be determined by historic geographical research, but that has the limitation of looking at the result of human interaction with the landscape. To understand the reasons behind this development and to get an insight on how the people valued their surroundings we must take the intangible data like stories and toponyms into account. When we do this, in an inter-disciplinary way, better reconstructions of our past can be made.