A LITERARY ATLAS OF EUROPE - ANALYSING THE GEOGRAPHY OF FICTION WITH AN INTERACTIVE MAPPING AND VISUALISATION SYSTEM

PIATTI B., REUSCHEL A.K., HURNI L.
ETH Zurich, ZURICH, SWITZERLAND

INTRODUCTION

How does fiction make use of existing geographical spaces over a period of several centuries? Does literature re-name, re-model, or even transform them? And how can such fictionalised landscapes and cities, or more precisely, their genesis and structure, be visualized in an adequate manner? The interactive mapping and visualisation system „A Literary Atlas of Europe“ (prototype), currently under development, is designed to make visible the specific geography of fiction. Maps are conceived for individual texts, but also for large groups of texts, in view of statistical queries. In the process, not only are the literary riches of single regions illuminated, but also, fictionalised landscapes and cities in all of Europe could be examined comparatively, in the sense of a literary-geographical system.

This paper describes how such an atlas information system for literature could ideally work, in the sense of an interactive mapping and visualisation toolbox. Via a graphically elaborated scenario it presents a number of map samples and important functions, which crucially support the analyses of the spatial dimension of literature. Moreover, it also deals with the very questions, literary experts, critics and scholars intend to answer with those instruments.

The presentation is based on a research project, entitled „A Literary Atlas of Europe“ (see www.literaturatlas.eu), carried out at ETH Zurich, Georg-August-University in Goettingen and, until 2009, at Charles University in Prague. A trinational, interdisciplinary team, consisting of both cartographers and literary historians, is collaborating since 2006 in order to answer some core questions of literary geography and literary cartography: How to map literature? And why to map literature (what new insights can be gained by such an approach)?

Due to the limited length of this paper an overall presentation of the complex, interdisciplinary project, including a discussion of the theoretical background and the technical solutions (i.e. building and structuring of the database) is impossible. Therefore, a selection of papers is indicated at the end, which provide more detailed information about data acquisition, data output, the actual mapping process and the problems that come along with it, about some first results and future perspectives of this endeavour (Piatti et al. 2008b, Piatti et al. 2009, Reuschel et al. 2009).

BACKGROUND: LITERARY GEOGRAPHY AND LITERARY CARTOGRAPHY

Before the actual presentation of the scenario a few remarks concerning the background of the research field „literary geography/literary cartography“ seem appropriate:

Since more than 100 years, literary scholars from various national backgrounds try to map literature – for different reasons, but always with a restricted range of techniques at hand (for a historical overview see Piatti 2008a and Döring 2009, yet a concise history of this research field is still lacking). It is important to differentiate between literary geography and literary cartography, especially since the terms are frequently (and wrongly) used synonymously. If one wishes to define precisely, it is about the conceptual distinction between subject and method. While the geography of literature is the actual research topic, tools of cartography can be applied in order to carry out the research in the field of literary geography.

In some cases, rather neat mapping solutions for particular problems have been presented (for instance Moretti 1999), yet in an overall perspective there is still no convincing mapping system in sight. While the research agenda (the horizon of possible questions which could be addressed as literary geography) is astonishingly rich, up to now the means to produce and provide adequate mapping solutions fall clearly behind. This is due to the fact, that – with some rare exceptions – the majority of literary critics tried and still try to design those maps by themselves and hence were tied to conventional, static, printed mapping products.

Only lately, the fabulous possibilities of a digital, interactive, animated cartography with database support have been discovered, among them for instance visualisation models of uncertainty (one of the key elements of an advanced literary cartography is the fact, that settings quite often cannot be localised in a precise, but in a rather vague way). If a literary critic wishes to explore on such techniques, experts from the field of cartography are desperately needed.
THE SCENARIO – TOOLS AND FUNCTIONS OF LITERARY ATLAS OF EUROPE (PROTOTYPE)

The scenario, conceptualised by the visual designer Anne-Christine Krämer, the cartographer Anne-Kathrin Reuschel and the author of this paper (expert in literary history and theory), presents some of the most important functionalities an atlas information system for literature should offer. It is based on formalised readings and data already collected via an online template and stored in a database (currently literary-geographical readings of approx. 200 texts are available). Please note that not every tool presented in the following will be implemented into the prototype, some of them have to be regarded as pure sketches, a collection of ideas, developed also with experts from literary studies, who told us their specific needs and wishes concerning a toolbox for literary-geographical research.

The scenario starts with an intro (fig. 1).

![Fig. 1: Screenshot - the Intro to “Ein literarischer Atlas Europas” (A Literary Atlas of Europe)](image)

In a visually appealing way the three main elements of the current literary atlas prototype are displayed: texts (handwriting, book pages), maps (historical ones and some from our own production), and pictures referring to the geospace. The material is arranged according to our three model regions: Prague (Czech Republic) as dense and symbolically charged urban space, Northern Frisia (Germany) as a coastal region, and Lake Lucerne/Mount Gotthard (Switzerland) as an alpine landscape.

After these first impressions, one is encountered with the enquiry interface (fig. 2).
The system invites the user to choose between a number of options: Via lists authors can be called up as well as titles of fictional works, nationalities (of a group of authors) or genres, to name just a few options. The template is modelled to some extent according to the structure of library catalogues, since those are the online-tools most literary experts work with frequently.

Let us assume, that the model user picks from the list of authors the German-Czech writer Libuse Monikova (1945-1998). Once such a choice has been made, the maps corresponding to the selected criteria are called up (technical background: based on the data available, the maps are generated automatically on demand, according to each individual query). The first map on display shows the space of Monikova’s novel „Die Fassade“ (the facade) from 1987 (fig. 3).
Fig. 3: Map of Libuse Monikova’s novel "Die Fassade" (1987), settings in Prague

Applied on a background map of Prague, kept in discreet colours, are the symbols indicating the fictional space. For example: Shadowed in grey you find so-called „marker“ (Kleinseite, Stalin-Denkmal), places which are only mentioned in the text, without having the actual weight of a setting. Nevertheless, they are part of the geographical/topographical horizon of the novel. In violet, you find a number of places, symbolised as boxes, such as „Kino Ponrepo“. They are, via their colour, defined as „projected spaces“, which means in that case they are remembered by a character (projected spaces = projections in the mind of character). For a detailed explanation of the categories and the symbology developed for the Literary Atlas of Europe see Piatti et al. 2008b/2009 and Reuschel 2009. The map allows to discover immediately not only where the action is set, but also what function the different places have (for example: marker vs. projected spaces) and how they are linked to the geospace: The colour attributed indicates whether is about a rather firm connection or just a vague and loose one. The brighter the colours become, the less corresponding is the fictional place to the geospace. In the Fassade-map the relation is a close one, the text is referring clearly to actual, existing spots in Prague.

Additionally, the user can access information about the author and the text (see window to the right). In the case of Libuse Monikova the system provides the information that she knows Prague from own experience, since she is born there (on the other hand, it is quite often the case, that writers choose a section of the geospace they have never seen – a fact that influences the literary-geographical analyses of their work substantially). There are other rubrics such as information regarding the text itself – a summary, bibliographic details and so on (see also fig. 4).

The novel „Die Fassade“ is partly set in Prague, but some threads of the story are located in other European places or even spread worldwide (see fig. 4 and 5).

Fig. 4: Map of Libuse Monikova’s novel "Die Fassade" (1987), European level
Fig. 5: Map of the Libuse Monikova’s novel "Die Fassade" (1987), global level

The system pays respects to this specific quality of fiction – to jump/to zoom from the local/regional level to a continental or even to a global one by providing easy access to different map scales (see buttons in the lower left corner of the screen, “Weltkarte”, “Europakarte”, “Pragkarte”).

On every scale the user is provided with written information regarding the depicted settings and projected spaces on the map. On Prague level for example, the symbol for „Kino Ponrepo“ has been activated via mouseover – a cross indicates to which symbol the information displayed on the right belongs (fig. 6).

Fig. 6: Additional information about "Kino Ponrepo", marked on the map by a cross

In this example, the cultural meaning of Kino Ponrepo is extensively described, using an extract from the map comment.
The next illustration shows, that other maps from the same author can be called up in order to compare how Libuse Monikova was using the same geospatial unit – Prague – in many different ways in her writing. In the same sense maps from other authors are available, arranged in a list. This is one of the major advantages single text mapping offers – the comparison between various ways to deal with a given extract of geospace in different works of fiction by one or several authors. Sometimes there are dozens, even hundreds of settings packed in one model regions, sometimes there are only a few important places where all the action happens. One can run through a number of map previews (fig. 7) before he or she decides to have a closer look at one of the maps (fig. 8). In the given case, Monikova’s novel is compared to Bruce Chatwin’s „Utz“ (1998).

Fig. 7: Map previews for the purpose of comparison
Fig. 8: A comparison between spatial dimension of two novel set in Prague (Libuse Monikova: *Die Fassade*; left - Bruce Chatwin: *Utz*, right).

Another service offered are the reference maps. Since the background maps are not labeled with current street and place names, orientation has to be guaranteed with other means. The user can call up any time a reference map (open street map data) in order to compare the literary map with a cartographic representation of the real space (fig. 9). Literary map and reference map are synchronised, hence a smooth navigation is ensured.

Fig. 9: Reference map (right)

Function change: The system makes function changes immediately visible: Some settings become projected spaces or vice versa as the story unfolds. The example chosen by the model user is again Bruce Chatwin’s novel „Utz“, set in various locations in Europe (fig. 10).
Fig. 10: Map of Bruce Chatwin’s “Utz”, settings located on European level

In the original scenario, the function change is indicated via an animation. The colours of the symbols for the towns Vichy and Kostelec are changing constantly – they are oscillating between red and violet, between setting and projected space. Function changes, the double-layered meaning of place in a work of fiction are of special interest to experts, since it is worth to dedicate a deeper analyses to such places. For that purpose, the system also provides quotations, directly linked to those places, as well as some hints for a possible reading (fig. 11).

Fig. 11: Function changes (Vichy, Kostelec) in Bruce Chatwin’s “Utz”, including explanations in a separate window

Once again, the user consults the list of texts he or she has selected at the very beginning. This time, the map of Zikmunt Winter’s historical novel „Mistr Kampanus“ (1906/1907) is called up (fig. 12). There, the layers of symbols are so dense, that the user is assisted by an interactive legend, where one can activate or deactivate certain layers in order to get a better overview. In addition, the interactive legend to the map offers, again via mouseover, handy explanations when it comes to the understanding of the complex categories and symbology. The example displayed deals with the category of the above mentioned projected spaces, which play a major role in the selected novel.
Another important tool is the catalogue of historical maps. As shown above, the spatial dimension of fiction is mapped onto up-to-date background maps. But the majority of the fiction analysed within the Literary Atlas of Europe is set in former epochs, in Prague around 1900, in Northern Frisia in the late 19th century or around Lake Lucerne even around 1800. In other words: One has to know that the literary-geographical maps contain a sort of falsification. Out of that reason the system offers a selection of historical maps for each model region, arranged along a time bar. In fig. 13 the space of action of Paul Leppin’s short story „Das Gespenst der Judenstadt“ (1914) can be traced.
The story is set in the former „Judenstadt“, the Jewish Ghetto in Prague. The background map displays only the grid of the streets and some building blocks, but the historical map, provided on the left side of the screen, offers an abundance of details, which can be explored through a magnifying glass (fig. 14). Only by studying the representation of the historical, no longer existing „Judenstadt“ with its narrow streets and maze-like backyards the user gets an adequate idea of the urban space in Leppin’s own epoch.

Fig. 14: Historical map of Prague, readable with magnifying-glass-tool

If the user goes back to the query mask and wants to see another set of maps, he or she might be interested in a statistic/quantitative approach. In our example the future user decides to see a map of all settings figuring in the works of famous German writer Theodor Storm, linked to the model region Northern Frisia (fig. 15).
Fig. 15: Statistical surface of settings occuring in the novels and novellas by Theodor Storm (model region Northern Frisia, Germany)

The map clearly shows a gravity centre in Husum, a small harbour town in Northern Frisia. There are settings placed on islands or along the coast, but undoubtedly Storm’s epicentre is Husum. This statistical surface allows to differentiate at first sight between zones which are heavily loaded with fiction and so-called unwritten regions, blank spaces, which have not been occupied/"colonised" by this particular author. The texts on which this statistical analyses is based are listed in a separate window.

Within the system the user can easily switch between single text mapping and quantitative visualisations. The next illustration shows that he or she wants to know more about the settings of one particular text, Storm’s most famous novella, „Der Schimmelreiter“ from 1888 (The Dykemaster). By clicking on the requested title on the list (fig. 16), the single text map appears allowing a closer look onto the spatial organisation of this particular text (fig. 17).
Fig. 17: Map of Theodor Storm’s novella “Der Schimmelreiter” (1888)

Of course, the set of additional information regarding the text and the author as well as the interactive legend, as presented in the map samples above, could be called up also for this entry.

In a next step, the user wants to compare how other writers, besides Storm, made use of this area. In a screen-split two maps are presented side by side and it becomes immediately evident, that the regions which have been addressed as settings, are not at all congruent (fig. 18).

Fig. 18: Comparison: Statistical surfaces of settings occurring in fiction written by Storm’s contemporaries (left) and by Theodor Storm himself (right)
In fact, Storm’s contemporaries, such as Klaus Groth, Theodor Mügge or Detlef von Liliencron, seem to have avoided the territory of Strom, they were placing their fictional plots in other, sometimes remote areas such as the islands in the Wadden Sea.

CONCLUSION AND OUTLOOK

In order to achieve a convincing literary-geographic map image one has to run through processes of abstraction, quantification and isolation of linguistic characteristics, which reduce the semantic content of a text significantly. Maps however, are never final results but tools of interpretation and sources of inspiration. Whenever literary scholars screen, read, interpret and compare the maps, they do what is regarded as one of their core competences: to consider carefully ambiguities, to compare, to contextualise, to shed light on historical references, to juxtapose several readings, to combine methods and tools. Though it is the map commentary that allows making the decisive last step: which questions are posed by the maps – and which answers can be found? For “placing a literary phenomenon in its specific space – mapping it – is not the conclusion of geographic work; it’s the beginning.” (Moretti 1999:7).

If this is properly taken into account, mapping and visualisation concepts at the intersection of literary theory, cartography, and database technology could open up new dimensions of research. For the scientific community, a platform such as the Literary Atlas of Europe serves as a generator of ideas, providing new topics for a comparative history of literature: Where and when do which landscapes and cities emerge on the literary map of Europe, and when are they submerged again in meaninglessness, or when have they exhausted their literary potential? Are there geographic areas which are entirely undocumented in literature? How densely settled by fictional works is a particular space? How international is the space, or is it inscribed almost exclusively by native authors? Under which (political-historical and other) conditions does the (imagination-) space of literature contract, and under which does it expand? Methods of literary geography have the potential to further progress in two areas: First, they can provide detailed profiles of single fictionalised spaces (model regions) such as a city or a landscape including close readings, based on the maps of single texts; secondly they simplify the comparison between such model regions. Such approaches could become future, innovative chapters of a cartographically supported and hence spatially organised history of literature.

REFERENCES


