Cartographies of Digital Fiction: Amateurs Mapping a New Literary Realism

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Since maps function as both analysis tools and research objects of literary geography, the digital evolution of mapping is relevant to this subdiscipline of literary criticism in two respects. Modes and potentials of digital cartography affect the analytical instruments – the ‘maps of fiction’. Moreover, non-expert ‘maps in digital fiction’ or rather ‘fictions in digital maps’ have been developed. These websites and their amateur cartographies of fictional(ized) worlds expand the research field towards a ‘literary neogeography’. This paper approaches the digital analysis objects from several perspectives. It analyses the recent history and samples of what I term geomedia fiction. Based on a small-scale qualitative study, it additionally involves user feedback regarding selected websites.

Keywords: geomedia fiction, literary maps, digital cartography, amateur mapping, literary (neo)geography, mashups, map usage, literary tourism

CARTOGRAPHIES OF DIGITAL FICTION: INTRODUCTION

Conditions and means to create literary maps have changed. The material constraints of paper maps no longer define which data can be mapped and how information might be cartographically visualized. Computerized production and usage, online availability, the applicability of layers and hyperlinks require a rethinking of the map’s possibilities in scope and design. Dynamic hypermaps allow flexible overlaps of additional content such as texts or (moving) images and animated cartographic visualisations. Since referring to literary maps always means to imply analytic tools as well as research objects of literary geography, the prospects of digital cartography affect the subdiscipline of literary criticism particularly in two respects: by influencing analytical ‘maps of fiction’ as well as illustrative ‘maps in fiction’ (Döring, 2009, p. 247).

Maps of fiction are used as cartographic text analyses which are made subsequently to published literary works. They act as ‘distant readings’ (Moretti, 2005, p. i) of a narrative, like a novel or a short story, and provide insights which can only be revealed through the cartographic abstraction of literary ambiguity. In this sense, literary geography abandons textual complexity in favour of graphic overview and structure – or rather combines these two logics of literature and cartography. The distance produced by these maps of fiction is ‘however not an obstacle, but a specific form of knowledge: fewer elements, hence a sharper sense of their overall interconnection’ (Moretti, 2005, p. i).

At an analytical meta-level, these cartographies are supposed to go beyond the purpose of an illustrative adjunct and supply an informational surplus value (Moretti 1997, 2005; Döring 2008; Piatti 2008). Even before such analytical literary maps evolved, authors and publishers themselves combined maps with fictional narratives. Their cartographies functioned as a means of orientation for the authors during the writing process and/or were published with the stories they geographically illustrated. These maps in fiction – inserted folding maps, printed map excerpts or ornamental cartographic book covers – visualize the geographies of literary, fictional worlds. They complement narratives, substantiate the conclusiveness of their fictional world and have the potential to reinforce the impression of a literary realism. However, they tend not to provide any analytical information that goes beyond cartographic illustration.

Today, digital mapping requirements influence both forms of literature maps. Piatti et al. (2009) examined the pertinence of digital cartography to analytical maps of literature. The development ‘towards a New Literary Geography’ would require literary geography to move ‘to the next level’ and work ‘with interactive tools and mapping solutions’ (Piatti et al., 2009, p. 181). The modes and potentials of digital cartography have also led to the development of creative concepts of maps in digital literature. Amateurs deploy the new requirements of cartography to experiment with literary mappings. Just as in the beginnings of literary geography (Piatti, 2008, pp. 33/34), nowadays it is not only cartographers or literary
s Scholars who merge maps with literature. Authors, publishers and programmers also create digital cartographies of fictional worlds.

These geomedia fictions are predominantly map mash-ups. They integrate novels, short stories, diaries and novellas in cartographic data which are most often obtained from the web mapping service Google Maps. For example, Figure 1 shows the mashup *The Diaries of Samuel Pepys* which locates settings of a historical diary within a Google map (Gyford, 2003, http://www.pepysdiary.com). Amateur mappings such as this expand the research field towards a ‘literary neogeography’. Non-expert users, or rather non-cartographers, now produce their own maps of fictional(ized) worlds. This paper analyses the recent history and examples of this new research field of literary geography. In addition, it includes deliberations on user acceptance regarding geomedia fictions made on the basis of interviews.

**TOWARDS A LITERARY NEOGEOGRAPHY**

The above described dual change of the research field, which is caused by digitalisation and affects tools as well as objects of research, represents a progression towards a literary neogeography in several respects. Today, the phrase ‘neogeography’ stands for a non-expert map making enabled by geographic information systems and mapping software: ‘Essentially, neogeography is about people using and creating their own maps, on their own terms and by combining elements of an existing toolsset’ (Turner, 2006, p. 3). This amateur involvement is not necessarily a type of mapmaking which is exclusively characteristic of digital mapping practices; however, the new techniques have facilitated mapping for non-experts. In this sense, literary neogeography is about people creating and using their own maps of and in fiction. The term indicates a reinforcement of a prior existing tendency of literary geography. Piatti *et al.* note that ‘the majority of former approaches in the field of literary geography are made by non-mapmakers – surprisingly enough cooperation between critics and cartographers hasn’t been established so far’ (Piatti *et al.*, 2009, p. 181). At present, exponents of literary geography aim at interdisciplinary collaborations in order to reinforce its future development, and ideally the amount of professional cartographers contributing to the research field should increase. Still, literary scholars will influence analytical maps of fiction and new literary cartographies will continue to be at least partly characterized by non-cartographers.

At this point, the categories of ‘cartographer’ and ‘non-expert mapmaker’ need to be clarified. Even though the academisation of cartography is a phenomenon that has only emerged in the last two centuries, in order to differentiate terminologically between non-expert mapmakers and cartographers, the latter shall be defined as (academically) educated professionals. In contrast, amateur mapmakers create maps without any externally guided and structured training in mapping practices or theories. Since a dissemination of geographic information systems and mapping software has taken place and they have become more easily accessible, the techniques these agents use might be similar. However, the key difference is to be found in the varying knowledges and perspectives that mark the created cartographies. One must take into account the extent to which these knowledges and their cartographic
expressions are still limited and channelled by available technologies.

On the one hand, the production of digital maps of fiction can be considered a literary neogeography because the knowledge of literary critics – as non-cartographers – will still give direction to research projects which are concerned with analytical literary maps. More distinctly, as an epiphenomenon of the broader ‘amateurization of mapping’ (Crampton, 2010, p. 5) it becomes easier for non-experts to map literature. These amateurs can be authors or programmers and therefore have a related (but non-cartographic) profession or they might be readers who became involved in the mapping of a fictional or fictionalized territory. As a result of their contributions, a new research field of maps combined with digital fiction has been evolving, suggesting that one should be speaking of a development towards a literary neogeography. The amateurs do not have any professional education in mapping practices, but they use software and particularly online accessible tools to merge digital maps with fiction. Hence, these mappings do not express the knowledge of cartographers, but signify the attitudes of people who are not necessarily familiar with mapping symbols and conventions. This can be related to Harley’s understanding of a map as a signifier of its own mode of production. According to his ‘broadly iconological approach’, maps are ‘regarded as part of the broader family of value laden images’ (Harley, 2001, p. 53). They do not only refer to a territory, but also to the conditions and contexts of their origin. Every map makes a ‘political statement’ (Harley, 2001, p. 53) to the effect that it does not originate from a neutral position. It is rather affected by human subjects who are bound to the conditions and limits of knowledge production and representation. The technologies that are applied and the knowledge that the act of mapping signifies find their expression in the plane graphic of the map. Therefore, not only is one confronted with literary maps, but also a ‘literature of maps’ (Harley, 2001, p. 53). Looking at cartographies in digital fiction also means to critically take into account the factors and constraints which affect these mappings.

In the following, this paper introduces examples of geomedia fiction. It analyses them in regard to their conditions of production, which results in specific text-map-constellations – with respect to textual characteristics as well as graphical map attributes. In particular, the available data and technologies appear to produce a very limited variation of used map material and a trend towards a ‘new literary realism’. Geomedia fictions only show a minimal level of spatial fictionalisation of the narratives and are mostly accompanied by cartographies of really existing territories.

**GEOMEDIA FICTION: BRIEF HISTORICAL OVERVIEW**

On the internet and on storage media such as CD-ROM, one can find successors of paper based maps in fiction like Abraham Ortelius’ prototype of literary maps: a visualisation of *Utopia* (1596), the fictional island invented by Thomas Morus. There are two historical trends in particular which have helped to popularize the combination of digital maps and literature. At the beginning of the 1990s, computer scientists, new media scholars and literary critics began to explore the possibilities of digital literature. With the technological advancement of computer graphics and storage media, computerized mediation, graphic presentations and embeddings of digital fiction have become more important. Geographic maps also began to be used more frequently as elements of these new forms of literature (Hiebler, 2005). The graphical plane of the map and its pictorial surface seemed well suited to support the author’s intention of enabling an experimental, non-linear experience of digital literature as well as an (allegedly) active, participatory usage.

Initially, geographic maps were used in a rather simple, illustrative way and were implemented as functional buttons which visually disguised hyperlinks. For instance, Figure 2 shows an extract of the digital fiction project *Gleitzzeit* [color: blue] (2001) by Collaboratorium Cyberprosa. It includes map excerpts showing the suspected position of the mythical island Atlantis from *mundus subterraneus* (Athanasius Kircher, 1644), a moon map from Adolff Strieder’s *Atlas über alle Theile der Erde* (1877) and the blank map from Lewis Carroll’s *The Hunting of the Snark* (1874). Here, the sign character of geographic maps is reduced to the status of pictorial metaphors. These applications somehow naively ignore that the chosen graphs do not simply visualize space, but reference spatial relations and geographical information. In these cases, maps were not used for their potential as media of geographic locatability, but rather as figurative graphics capable of symbolizing a pathfinding which acted as a key metaphor of digital literature at that time. ‘Ergodic literature’ – Espen Aarseth’s (1997) chosen term to address hypertext, a combination of the Greek words *ergon* (word) and *bodos* (path), already implicates the cartographically symbolized demand to navigate through the narratives.

Only with hesitation did the geographic regime of the map and the possibility of inserting a variety of location-based hyperlinks become more specifically utilized. While the aforementioned maps in *Gleitzzeit* [color: blue] (2001) only function as single hyperlinks that lead to explanations of the graphics, the map of *Chile: A Literary Online-Diary* (2001) contains multiple hyperlinks which are graphically placed in specific locations and refer to events which are said to have occurred at these marked places (Figure 3). Approaches such as this are indications of a realisation that maps are not only pictorial graphics, but sign systems which provide the aesthetic possibilities of an extensive image, while simultaneously suggesting a geographical organisation of hyperlinked annotations. The map has therefore become a possible interface of digital literature instead of being one of many pictorial elements. This first trend of geomedia fiction is therefore marked by the fact that it is produced by non-cartographers who come from a predominantly academic background. In the course of time though, it became apparent that readers are less interested in ‘working/searching for reading’, but rather appreciate a facilitated literature experience with applications such as search functions and additional information via hyperlinks. Hence, the initial euphoria and academic involvement in
programming experimental digital literature subsided in the beginning of the twenty-first century.

In June 2005, it was a subdevelopment of the web rather than a technological upheaval which led to a renewed rise of geomedia fiction. As part of the mashup trend, combinations of (particularly Google) maps and fiction emerged. The release of the application programming interface of Google Maps facilitated the development of all sorts of applications combining cartographic and additional data. Fiction was one type of content which was increasingly merged with Google Maps. The simplified availability and editing functions have allowed amateurs to digitally map single narratives or various novels in relation to each other. One feature of these map-fiction-mashups was that the cartographies themselves were not made by the users, but were edited by them in order to effect particular mappings, localisations and possibly specific animations. There are few examples where maps were created from scratch. For instance, both the Novel Atlas which locates literature reviews on an animated globe graphic (http://www.faz.net/romanatlasis) and Peter Bird’s Middle Earth-map which transfers fictional space to a real world geography (http://peterbird.name/pictures/Middle-Earth.jpg) are not based on Google data. These cartographies reveal that the avoidance of provided map materials might lead to low levels of detail (Figure 4).

Moreover, the Middle Earth-map which tries to locate the fictional world within the real-world topography is a rare example of a literally ‘fictional world’. Since most geomedia fictions apply Google Maps, which solely consist in real world cartographies, their narratives also involve existing places. Therefore, the availability and approachability of software have influenced the literary genre. This aspect reveals a relation between technological development and the aesthetics and content of geomedia fiction. One could speak of a technologically induced literary realism. This aspect shall be elaborated in the next chapter by looking at two recent examples.

Figure 2. Screenshot of Gleitzeit {color: blue} by Collaboratorium Cyberprosa showing an excerpt of a map referring to the position of the mythical island Atlantis from Athanasius Kircher’s mundus subterraneus (1644) (http://tiss.zdv.uni-tuebingen.de/webroot/nr/ndres/zukunft/zukunft_roman/roman090_utopia.htm)
EXEMPLARY ANALYSIS: A NEW LITERARY REALISM?

Similar to the analytical literary geography which is ‘only established in its rudiments’ (Piatti, 2009, p. 178), current geomedia fiction is an emerging field. However, Piatti determined a popularisation of digital literary geography concepts as early as 2008. At this stage, she referred to the aforementioned Novel Atlas, the digital catalogue Storytravels that allows users to publish their mappings of fiction (http://www.handlungsreisen.de), and Gutenkarte which was a geographic text browser. The latter two websites both apply Google Maps data.

Since I can only outline the research field exemplarily, I have chosen the following more recent websites because they are contrastive as well as paradigmatic examples of the emerging research field. Senghor on the Rocks, a travel novel written by the Austrian author Christoph Benda, depicts a graphical juxtaposition of literary text and satellite views of Google Maps (Fig. 5). An image of a book shows a left page framing a satellite picture and a right page containing text. A click on the respective page produces an animated visualisation of turning over a book page. The website has been available online since May 2008 (http://www.senghorontherocks.net). Its rather traditional appearance could be printed in book form, as it refers to established reading habits. Merely the animated movements on the map distinguish this geomedia fiction from print approaches. In contrast, The 21 Steps is a geo-annotated spy thriller by the Scottish author Charles Cumming...
Graphically, it consists of an intertwining and overlay of map and literary text (Fig. 6). It was published in March 2008 by Penguin Books UK as part of the digital fiction series *We Tell Stories*.

Figure 6 shows that in *The 21 Steps*, the map is not just an illustrative, but a functional element. The reader gains access to the text by clicking on the cartographic surface. The map itself acts as a graphical user interface. On the other hand, *Senghor on the Rocks* utilizes the framing book graphic as an interface that contains both map and text and effectively regulates the reading process. Map mashups in general and literary map mashups in particular can be subdivided according to these graphic design characteristics. On the one hand, content can be directly annotated on the map, for instance, by using text information bubbles; its visibility then comes along with a partial superposition of the cartographic surface. Alternatively, content is placed next to the map and a third element, for example, a location mark, clarifies its cartographic position. This graphical mode of presentation suggests that Döring’s classification of presentation modes of literary geography should be expanded: in addition to analytical ‘maps of fiction’ and illustrative ‘maps in fiction’, one has to speak of ‘fiction in interactive maps’. With that, the hierarchical relation of literary texts and maps shifts: while in printed contexts, literary texts tend to take up more space than the maps of fiction, the digital cartographic surface proportionally gains in functional importance as well as in visual significance.

In comparison to academic demands on analytical literary maps, amateur mappings show little complexity. Piatti et al. propose five spatial aspects of fictional texts: *setting* (‘where the action takes place’), *zone of action* (‘several settings combined’), *projected space* (‘characters are not present there, but are dreaming of, remembering, longing for a specific place’), *marker* (‘a place which is mentioned, but not part of the categories above’) and *route* (‘along which characters are moving: by foot, by train, on horseback etc.’) (Piatti et al., 2009, p. 183). With regard to these categories, the following examples of geomedia fiction only consider *settings* and *routes*. Their cartographic visualisations solely locate the space of action of their protagonists and show their movements as an animated route or line on the map.

The satellite pictures in *Senghor on the Rocks* illustrate the main character’s travel through the West-African state of Senegal and the quests in *The 21 Steps* lead from London via...
Scotland to Rio de Janeiro. The lower complexity of these maps is related to the differing theoretical backgrounds of maps of fiction compared to maps in fiction. Analytical literary geography aims for an informational surplus value by using maps: not to be a merely illustrative element, but an instrument which discloses insights which were obscured by the textual richness. The analytical perspective therefore requires comprehensive mappings which also enable a comparative perspective and interrelations of various literary spaces. It appears that amateur literary mappings primarily utilize maps in a pictorial sense and therefore tend to generate rather basic mappings.

The aesthetics of amateur mappings also limit the textual possibilities in several respects: the respective stories only include content which maintains a linear, unbroken plot and therefore provides the narrative basis for a continuous, animated path-visualisation. The maps thereby function as a superior factor of influence restricting the literary leeway. The author Charles Cumming even commented on this interdependence between the writing process and the programming of the cartographical embedding, saying that the story ‘was written very much in conjunction with the programming of the cartographical embedding, saying that the story ‘was written very much in conjunction with the game designers, Six to Start (the programming agency). The process was collaborative from the word go. I would write a few short chapters and they would say: Can you move the action outside? or Is it possible to build a visual clue into this section which will pay off later?’ They also came up with the idea of having Rick run over the roof of Waverley Station because they knew that it would look good on the map’ (Black, 2008). Writing the story and creating its cartographic user interface were therefore interrelated processes. Cumming put the resulting restrictions very politely: ‘It was limiting only in the sense that I couldn’t explore character in any great depth or get into the more psychological or emotional sides of the story. Plot was everything. Suspense was everything. It was all about pace and movement’ (Black, 2008).

In this sense, artistic freedom was abandoned in favour of visual appeal. An interview with Jeremy Ettinghausen, the former digital publisher at Penguin Books, makes clear just how strongly the prospect of a webcartographic presentation limited the author’s creative autonomy: ‘Early drafts of the story saw the protagonist having a very tense discussion for a couple of chapters – riveting stuff’ – but it was all in one room. Luckily we had a great relationship with Charles and we worked together to incorporate more movement, or references to other locations, in every chapter’ (Carless, 2008). In order to ‘show off’ the innovative presentation mode, a variety of cartographic animations were necessary. Consequently, the story had to offer movement which could then be visualized on the map. The proposed design thus, dominated the writing process from the start. This focus on visual and media performance can be traced back to economically grounded PR-deliberations and the company’s search for new markets, target groups and future business models. Of course, aspects of profitability affect print-literature as well, for instance, by mechanism of ex-/inclusion. However, in the case of this particular digital publication, its institutional and economic embedding gives direction to the process of literature production even more directly.

Such a unilateral influence exerted by the cartographic annotation on the literary text does not account for Senghor on the Rocks. One reason is that the project emerged from a collaboration between friends instead of being conceptualized and coordinated by a professional publishing company. Besides, the unpublished manuscript of the novel Senghor on the Rocks already existed before the three producers Christoph Benda, Florian Ledermann and Johannes Krtek came up with the idea of a geographic embedding. Incompatibilities between text and map had to be hurdled through interpersonal negotiations and could not be solved by professional hierarchies and top-down decisions in favour of the map. In this case, the author also had to make changes in the text to adjust it to the added map, but at the same time, the initial mapping tool had to be modified, since it was more suitable for shorter passages. Therefore, during this production, mutual concessions from both the programming and writing perspective were made – yet, the cartographic visualisation still had an (albeit relatively minor) influence on the literary text.

In regard to the interdependencies between the literary text and its cartographic annotation, one must also consider that it is not only the mapping – the point by point localisation and the linear animations of movement – but already the choice of the map itself which is an influential aspect. Since Google Maps are easily, legally available and because their editing appears simpler than the creation of a new, individual map, they are the obvious data choice for geomedia fiction. Likewise, the characteristics and limits of Google Maps define the appearance and illustration facilities of these amateur mappings. As mentioned before, the Google data only include geographic maps which have a real world reference (except for material such as Google Moon for instance). The 21 Steps and Senghor on the Rocks therefore both take place in a real-world setting which is visualized by Google Maps material. In terms of Parson’s theory of fictional objects, they only contain spatial ‘immigrant objects’ (Parsons, 1980, p. 51) – really existing places which are set in a fictional context and can be shown on a geographical map. The evolving geomedia fiction is therefore a genre which shows a tendency towards a literary realism.

Generally, literary realism refers to the aspiration of an artwork, e.g. a piece of fiction, to create a representative depiction in relation to the real world and its contemporary or historical society. As a style-typological term, it indicates narratives which (ideally) intend to give an objective account of physically perceptible phenomena. As a category of literary history, it also refers to the period of ‘poetic realism’ during the second half of the nineteenth century. In this essay, the phrase indicates narrative strategies which are deployed in order to convey the impression that a fictional plot could have indeed taken place. Literary realism produces an illusion of history and a society’s contemporary knowledge as expressed by socio-cultural artefacts. Barthes points out that realistic accounts comply ‘with the regnum of “objective” history, to which must be added the contemporary development of techniques, of works, and institutions based on the incessant need to authenticate the “real”’ (Barthes, 1989, p. 146). As an example, he cites ‘the photograph (immediate witness of “what was here”)’
Similarly, maps in fiction act as indicators of reality, and therefore as functional elements in order to construct a literary realism. Their integration in fiction simulates reality on two accounts. Firstly, the readers perceive the maps themselves as realistic objects, since they are familiar tools of orientation and overview in daily life. Moreover, such maps localize the story in a factual geography and act as a topographic authentication of the literary space.

Ideally, any account of realism aims at representing the world ‘as it is’, but one has to keep in mind that they are inevitably based on individual and subjective perceptions of the world. This causes biases and distortions between the real and its ‘realistic’ depiction. Moreover, the concept of realism takes on diverging meanings in various contexts. Literary and artistic realism differ from cartographic realism which may on the one hand imply illustrative, pictorial topographic visualisations that are meant to reduce a map’s complexity and degree of abstraction. Alternatively, the notion of a ‘naïve cartographic realism’ has been employed in order to critique ‘the belief that the map is the real world’ which led to the misconception that ‘the map is abruptly and unwittingly converted from an analogy into a metaphor’ (Downs, 1981, p. 290). Hence, realism can be said to be an ambiguous as well as a utopian concept. Moreover, the deviations between a ‘realistic representation’ and the real can be more or less intentional. They might be an inadvertent result of an author’s personal perception or of strategic manipulation. This aspect is of particular importance since maps and therefore the cartographic elements in geomedia fiction do not represent but construct spaces and spatial relations.

Market-dominating (one might say hegemonic) services such as Google Maps relate to Pickles’ observation that ‘the theory of cartographic representation that held sway for so many years has begun to show signs of wear and tear. In particular, new technologies and uses of spatial representations have brought to the forefront again issues of accuracy and error’ (Pickles, 2004, p. 290). Hence, realism can be said to be an ambiguous and utopian concept. Moreover, the deviations between a ‘realistic representation’ and the real can be more or less intentional. They might be an inadvertent result of an author’s personal perception or of strategic manipulation. This aspect is of particular importance since maps and therefore the cartographic elements in geomedia fiction do not represent but construct spaces and spatial relations.

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The satellite pictures in Senghor on the Rocks are a good example of these technologically induced limitations. The application of Google’s satellite view in place of maps is due to the fact that the cartographic material is rather under-developed. With regard to Harley (2001), the graphic iconologically represents a lack in the available Google map material for Senegal. Where the Satellite pictures in Senghor on the Rocks show topographic details such as streets and buildings, the map view reveals that urban areas like Dakar and Thies are cartographically quite well developed, while the rural territories are grey planes that have been barely filled (Fig. 7). This becomes evident that the reality of Google’s maps is a susceptible factor and that the ‘new literary realism’ is just an elusive aesthetic mode which makes use of the established image and symbolic potential of maps as signs of ‘the real’. Even though literary realism always involves a utopian element, the cartographically simulated realism effect trades on the fact that in daily life, maps are accepted as reliable, well-functioning instruments which are supposed to be ‘true’ in reference to the real world since they fulfil their purpose of geographic navigation and orientation. Wood refers to the cartographic authority of maps, stating that any map always implicitly claims its own verifiability: ‘what makes the map so capable of evoking this existential presence is the implicit challenge: you don’t believe it? Go check it out!’ (Wood, 2010, p. 58). In
the introduced geomedia fiction, the cartographically induced literary realism makes use of this allegedly frequently kept promise of maps.

**GEOMEDIA FICTION: USER ACCEPTANCE**

A subsequent question arising in this context is how users might read or rather view these mappings and their literary realism. Therefore, this last chapter shall take a brief look at the usage of the analysed websites. It cannot answer the question by whom the websites are used in unaffected contexts, since it looks at data collected in artificial settings. The following analysis is based on interviews with ten women and seven men aged between 21 and 52 years (mean: 29 years) which were conducted, while the participants used *The 21 Steps*, *Senghor on the Rocks* and two other websites which could not be discussed in detail in this essay (http://www.landvermesser.tv and http://www.faz.net/romanatlas). The following passages address the reactions to these two previously mentioned websites. Audio recordings of intuitive reactions, comments and arising discussions were undertaken at participants’ homes between July and September 2009.

The length of the interviews ranged from 20 to 52 min, with an average of 32 min. The participants browsed the four aforementioned websites, while I interviewed and observed them. The websites were opened as tabs in advance on participants’ private computers or laptops. During the initial interviews, I applied a basic guideline which included questions regarding the users’ perception and evaluation of the shown examples. Since I aimed at intuitive, unconstrained reactions, the questions at the beginning of each interview were phrased deliberately: ‘What do you think about these websites?’. Only after a participant had indicated a specific normative position, would I ask for instance why they (dis)liked the websites, how they would rate them and if they would use them in private. Moreover, questions regarding their rather general perception were integrated. For example, I asked if they knew the websites or anything similar before and how they would describe them to a friend. In later interviews, I addressed issues that came up during prior conversations in addition to the original guideline. I asked the interviewees if they had thought of these aspects as well and if they could elaborate on them. However, before addressing these questions, I would give participants ample time to express their individual reactions in sufficient detail.

These semi-structured interviews were audio-recorded and transcribed afterwards. During the interviews, I additionally wrote down comments on the participants’ behavior, e.g. which interface elements they clicked on, if they had problems using the websites or if they had used them in unexpected ways. Those observation notes were included in the transcribed interviews. Afterwards, I coded the interview transcripts using a *Grounded Theory* framework (Glaser and Strauss, 1967). The analysis was particularly guided by the approach specified by Strauss and Corbin (1990). In order to find repetitive or structurally similar topics, I extracted quotations and assigned them to superior concepts and (sub-)categories.

One constantly recurring theme was the subjectively perceived incompatibility of literary and cartographic content which I am going to expand on in the following passages. Even the selection of participants was guided by the notion of theoretical sampling which has its roots in *Grounded Theory*: after conducting interviews with three randomly chosen participants, a major selection criterion was to address and contrast persons which were likely to have highly varying media usage biographies and preferences. On the one hand, I aimed at achieving such a sampling through an inclusion of different age groups as well as different professions (e.g. a literary scholar and a cartography teacher). This method was chosen since the prior participants invariably explained their evaluations of the shown websites with regard to prior media usage and preferences. The participants were gathered through various communication channels: by postings in several universities in North Rhine-Westphalia (Germany), by personalized e-mail enquiries and through contacts facilitated by acquaintances. Since participants were informed that they would not be remunerated, there was a minimal response rate.

In regard to the following analysis, one must keep in mind that it is based on a qualitative approach and does not claim any representativity. Moreover, the approach tends to address consciously explicated user preferences and cannot be read as a usability study in terms of a failed or successful user performance. Even though most users stated to dislike the websites, they were able to handle them without considerable problems. Therefore, one has to differentiate between a critique of the websites’ concepts and a nevertheless established competence to use them. With that said, it shall be elaborated below how the users perceive the digital combinations of maps and fiction with particular regard to the critical aspects of geomedia literature discussed so far.

The participants did not differentiate between satellite pictures and map material in a terminological sense; both were literally addressed as ‘the map’. However, they were remarkably critical of the use of map(-like) material within the websites. The participants rejected the merely illustrative application of the cartographic visualisations and demanded a purpose in terms of a navigational or orientation function. A major point of criticism was that the graphics did not come along with any distinct utility. In this sample, maps were predominantly seen as media of purposeful navigation and orientation. In contrast, the websites offered an almost contemplative ‘map viewing’ instead of the demanded possibility of reading the maps.

For instance, users complained that the satellite pictures in *Senghor on the Rocks* were too closely zoomed in to allow for any orientation. In addition, the chosen map extracts limited their possibilities to get an overview of the fiction’s setting. Rather than seeing a single street where the story takes place, they asked for a view that shows the position of Senegal within the world. The high zoom factor and the immutable extracts led to negative criticisms. Likewise, *The 21 Steps* was criticized on the grounds that it does not immediately explicate the setting of the story. It shows a map of London, but does not specify this information within the text, requiring users to recognize the urban
structures, which only participants familiar with the geography of London were able to do. The users did not accept the maps as isolated pictures, and asked for the unseen geographic embedding. The impossibility of realizing spatial relations and the geographic position of the shown territory created frustration. Thus, the participants did not criticize the maps themselves, but rather the producer’s application, particularly the lack of a distinct function that would allow for an extrinsically motivated use of the maps. From the users’ point of view, maps should only be included when they inform, orientate or provide navigational benefit beyond providing a mere pictorial illustration. This complies with Stockhammer’s observation that one could still detect a dominantly assumed contradiction between ‘numeral and literal arts’ (Stockhammer, 2007, p. 67). Only in children’s and youth literature would the implementation of maps in fiction, maps in these digital contexts would not lead to the map as a disturbing graphic. From the participant’s viewpoint, the cartographic elements impose a visual pre-definition of the fiction which contradicts the users’ wish to picture the literary world themselves. Compared to paper-based maps in fiction, maps in these digital contexts would take up too much space and limit the freedom of interpretation. Senhhor on the Rocks and The 21 Steps do not offer characteristics which are expected for a map. On the other hand, they also contradict conventionalized features that determine how literature is read. While the maps are meant to convey realism and act as topographic verifications which support the fictional world’s conclusiveness, the users rather perceive them as disturbing graphics. From the participant’s viewpoint, the cartographic elements impose a visual pre-definition of the fiction which contradicts their wish to picture the literary world themselves. Compared to paper-based maps in fiction, maps in these digital contexts would take up too much space and limit the freedom of interpretation. Senhhor on the Rocks and The 21 Steps therefore challenge the user’s habits in several respects: they contradict the participant’s conventions regarding their accustomed, instrumental reading of maps as well as their reading habits regarding literature. Overall, the user acceptance was therefore low and one could almost speak of a certain resistance towards an illustrative use of maps which the websites implement.

(Digital) maps seem to have an established reputation of being a rather instrumental graphic. Since the websites do not comply with this expectation, the specific applications of map materials were harshly criticized. In every interview, questions arose regarding the utility and intent of the included Google Maps. The common axiom and self-imposed aspiration of analytical literary geography, that an included map should embody more than a merely illustrative adjunct, therefore appears to be similarly relevant for geomedia fiction. The recipient of a map in the literature acts primarily as a ‘map reader’. Mere pictorial illustration produces irritation and refusal, and the users remain clueless: what is to be done with a map that does not demand to be read? The digital notations face limiting factors apart from boundaries defined by current technical feasibility. New modes of map-literature-combinations might be viable, but not necessarily user-accepted. Cartographic functionality appears to act as a silent demand on maps in the literature. Even in contexts where literature reading is an intrinsically motivated act, the map seems to signify an informational, useful sign-system. Therefore, maps in literature face the challenge of justifying their existence with informational surplus value – presuming that a product aims at actually being used (which does not necessarily apply to artistic projects for instance).

This leads to the crucial question of how geomedia fictions should be designed in order to make them more attractive to potential users. The coherencies described above pose the challenge that diverse user expectations and producers’ intentions (which suggest nearly incompatible design criteria) have to be brought in line. User interviews have emphasized the demand for literary maps to take up a utilitarian function and a more distinct applicability. From the users’ point of view, a merely illustrative application makes the map expendable and contradicts their internalized image of everyday cartographies. In order to react to this critique, adding analytical elements to literary maps appears to stand to reason. Such a solution, however, conflicts with those websites’ function as an object of entertainment, as well as with the map makers’ intentions. The production of websites like Senhhor on the Rocks and The 21 Steps usually starts from two basic motivations. Firstly, an important incentive is technophilia. Most mashup approaches emerged from the realisation of upcoming possibilities and a desire to experiment with these new means. For instance, the digital writing project We Tell Stories, which included The 21 Steps, systematically aimed at creating ‘new forms of story – designed specially for the internet’ (http://wetellstories.co.uk/about). The mashups mentioned so far do not emanate from anticipated user interest, but from technical possibilities and their tentative exploration. The popularisation of Google Maps and map mashups involves a domino effect where the perception of the phenomenon leads to its reproduction in diverse forms such as sound, news or literature map mashups. The multiplication of the innovation has followed a ludic drive rather than usability concerns.

Secondly, it is characteristic of geomedia fiction in particular that the producers aim at creating entertaining content. Assuming that they dealt with bellertric texts, which are mostly read in context of leisure time and enjoyment, they also intended their mashups to be entertainment products. The interviews confirm the adequacy of this intuitive approach: with explicit regard to the literary content and the web context, most users revealed that they expected the websites to be enjoyable. Therefore, the creation of geomedia fiction turns into a balancing act. The challenge of conceptualizing literary cartographies involves the realisation of a distinct functionality of employed maps while simultaneously maintaining the essential entertainment context.

In this respect, using analytical maps as in academic literary geography would miss the target group, but at the same time, merely illustrative maps caused user dissatisfaction. In order to solve this dilemma, one has to develop approaches that create a compromise between both forms of literary maps. A possible solution lies in a popular tradition of literary geography which is gradually manifesting itself in the digital
literary tourism facilitates cartographies which closely interrelate the practices of map and text reading. Map mashups that take up the idea of literary tourism therefore come along as possible enhancements of cartographic applications. Literary tourism organizes travelling according to literary interests and themes. Travel guides such as Literary London (Kramer, 2004) Weimar. A Literary Guidebook (Seemann, 2006) or The Marvel Comics Guide to New York City (Sanderson, 2007) allow for an exploration of areas ‘on the scent’ of authors or through their fictional protagonists. In doing so, a purposeful utilisation of maps is usually a condition for gaining meaningful access to the respective literature. For instance, one must first navigate oneself by means of the map in order to find a place of literary significance and only then may learn more about it by reading a text.

Piatti states that literary tourism is far from being an obsolete nineteenth century trend, but is rather a type of travelling which has become more and more popular over the past few years (Piatti, 2008, p. 294). Still this user interest is mainly addressed through traditional paper-based media, even though developments such as navigation systems and mobile phones with GPS functionalities open up a new field for literary tourism. Likewise, the considerable progression and dissemination of mobile media and geographic information systems multiply the possibilities of geomedia fiction. Digital maps could be used to guide literary walks and provide geographic information on fictionalized territories. Thereby, they would act neither as simply illustrative or analytic graphics, but could undertake a navigational function and significantly instruct the usage of an entire application. Mobilized geomedia fictions could offer trips instructed by the literature: digital leisure facilities showing literary spaces with a real-world counterpart.

So far, there are only a few examples merging literature with maps acting as concrete navigational instruments. An interesting case is the Google Maps mashup Landvermesser/Land Surveyor (http://www.landvermesser.tv/alt). A similar, less complex approach without cartographic visualisations is offered by the aforementioned website The Diary of Samuel Pepys (http://www.pepysdiary.com/dl/PepysCityWalk.pdf). During the previously mentioned user interviews, the website Land Surveyor was harshly criticized because of its ‘confusing interface design’ and ‘graphic information overload’. Indeed, the website could benefit from a focus on less elements and a reduction of included media forms which range from audio data, videos and photographs to extensive texts.

Nevertheless, the users positively acknowledged the producers’ basic idea: the website enables literary walks in the city of Berlin by providing audio files and printable, cartographic tour guides. Originally navigation systems guiding these literature tours were also available, but they became economized over time. The website’s front page shows a Google Map excerpt of Berlin and localizes several narratives and authors (Figure 8). With a few clicks, users can download audio files containing verbal, literary city tours as well as printable PDF documents. Those papers show maps important places and routes of the novel, and enables a literary walk through Prenzlauer Berg in Berlin (http://www.landvermesser.tv/alt/zfiles/pdfs/landvermesser_marcbuhl_guide.pdf).

Figure 8. A screenshot showing the front page of the Land Surveyor website (http://landvermesser.tv/alt)

Figure 9. The tour guide to Marc Buhl’s Three Seven Five (2008) maps important places and routes of the novel, and enables a literary walk through Prenzlauer Berg in Berlin (http://www.landvermesser.tv/alt/zfiles/pdfs/landvermesser_marcbuhl_guide.pdf)
Even though this specific application and its actual performance are rather complex, they demonstrate the possibilities of geomedia fiction. Further conceptualisations will need to explore its potentialities beyond a usage which is bound to one location, an immovable computer or inflexible, bulky notebooks. Users commented especially positively on the distinct necessity of the maps in *Land Surveyor*. Their perception of the cartographic visualisation as a functional element which acted as an instructive, navigational tool led to an affirmative evaluation of the website. Developing geomedia fiction with regard to possibilities of mobile media and content that enables literary tourism practices can therefore harmonize the complex and partly contradictory user expectations. In doing so, approaches may avoid the initially described dilemma: the map undertakes a specific, navigational function and geographically organizes the usage, while the literary text can remain embedded in a practice of leisure time and enjoyment.

**CONCLUSIONS**

In terms of user-friendliness, one should avoid using maps in combination with digital literature in a merely illustrative way. After the outlined history of geomedia fiction, which developed from a rather metaphorical use of map graphics to interactive map interfaces and geographically precise localisations of fictional settings, the time has now come to move to another level: geomedia fiction needs to explore the map beyond its use as an element of geographic visualisation of fictional worlds and as an interface organizing the reading process. The interactive map interface in *The 21 Steps* is a step in the right direction, but does not fully utilize the geographically structuring potential of maps. Users need to receive the impression that the map is not just an additional graphical gimmick, but an essential component of the digital literature reading. In this sense, the common demand addressed to analytical literary maps, that they need to represent more than embellishment, is likewise relevant to the development of geomedia fiction. Even though they are in fact usually implemented as illustrative graphics, from the user’s perspective, a mere geographic visualisation is not a sufficient justification for combining digital maps and literature.

However, since geomedia literature is usually confronted with user expectations focusing on entertainment and enjoyment, the implications of such an insight must be different to those conclusions drawn in an academic context. Instead of an analytical contribution, the possibility of using a map for geographic orientation and navigation can convey the impression of a distinct functionality of the cartographic elements while justifying their necessity. Therefore, the junction of literary tourism and of new media possibilities is an appropriate point from where to harmonize the complex user expectations towards a combination of literary and cartographic content. Websites such as *Land Surveyor* may act as inspirations for a further development of mobilized geomedia literature. Literary tourism concepts justify the use of a map in terms of a specific, cartographic imperative, since the literary content only becomes accessible through the use of the map. These approaches align with user demands for a concrete function of literary maps while simultaneously offering a usage which can be enjoyed in the context of leisure time. Such a form of geomedia literature establishes an alternative to analytical or illustrative maps and realizes digital literary cartographies as navigational and instructive tools.

Moreover, after revisiting the earlier exemplary analysis, it appears questionable whether the current amateur mappings take full advantage of digital mapping possibilities. They rather seem to simply employ the most obvious and viable option. Indeed, a literary neogeography cannot be defined as people making their own literary maps, since they create cartographies of fiction within a very limited scope. Their mappings are regulated by the functional and aesthetic possibilities of Google Maps. This is also relevant to literary geography, since one has to review the applicability of prior approaches regarding these new objects of research. Clearly, the literary realism which comes along with geomedia fiction cannot be read as a purely textual expression and it is not interpretable as such. Deliberations on connections between genre and author’s geographic choices such as those undertaken by Moretti need to be reconsidered with regard to geomedia fiction. Moretti reflected on interrelations between imaginary or really existing places and on other content characteristics. A provisional assumption is, for instance, that imaginary settings tend to come along with happy endings. Subsequently, he raises the following issue: ‘[W]hy do novels so often mix real geographical sites and imaginary locations? (…) Are there, in other words, events that tend to happen in real spaces – and others that prefer fictional ones?’ (Moretti, 1997, p. 18). Asking these questions in regard to *The 21 Steps* or *Senghor on the Rocks* would miss the point, however, since the text cannot be analysed as a discrete object. Bringing together Moretti’s statements and the previously discussed influences on the literary texts which were combined with Google Maps exposes two implications. Firstly, the lack of imaginary, (what Parsons terms ‘native’) spatial objects in geomedia fiction cannot be read as a meaningful, interpretable aspect of the text in the way that would have been applicable to paper-based contexts. Instead, the maps are main factors of influences which determine the tendency to include real objects. Secondly, assuming that Moretti is correct in relating specific stories with real or imaginary spaces, geomedia literature appears to be an exclusive form of literature (which is nevertheless a technologically induced development). The narrow diversity of amateur mapping technologies and the consequently developed cartographic embeddings limit the narrative possibilities and marginalize the implementation of stories dealing with imaginary spaces. This aspect shows once more how important it is for literary geography to expand interdisciplinary approaches: the interpretation of the text appears to depend more and more on a reliable ‘deconstruction’ of the literary map and its production background.
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ACKNOWLEDGEMENTS

During the ‘Mapping Maps’ workshop at University of Siegen in January 2011, I had the chance to present an intermediate stage of this paper. I would like to thank the interdisciplinary audience for their helpful notes and the open discussion. Moreover, I want to thank the reviewers as well as Jörg Döring and Bartek Goldmann for their constructive critique and valuable complementary suggestions which have enabled me to refine this essay.

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