

# Poetic Augmented Reality: Place-bound Literature In Locative Media

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## ABSTRACT

This paper presents the *textopia* project, a locative media design experiment set up to explore the relationship between places and literary texts. The system allows a user to walk through the city of Oslo and listen to texts that talk about the places the user is passing by. A series of texts written for the system through a creative writing competition is analyzed to identify the potential for new, place-bound literary experiences made possible by the locative system.

## Categories and Subject Descriptors

J.5 [Arts and Humanities]: Literature; H.5.4 [Information Interfaces and Presentation]: Hypertext/Hypermedia; A.0 [General]: General literary works.

## General Terms

Design, Experimentation, Human Factors

## Keywords

Locative media, place-based storytelling, user-generated content

## 1. INTRODUCTION

Locative media – here understood as mobile media applications which are sensitive to the user's physical location – make it possible to connect texts with places. When 'text' is understood as 'information', this connection has practical benefits. For instance, a car navigation tool using the Global Positioning System (GPS) can tell its user not only where she is and what road to take, but also the location of the nearest gas stations, hotels, tourist information offices and so on. But text is not only information – among other things, it can be an aesthetic medium for creative expression, as in poetry, fiction and other forms of literature. Is there a value in connecting literary texts with places? This paper argues that there is. It also presents a prototype for a locative media application that enables this kind of connection, and analyzes some interesting features of the texts produced by initial users of the system.

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Theorists of space and place tend to agree that the concept of 'place' should not only be treated as a physical location in space, but also as a psychological, social and cultural phenomenon (cf. [4], p. 157-161). In their influential paper, Harrison and Dourish define place as "a space which is invested with understandings of behavioral appropriateness, cultural expectations, and so forth. [...] Furthermore, 'places' are spaces that are valued" ([2], p. 69). Virtual place-making theorists Yehuda Kalay and John Marx describe a place as "a setting that affords the entire spectrum of human activities, including physical, economical and cultural activities, while affecting, and being affected by, social and cultural behavior" [9].

In this perspective cultural activities are part of what constitutes a place, just as places affect the cultures that inhabit them. Speaking about the relationship between literary texts and landscapes, J. Hillis Miller observes:

Among such transformations making the brute X-ignotum of the earth (if that is what it is) into a human landscape are the making of a map or of a picture, the telling of a story, the writing of a novel located at that place. [...] The landscape exists as landscape only when it has been made human in an activity of inhabitation that the writing of the novel repeats or prolongs. ([24], p. 20)

Literature and place seem to stand in a dual relationship, in which they affect each other reciprocally. Places, of course, are part of the material of literature – whether it is seemingly directly through realistic depictions of real-world places, or more indirectly as models for imagined places. On the other hand, literary texts are part of the cultural processes whereby human landscapes (and places) are constructed as dwellings for human beings, societies and cultures. When an author writes a text about a place – be it James Joyce writing about Dublin, Knut Hamsun about Oslo, or Allen Ginsberg about San Francisco – the place changes as a result of it. This is obviously true for certain famous and canonical texts, which frequently leave their physical marks on places – in the shape of statues of their authors, inscribed quotes, memorial plaques, literary tours and so on. But in principle it is true for every little text, no matter how insignificant, as long as it is read and shared among a small community of readers.

If these arguments are accepted, then the study of the relationship between literary texts and the places they deal with should be a matter of interest not just to literary critics and authors, but to society at large. Making visible and accessible the invisible layers of meanings formed by the literary texts connected with places and landscapes has a potential not just for preservation and dissemination of cultural heritage, but also for enriching people's experience of their local environment (whether it is the one they live in, or one they are visiting). Furthermore, if the public could be encouraged to enter into dialogue with the literary heritage – that is, by writing and sharing their own texts in a place-centric

system – this would entail a measure of cultural and democratic empowerment of citizens with regard to their local environment.

The *textopia* project is an attempt at realizing these ideas through a geo-referential wiki of place-bound literary texts, as well as a reader application for location-aware cellphones. The project is interdisciplinary, in the sense that it is a humanities-driven project using explorative digital design as method of research. In the following section the methodological challenges raised by this project will be discussed, before the actual design is presented. The two last sections evaluate the outcome of the project so far from two different perspectives: First, through an analysis of the texts produced by the users of the *textopia* system, and secondly through a discussion of weaknesses in the current design of the system.

## 2. METHODOLOGY

Traditionally, humanities-based studies of media developments are undertaken after the fact, as historical accounts; or sometimes as investigations into contemporary developments. It is relatively rare that humanist scholars actively try to contribute to the future and ongoing development of new media; such efforts are normally left to art and design departments, film and journalism schools, computer science and other fields where practical, constructive development is central. There may be many good reasons for this division of labour, but there is also the risk that the humanities in general – and humanist media studies in particular – may lose out on valuable insights that can only be gained by being part of practical development work. Conversely, and arguably more importantly, for the world outside humanities faculties: If we believe that the humanities hold valuable insights about such things as language, culture and communication, there is much to be lost by not involving this knowledge in practical research directed at developing new media forms and technologies.<sup>1</sup>

Unfortunately there is no established methodology in the humanities for doing research through digital design. Simply importing design research methodology will not do, since design research tends to focus on methods for doing design – whereas what is needed here is a way to use design as a method in itself, to answer questions raised by another academic field – namely, humanist media studies.

Stuart Moulthrop convincingly makes the case that the emergence of new media – cybertexts – may have fundamental consequences for education and for humanist scholarship [25]. Expanding on Espen Aarseth's claim that (computer) games “can't be read as texts or listened to as music, they must be played” [1], Moulthrop argues that this seems to be a basic feature of cybertexts: that they require participation by the user (e.g. the humanist researcher) in order to be understood. The idea (taken from James P. Gee [7]) of a new *literacy* taught by computer games, along with the idea of programming as a new form of *writing* (after John Cayley [5]) leads Moulthrop to the observation that the advent of cybernetic media “rewrites writing” and indicates “*a change in the status of the letter itself*. [...] This sort of writing is not simply intelligible, but also executable” (p. 4).<sup>2</sup> This leads him to suggest

expanding the ambit of writing to include not just the secondary creativity of play, but also the primary production tasks of programming, and by extension, media design. In fact, by situating the letter within the cybernetic process or feedback loop, this extended literacy directly connects writing with play. I mean not simply that it reveals the control structures that govern our experience

of play, but that those structures themselves become objects of play. (p. 5)

In other words, in order to fully appreciate and realize the changed status of writing and text, humanist researchers need to extend beyond simply participating in the new media as *users*, to also become *creators*. As a “sketch” of a “working model”, Moulthrop proposes a new scholarly category: the “intervention”, described as “a practical contribution to a media system (e.g., some product, tool, or method) intended to challenge underlying assumptions or reveal new ways of proceeding”. Moulthrop lists four criteria for projects which are to count as interventions:

1. It should belong somewhere in the domain of cybertext, constituted as an interface to a database and including a feedback structure and generative logic to accommodate active engagement.
2. It should be a work of production crafted with commonly available media and tools.
3. It should depart discernibly from previous practice and be informed by some overt critical stance, satirical impulse, or polemical commitment, possibly laid out in an argument or manifesto.
4. It should have provocative, pedagogic, or exemplary value, and be freely or widely distributed through some channel that maximizes this value, such as the Creative Commons or open-source licensing. Ideally, the infrastructure of the work should either be available to the receiver or documented in sufficient detail to permit productive imitation. (p. 5-6)

This is how the *textopia* project is conceived – not as a design project to be evaluated by user tests and focus groups, but rather as a humanistic intervention aimed at exploring a certain critical stance towards the relation between places and texts. Although it was not created to be an example of Moulthrop's idea, it fills all his general criteria: It is a (or rather, several) interface(s) to a database, which is open to collaborative construction and editing; it has been created with commonly available tools and pre-existing technology; it represents a new way of reading and writing texts, informed by a critical stance towards the relationship between places and texts, as presented in this article (and others to follow); and finally, the project aims for both provocative and pedagogical value, and both its technical components and textual contents are released as open source material.<sup>3</sup>

The knowledge contribution that is aimed for in the *textopia* project is not about usability or viable product development, but rather about exploring possible ways of connecting literary texts with places. Therefore, the design will not be evaluated primarily through feedback from and observations of users, but rather through the textual production and activities that the system is able to facilitate – that is, the users' own collection and production of texts through the system. The primary research goal is not to find out how to design locative media, but rather how a locative literary system can allow users to experience and play with the relationship between texts and places in new ways. Therefore, the outcome of this playful experience – the texts produced – is the primary material for analysis and evaluation.

## 3. THE TEXTOPIA SYSTEM

In what Tuters and Varnelis describe as the “ur-text for locative media” [34], Ben Russell in his 1999 *headmap manifesto*

1 Similar arguments have been made by Bolter [2] [3] and Liestøl [16] [17].

2 In the references to Moulthrop, page numbers refer to the manuscript version available online.

3 The *textopia* mobile browser is released under the GNU General Public License, whereas the contents of the wiki are released under a Creative Commons license.

envisioned that “location aware, networked, mobile devices make possible invisible notes attached to spaces, places, people and things” ([30], p. 4). Since then, several locative media projects have explored different ways of connecting stories with places. Many of these projects, such as “34 North 118 West” [14] and “Media Portrait of the Liberties” [27], focus on stories which are created by the researchers specifically for the projects. Interesting as these projects are, they do not seem to activate the democratizing potential in allowing the audience to create their own stories. Even the “[murmur]” project, which claims to be writing “history from the ground up, told by the voices that are often overlooked when the stories of cities are told” [23], does not seem to offer any direct way for users to submit their own stories. The [murmur] project makes stories accessible to users by posting small signs with phone numbers at various locations in a city – calling the number, the user will hear the story connected with the particular location in which the sign was posted. This does overcome one important obstacle of locative media applications, in that it allows all users to interact with the system with their own devices, as opposed to being dependent on borrowing (or renting) special-purpose equipment. However, as a consequence it also reduces the flexibility of the user interaction with the system in a certain respect, requiring the user to actively seek out the signposts and dial the numbers. Part of the goal of the textopia design is to create a system which is flexible and open, both in the sense that it allows users to contribute their own texts and interact with the system as freely as possible, as well as in being based on open standards which would allow the system to be used on as wide a range of devices as possible.<sup>4</sup>

The basic vision for the textopia system is to create a mobile application which makes it possible for a user to walk through a city (in this case, downtown Oslo, Norway) and listen to literary texts that talk about the places she is passing by. The main requirements to achieve this are:

1. a database of place-bound literary texts, tagged with geographical coordinates
2. a mobile browsing application

In order to make it possible for a user to hear texts which are relevant to her location, at any spot within downtown Oslo, the database would need to be quite large. Even if we limit the area to a rectangle of 2x2km, it would take 400 evenly dispersed text samples to make sure that there is one within every «grid» of 100x100m. Accounting for the difficulty of finding interesting texts for every location, and that ideally there should be several texts available at every location to avoid repetition, as well as the fact that only texts which are old enough to be in the public domain can be used,<sup>5</sup> it is clear that it would take considerable resources to gather an appropriate collection of interesting sample texts. Combined with the desire to make it easy for users to contribute their own texts, this led to the decision to construct the database as a wiki (using the open source MediaWiki software used to run the Wikipedia websites). A set of customized extensions and templates are used in order to standardize the registration of texts in the wiki, and make it as easy as possible for users to contribute.

4 For the first design of the system, this latter goal was not achieved – although the mobile application was based on Java Mobile Edition (Java ME), which is an open standard, the implementations of the standard varies so much among the various device manufacturers and operating systems that the application can not be assumed to run correctly on other platforms than the one it was designed for. However, the task of porting the application to other Java phones is easier than it would have been if the application was based on a proprietary standard.

5 That is, texts whose authors died more than 70 years ago.



Figure 1: The wiki combines MediaWiki and Google Maps to collect and display geo-tagged literary texts.

The mobile browser was designed along with the wiki implementation in the period May-November 2008. It is a fairly simple Java application<sup>6</sup> that runs on Nokia GPS cell phones using the S60 3.1 operating system, such as the popular models N95 and 6110 Navigator. The program has a text-based interface and a basic set of features. It downloads all the texts from the wiki, finds the user's current location, and starts playing a recording of the nearest text – provided there is one within a predefined “trigger distance” – via audio streaming. It is possible to filter the content so one only hears texts by a certain author, or group of authors. (There is also a “manual location” mode that can be used to input location manually, if needed – for instance if the GPS signal is too weak.) The uploading of texts to the wiki is done through the wiki interface on a desktop or laptop computer, and the audio recordings are created by users and uploaded along with the text.

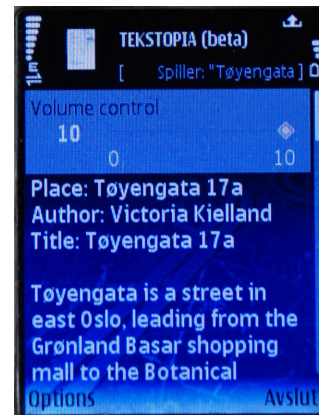


Figure 2: The mobile reader uses a basic text interface. When the phone's position has been found the nearest text is displayed, and a recording of the text is played back.

In order to get users engaged in contributing texts to the textopia system, a writing competition was arranged in November 2008 – January 2009. Invitations were distributed via email lists, local media and websites, inviting anyone interested to submit texts to the system. The contributors were asked to submit series of 3-6 texts each, where each text was identified with a specific place in downtown Oslo. These texts would be submitted in plain format to be evaluated by a professional jury, which in return selected 10 participants to a finale. The ten finalists were given instructions on how to upload their texts to the textopia website, and were given appropriate equipment to go out and listen to their own texts in the city, in order to see if the experience would inspire them to make changes to their own texts to exploit the features of the system.

6 Java Mobile Edition (JME), with additional support for JSR-179 Location API required.

Finally, the jury gathered for a day to go out in the city and listen to all the texts and select three winners, who were awarded cash prizes.<sup>7</sup>

The competition turned out to be a successful experiment in soliciting participation, gathering altogether 46 contributions from both professional authors, students and amateurs. The place-bound texts submitted by all of these contributors offer an exciting opportunity to investigate the ways in which users might engage with a system that allows them to write texts for a locative literary system.

#### 4. POETIC AUGMENTED REALITY: LOCATIVE LITERARY EXPERIENCES

In the following section I will provide a brief analysis of the texts submitted to the textopia competition, sorting them into some main categories in order to try to identify the literary formats made possible by the locative system. I propose the following categories:

1. *Placetexts*: Poetic place descriptions, or stories that are placed in certain city locations, but which do not otherwise seem to engage with the specific qualities of the system, and could apparently have been written without a locative system in mind.
2. *Voice sculptures*: Poetic texts which usually address the reader directly in the second person, and in which the poetic voice/narrator appears to be aware that it is speaking as a recording to a reader/user present in the same location, but at a later time, and uses this situation as a poetic or rhetorical tool.
3. *Stray voices*: Series of texts which form stories that move from place to place, requiring the user to physically traverse the landscape of the story in order to traverse the text of the story (though not necessarily in linear sequence).

These three categories can be seen as a taxonomical ordering of the body of texts, though they do not divide the material in equally large groups – perhaps unsurprisingly, the largest number of contributions to the competition seem to fall in the first of these categories. In addition a fourth category can be identified, which can include texts from either of the previous three categories: 'Counterfactual placetexts', which talk about the places in ways that go beyond the present-day reality of the place – for instance by invoking old history, or describing future or alternative realities.

##### 4.1 Placetexts

On the face of it the first category of texts, the name of which implies a simple juxtaposition of place and text, seems to be the one that holds the least interest here. However it should be noted that this is not a statement of literary quality – in fact, many of the texts written by the winner of the competition, Simon Stranger, could aptly be placed in category one. And though these texts could probably have been written for a different medium, placing them in a locative medium may still affect the texts in significant ways. For often in these texts the narrator or the poetic voice, although not addressing the reader directly, seems to take on a certain role: that of the *seer*, the poet with the penetrating glance that sees below the surface and reveals the truth below, bringing forth hidden histories or hidden qualities of the place to the

<sup>7</sup> The jury consisted of Helene Uri (professional author, leader of the jury), Bjarne Buset (author and publisher) and Gunnar Liestøl (professor and leader of the Inventio project group, to which textopia belongs). The winner of the competition was awarded a prize of NOK 5000 (ca. US\$ 750), whereas two other participants shared the second place and were awarded NOK 2500 (ca. US\$ 375) each.

attention of the reader. This is the position taken by the narrator in Erlend Erichsen's text about Vaterland,<sup>8</sup> the 19<sup>th</sup> century working class neighborhood of Knut Hamsun's Oslo, which in today's Oslo has been replaced by modern high-rises and freeway overpasses:

You were all the time trying to find it. This place that you'd been reading about and hearing about so many times. [...] It was as if it had disappeared into the river, as if it had been washed away with the current, sunk into the dark and foreign cultures, driven by the wind out the fjord. It didn't exist any more, apparently this place didn't exist any more. But one afternoon, standing on the bridge and looking down on all the black water washing away, it dawned on you. [...] It was there, just there, on the bridge, over the river, in all the darkness by Grønland, this was what they called Vaterland. [6]<sup>9</sup>

The idea of being able to bring forth hidden stories or hidden qualities of place is one that seems to be shared by many locative media projects [18] [22] [27]. And of course this is a common position for a poetic voice or a narrator to assume – it does not necessarily depend on a locative system to be effective. One might even argue that this is a role that serious poetic texts that talk about places take on by default – if they were not seen as trying to go beyond the surface of the immediately visible, they would probably not be accepted as serious literature by readers and critics. Be that as it may, something particular happens when this is done in a locative medium: The medium causes the poetic attempt at penetrating the surface of things to be experienced *on site*, so that both the «surface» – the visible place – and that which the poet claims to be making visible are accessible at the same time. Experiencing the text in this way may be enriching to the reader, allowing her to see a new dimension beyond the already visible qualities of the place, and perhaps help her more fully understand the text; on the other hand, it may also help the reader to be critical of the text, by giving her direct access to (part of) the physical source material of the text. One might be tempted to call this effect 'poetic augmented reality' – and this is an effect that is shared among the texts of all the three main categories described here. Whether it is aesthetically effective or pleasing in any individual text is a matter best left to the individual reader and critic.

##### 4.2 Voice sculptures

The texts in category two, 'voice sculptures', tend to explicitly address the reader and the unique situation set up by the use of the locative system. The poetic voice finds itself in a paradoxical situation: On the one hand the text has been embodied, in that it has been given an audible voice and a physical location to live in; on the other hand the body which created that voice is no longer present. In stead of being printed on paper, thus being turned into

<sup>8</sup> According to the Norwegian Wikipedia [35], the name Vaterland derives from the Dutch word «Waterland», referring to the marshland around the Akerselva river's entry to the ocean. However there are also obvious (and problematic) connotations to the German word for «homeland» (literally, «fatherland»), and the present-day situation where the area serves as borderland between the immigrant neighbourhoods of eastern Oslo and the downtown business districts.

<sup>9</sup> All quotes from the competition contributions have been translated from Norwegian by the author of this article. A few of the texts have been translated in their entirety, and can be viewed at en.textopia.org (complete urls in the reference list); for other texts only the specific quotes have been translated, and the urls in the references point to the Norwegian original at tekstopia.uio.no.

a physical mass product to be distributed around the world, the text finds itself left hanging in the air, as an aural sculpture to be listened to by random passers-by. Some authors use this situation in a relatively straightforward way to pursue something similar to the poetic augmented reality strategy mentioned above, such as in the following excerpt about the town hall square by Marianne MacDonald, whose every text starts with the words «Stop. Look around», followed by an encouragement to view the surroundings anew:

Stop. Look around.

You are going somewhere. Everyone who passes by here is going somewhere. Cars come from all directions, the tram flies over the cobblestone. People are fleeing home from work, driven by cold winds which no artificial constructions try to stop.

But you: Stop. Here are some of the most uniquely ugly buildings in the city, whether it's that thousand year old box they call the palace, or that monstrous goat cheese from the thirties. [21]

This strategy is not limited to the visual sense, as shown by the following enthusiastic praise for what at first glance may seem like just a dull, empty tunnel leading down to an underground train station. Granted, this text does not address the user directly, but still seems to address the situation the user will be in if listening to the text on this exact location, and seems to invite the user to take part in the activity described:

Oaaaao! Hoi, hoi! Such fun it is to shout here! What acoustics! Even the footsteps bang from wall to wall. The best tourist attraction in Oslo – for the ear, that is. [20]

Both the visual and aural modes of perception can of course be combined and incorporated into more complex poetic imagery. The following text by Endre Ruset, about a relatively anonymous street in the eastern downtown part of Oslo, brings together multiple images of presence, absence, and mediated presence:

Now you are the one walking here, past Lakkegata school on the way home to a shining room in a shared apartment, on the way to a party with a bottle of wine in the one hand, on the way away never to return: London, Paris, Brussels, Alta, Nowhere. Maybe this street, this stretch, just after the Botanical Garden, between the junction with Sarsgate and the junction with Lakkegata, is just a vague memory of something morbid you read in the newspaper, the rape of a fifteen year old girl, a brutal assault on a retired person, or just something trivial; how the man who passed you by with his dog, a cocker spaniel, was swaying in his walk. It's snowing. It's cloudy. The sun is shining and it's hot. There's a hail storm. My voice holds four seasons and any weather, it will always stay here and never know who you are. And yet something may be staring at you just now, from a window you can not locate, unreal, like Lee Harvey Oswald in the dark. [29]

“My voice holds four seasons and any weather, it will always stay here and never know who you are” - the poetic voice seems at once powerful and weak; ever-present, but disembodied and eternally cut off from the reader. There is some fundamental ambiguity here: The poetic subject will never know the reader, who is herself only barely present, just passing through and equipped with the unprecedented mobility of present-day western

youth to go nearly anywhere in the world seemingly with the same ease as if she was just going across town to a party.<sup>10</sup> In spite of this image of mobility, and the technical implications of the system the poem is communicated through, the poetic subject emphasizes the impossibility of communication. The reaction of the reader to the poem remains unknown, just as the reaction of the reader to the media images of violence related to the place she is passing through. These images build up to the final image of a hidden threat, an image of surveillance and ambush which mimics the dystopian fears harbored by many people faced with positioning technologies.

The texts in this category differ from the 'placetexts' primarily in that they directly invoke the co-presence of the reader with the voice of the text in the place the text is talking about. This co-presence may create an illusion of embodiment that can be used to invite the reader to take part in playful exploration of the environment, as in the shouting example above; or to invite greater intimacy between reader and text; or even to invoke images of paranoia, as in the last example.

### 4.3 Stray voices

This third category contains contributions from a few of the competitors who wrote text fragments that connected with each other to form serial narratives, moving from place to place in the city. Most of these stories were strictly linear both in the temporal succession of events, and the physical layout of the texts on the map – one of the finalists even reduced the radius within which the texts were triggered by the system, requiring the readers to visit specific places such as a certain mailbox and a certain hotel entrance in order to traverse the story.

However, the one of these text series which in particular caught the jury's attention, and was awarded a second prize in the competition, attempts to complicate this mode of place-based narration. This complex series deserves a thorough analysis. In this poetical narrative series the reader follows – literally – the narrator as she is walking home from a night out with some friends. She's been telling some stories to her friends, and though she never says exactly what the stories were about, the text seems to hint at something serious. As she wanders, the text also wanders – or rather leaps – in confusing trains of thought that are hard to follow at first reading:

The way things have gotten now makes it ever harder to come closer to what you think you want to say.

That's the way things have gotten now. Particularly now. Here. Here on the way home. I'm eating a cake on the way home. I almost never eat cake. I eat cake at family dinners, but never apart from that. Last time I ate cake they were singing psalms. Psalmcake tasting like blood pudding. [...]

(Shush)

Where are you?

On my way home. Where?

Why aren't you moving faster?

I clean my nose on the napkin and there is blood on the paper and in my panties. [10]

The narrator urges the reader to move on, to follow her on her way home along the series of text fragments. But already in the second of these fragments the endeavor starts to unravel:

I was telling old stories tonight, but I smell no memories. I'm a little afraid each time I'm going

<sup>10</sup> The words “never to return” seem to contradict this picture with a hyperbolic anachronism – who, in the days of budget airline weekend trips across the European continent, goes from Oslo to London, Paris or Brussels never to return?

home alone, probably because people have told me one should be. Here. In Oslo. Like this, in the evening, through Grønland, up Tøyengata to Hagegata, past Sexes gate. The sex street. Through the center, up to Brinken, so far up that you can see the church, where nothing smells of old memories. These distances are too long, you can't walk as fast as I want to tell. [11]

The leaps of thought, which are hard enough to follow mentally for the reader, are impossible to follow physically at the same pace at which they are read. This only adds to the narrator's difficulty in saying what it is she is trying to say, and her ever-frustrated attempts at being precise. And now the linearity of the texts break down – after the third passage follows a fourth one in an entirely different part of the city, and seemingly occurring at a different time of day, perhaps in a flashback. Finally the text leaps back to the original part of the city, but not to the path described before as “the way home”. The two final texts are oddly located in simultaneously precise and imprecise manners: “The video store with zip code 0558, Oslo” [12] and “Closer to Schou Square than Rathke Street 7” [13] (the video store, the square and the street address are ca. 50 meters apart). “If Polaroid now decides to stop producing film, what will we do to recognize that unfixable snapshot feeling?” the narrator asks, while heading to a tattoo parlor. “The tattoo personnel [...] can't afford not to be precise”, she reasons and concludes by addressing the reader once again:

Where are you?  
Lakkegata? Trondheimsveien? Sarsgate?  
It's not important.  
[...]  
Lift your head.  
Words don't command unless you obey.

One can always choose the word that fits,  
but that doesn't necessarily mean that you're lying.  
You're just being precise in a different way. [13]

Physically inscribing words on her body, the narrator seems to be searching desperately for a way to fix meaning in a precise manner; but even this does not help her communicate the meaning to the reader, as the story never lets us know what she is having tattooed. In the end she seems to be giving up her search, with the paradoxical conclusion that precision can be so many things, while at the same time apparently giving up her command over the reader – releasing him back into the wild, the landscape beyond the story, where the chaotic environment of the city is not organized into meaningful narrative. The physical labyrinth of the story ends in the same inconclusive manner as the labyrinthical pattern of thoughts communicated by the story.

Victoria Kielland's story shows how the locative system can be used for something more than just a juxtaposition of the text with the urban landscape; instead incorporating the cityscape as both a structural element and central metaphor for the text itself. In doing so she has indicated one possible way to create literary locative experiences which might also enrich the reader's experience of seemingly mundane city streets. Whether actual readers find that their experiences of the urban landscape have been enriched is of course an empirical question, and one which this paper does not aim to answer (that would be a possible task for future research). However, the reactions of the jury members to the text during their 'tour' of the finalists' contributions indicate that at least these readers had such an experience. Hearing the line “These distances are too long, you can't walk as fast as I want to tell”, caused the jury leader Helene Uri to stop and comment to the rest of the jury that “this is the best line of the day”, joined by concurring remarks from the other two jury members. Kielland's texts seem to have put words to an experience shared among many of the writers, as

well as the readers (i.e. the jury) of the texts in the textopia system: that the mind wants to wander (or jump) from place to place in a way the feet can not follow. Exploring this tension can be a fertile strategy for locative literature.

#### 4.4 Counterfactual placetexts

The three first categories sketched so far may be considered as mutually exclusive categories, which together make up a taxonomy of the contributions to the textopia competition. But it is possible to identify a fourth category which runs across the divisions between the other three: That of the counterfactual placetexts, the alternative realities. These texts deny the implicit realism and actuality which may be expected as a convention for texts which are connected by technological means to real-world spaces (or, in the case of the wiki interface, to real-world maps). In stead they present imagery and scenarios which may be historical, fantastical, parodical, surrealist or science fiction.

In the case of category one texts, the 'placetexts', these counterfactual texts sometimes describe a moment when the normal routine of life and the normal conventions of place suddenly stop functioning for a moment, revealing the hidden fabric of society below; such as what would happen if all the traffic lights turned permanently red [31]. Another writer contributed a series of texts consisting of absurd, Monty Pythonesque fictional historical accounts of seemingly mundane downtown buildings, earning honorable mention from an amused jury [19].

In the case of category two texts, the 'voice sculptures', the poetic voice may be asking the reader explicitly or implicitly to imagine the same place at a different time, or in a different reality. And in some of the category three contributions, the 'stray voices', writers invoked images of catastrophic moments, fantasy scenarios or fairytales. Arguably the most accomplished use of the counterfactual motif is in some of the texts by Simon Stranger, who was awarded first prize by the jury. Here, the poetic voice is constructing images of history's passing through many small events happening in the same place at different points in history. In one particular text about the newly constructed Oslo Opera House in the harbor of Oslo, it also invites the reader to take part in constructing the image for herself:

And now, as you're standing on the roof of this iceberg-like monument  
[...]  
take a deep breath and try to imagine that all the houses were gone.  
Disappeared.  
That all of it, the train station, the neon light billboards and the apartment buildings dissolved in front of you.  
Then the roads. Lift away the asphalt, the cobble stones and the tramlines for your inner eye.  
[...]  
In just a moment, you have managed to remove the entire city of Oslo.  
What would be left?  
What would emerge in the city's absence?  
The quiet water sliding in towards the beaches and the rocks. [32]

This text does with words what a historical atlas might do with maps and figures: It invokes a journey back through time, to the moment when the first human set foot on the land that is now a busy city. One might consider this a pedagogical vision as well as a poetic one; and it is a good example of how a writer can use the contrast between what the user sees with her eyes and the alternative reality that the text describes, for purposes that can be not only poetic or pedagogical, but also political, philosophical, humorous and/or satirical.

## 5. DESIGN PROBLEMS

In light of the preceding analysis, it seems fair to conclude that the textopia project so far has succeeded in at least one respect: To serve as a creative tool for inspiring writers – professional and non-professional – to write place-bound texts in new ways. In the official press release announcing the results of the textopia writing competition the leader of the jury, the author Helene Uri, lends support to this conclusion:

To go around the city and have the texts read out loud to you on site has opened up for new and exciting ways in which to experience literature, and has added a new dimension to the texts. In a way, the contributors have taken part in defining a new genre. [33]

Public interest in the project seems also to have been proven. The competition received a fair amount of attention in the local media, with stories appearing in two major newspapers [37] [15] as well as local radio and TV and various smaller media. Given the complexity of the task asked of the contributors, the zero advertising budget and the relatively short time available (less than four weeks), a total of 46 contributions to the competitions seem to indicate more than sufficient public interest to justify the efforts going into the project.

However, in another respect the textopia project has not succeeded, at least not for now: It has not managed to build a community around the wiki. Between the end of the writing competition at January 15<sup>th</sup> and the time of writing this article almost no further texts have been uploaded to the wiki except by members of the project – and although the mobile browsing application is freely available for download for those who have compatible mobile devices, there has been no indications that anyone outside the project has used this opportunity. The lack of engagement with the mobile application can safely be assumed to be at least partly a consequence of the lack of activity in the wiki, since users would have to download the mobile application from the wiki pages. In the following discussion of the shortcomings of the textopia system we will therefore focus on the design of the wiki.

### 5.1 Wiki problems

The finalists in the competition gave feedback on their use of the system through an anonymous questionnaire as well as an informal group interview after the end of the competition. Their responses indicate that ease of use and openness are key challenges to building a community around the wiki. Although all the users indicate that they liked the ideas behind the project and found it interesting to interact and experiment with this way of writing texts, most of them also expressed some disappointment with the complexity of the system, in particular the wiki.

To some extent this came as a surprise, for two reasons: First of all, there were more complaints about the wiki than about the mobile application, which had been expected beforehand to be a much bigger problem due to instability and general usability problems with the mobile devices. It appears that our users (who of course were well aware that they were taking part in an experiment with little technical resources, and expressed sympathy about that situation) *expected* a greater degree of usability problems from a mobile application, and therefore were more tolerant towards problems in the mobile part of the system. The second reason, why we were surprised by the greater usability problems with the wiki was that the MediaWiki system, with its basic layout and interface is the same as the one used to run Wikipedia, one of the world's most popular web sites over the last few years, and should therefore be well known and established among web users.

However, most Wikipedia users are not Wikipedia contributors, so

even though most of our users probably knew how to use Wikipedia to *find* and *read* articles, few or none may have had any practice *editing* Wikipedia articles.<sup>11</sup> Granted, a customized and much simplified editing interface had been designed specifically for the textopia system, allowing users to upload a text simply by filling out fields in a web form in natural language and indicating location by clicking on a map, thus avoiding any need for users to learn to use the “wikicode” formatting language or template logic that the normal MediaWiki editing interface would have exposed. Even so, the complexity of the MediaWiki software still made certain operations unnecessarily complicated. Two such problems stood out, and will be described briefly to illustrate a more general point about the MediaWiki system.

First of all, the process of uploading and attaching a sound recording to one's text was less than ideal from the user's point of view. The MediaWiki system treats uploading of files as a process separate from editing of texts, so when the user was contributing her text to the system for the first time, she was not able to add the sound recording at the same time. She first had to save her text in the wiki interface, then find a menu link marked 'Upload file', go through the uploading process (which has several steps and warnings of its own), and finally navigate back to her original text, click 'edit' and insert the name of the uploaded audio file in the appropriate field of the edit form.

The second problem made it hard to correct certain errors. In the form that was used to add a new text, users were asked to type in a place name and an author name. Once this information was submitted, the user was taken to an edit form for an 'article' with a name constructed from these parameters as well as a couple of predetermined prefixes (on the form of '/Literature/Oslo/Place name/Author'), and in which the fields in the edit form for author and place were already filled out. The purpose of doing this was to standardize article names, which needed to start with a given prefix (in order to activate the customized edit form for these articles). However, this also meant that if a user made a typing mistake, or wanted to change the place name to something more accurate – as happened with at least half of the users – they needed to find out not just how to change these parameters in the article, but also how to change the filename itself, an operation which MediaWiki only allows administrators to do. Inevitably, as this problem soon occurred with many of the finalists, they all had to be promoted to administrators for the duration of the finale.<sup>12</sup>

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11 According to Jakob Nielsen, in October 2006 the number of active editors on the English Wikipedia was only 0.2% of the number of unique visitors to the site in the US alone [26]. The textopia finalists were asked in advance about their experience with computers in general, though not about wikipedia editing in particular. To the question: “Do you ever use computers for anything more complicated than writing word documents, send email or surf the web?” only one user answered unequivocally yes, so it seems fair to assume that this was not a group of advanced computer users.

12 The MediaWiki system provides several administrator levels, and the contributors were given the lowest of these, so the risk to the system was very low – but it still gave them powers not normally given to base-level wiki users, and was clearly not an ideal solution.

Figure 3: The form used to start adding a new text to the wiki.

Figure 4: The information from the first form is used to set both the filename and the corresponding parameters for the structured text format used in the wiki and the mobile application.

In retrospect, these design flaws are easy enough to diagnose as violations of two of Donald Norman's "straightforward" principles of design – namely, "Simplify the structure of tasks" and "Design for error" ([28], p. 187-206). In fact, these issues were known to the designer before the system was taken in use – the only reason better solutions had not been implemented was that the wiki system made such solutions hard to find. Going into further details of these complications would require more space than is given here, but one interesting conclusion can be drawn from these problems: The wiki format may have been the wrong choice of format for the system.

At the start of the project, when the wiki format was adopted, work with the system focused on one particular use of it – namely to collect and register excerpts from canonical 19th-century literary texts. This activity has much in common with the original purpose that MediaWiki was designed to support, namely to build a collectively edited database of all the world's knowledge. This is a task that lends itself to collective efforts, in which more technically proficient users can help formatting the contributions of users with less knowledge of the system. However, it is not immediately clear how this division of labour can be employed in an activity focused on individual creativity. MediaWiki was never built to support individual creativity – in fact, one of the central rules for editing Wikipedia stipulates that users should not use the webpage to publish their original ideas [36]. Furthermore, using MediaWiki to allow users to submit their own, original texts in a structured format which could also be read by our mobile application required the creation of a customized edit form, in order to reduce the complexity for new users. However, in doing this the openness of the system was reduced, making it harder for users to take part in shaping the system. Tellingly, the two external users who have contributed texts to the system outside of the competition both 'failed' to use the system as intended, supplying factual texts about places in their neighbourhood rather than

literary ones.<sup>13</sup> In short, being a format unfit for the task, the wiki format seems paradoxically to have restrained users of the system rather than empowering them.

Currently, work is ongoing on a second version of the textopia system, in which we are trying to repair these flaws. Looking for an improved format which avoids the problems we experienced with the wiki system, we are taking inspiration from a different set of web genres, that have a track record in affording create use: Blogs, video-sharing web sites such as YouTube, and messaging services such as twitter. Instead of presenting users with a large, complex system for collecting and sorting literary texts, we are now aiming for a more minimalist solution in which the user is faced with a mostly blank page requiring little more than a text – be it a literary text, a blog or diary-style text, tour guide fragment or anything the user might fancy – and a position (an address or a click on a map), as well as some optional meta-information such as keywords. Hopefully, reduced complexity will lower the threshold for users to engage with the system.

## 5.2 Granularity

A final issue to be explored in further developments of the system is the question of granularity, as shown by some of the 'stray voices' texts discussed above. This is a practical problem which textopia shares with other locative media experiments [22][18]: How big is a place? How close should the reader be required to come before triggering the content connected with a given location?

There is a basic dilemma: If the texts only play when the reader is very close to it, the browsing experience becomes more cumbersome and impractical because the reader needs to actively search for the place, and the amount of readers that get to hear any particular text is most likely reduced (and the amount of texts needed to fill up the system is increased). On the other hand, if the radius of each text is too large, the reader may not be in sight of or in contact with the actual place the text talks about when hearing the text – thus perhaps defeating the purpose of the system.

In the textopia competition the system's default radius of 200 meters was used in the contributions of nine of the ten finalists, which meant that the members of the jury sometimes started listening to a text which talked about a quite specific place (such as a building) long before that place was in sight. A few times the system forced the readers to move to a particular spot in order to find the text, although the object of the text (e.g. the royal palace) was already in plain sight. (This last effect was particularly pronounced in the case of the one finalist who chose to reduce the trigger radius of her texts to 50 meters.) Clearly, one of the requirements for a system like textopia is a flexible way of manipulating granularity – something which is not just a challenge for the designer of the system, but probably even more so for the writers of texts, who have to incorporate yet another unfamiliar parameter in the writing/designing of their texts.

## 6. CONCLUDING REMARKS

The textopia system, although not (yet) able to foster a thriving online community, has enabled the production of a small body of literary material which demonstrate possible creative uses of a locative literary system. Four categories, representing four different literary strategies, have been identified: From the relatively simple 'placetexts' to the more complex 'voice sculpture' individual texts, 'stray voices' narrative series, and the counterfactual texts. These categories may be seen as a form of genre prototypes, textual practices which introduce new possibilities for writers and readers of literature.

<sup>13</sup> This caused some conceptual conflicts with the automated article templates, which presupposed a literary text. For instance, all texts created using the custom edit form are automatically prefixed "Literature", and placed under a super-category by the same name.



The importance of these possibilities lies in their potential to allow readers and writers to see literature in relation to their lived environment. Placing literary texts in public spaces may help to make literature, and its relationship with the city, more visible and accessible to readers. It may also contribute to a vision of public spaces as inherently readable, playable and malleable by its inhabitants. Placing one's own literary texts in a public space via an electronic medium is perhaps not equivalent to placing one's own physical sculpture in the same public space; but the locative medium does give its users a new kind of power to shape the cultural landscape of their own environment. Although more research is necessary in order to develop a system that can give users access to this kind of cultural empowerment, the experiences made so far seems to indicate that this is an endeavor that is both attainable and worthwhile.

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