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Literary-Cartographic Models in the Corpus of Czech Prose

Abstract

The study focuses on problems of literary cartography. Part one deals with basic issues such as the definition of the discipline and attempts to define its basic taxonomy, and also presents selected literary-cartographic projects. Part two presents literary-cartographic models that are part of the literary corpora of Czech prose. Specifically, it deals with models of the fictional topography of Prague in the work of selected Czech writers. The aim is not only to demonstrate what such models look like, but, above all, to present a way of working with them in the process of literary interpretation.

Keywords: computational literary studies, quantitative and cartographic methods, structuralism, interpretation of cartographic models, corpus of Czech novels.

Introduction

If we were to characterise literary cartography, which has been discussed for the last 15 years or so, in the most concise way, we could say that it is an interdisciplinary field seeking to functionally link literature and other

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aspects related to literary texts (authorial biographies, reading experiences, literary places, journeys of authors or important personalities) with spatial or cartographic models. However, the combination of maps and literature is not new in itself. It can already be found in some medieval or early modern texts. Nevertheless, if we focus on purely artistic texts (fiction), then the best examples of such correspondence include, for example, the texts of Daniel Defoe, Jonathan Swift, Robert Louis Stevenson, Rudyard Kipling and John R. R. Tolkien. According to the British scholar Sally Bushell, literary scholarship has only begun to take a significant interest in cartographic models, and not only as tools for the analysis of artistic texts, in the last 10 years (Bushell, 2020, p. 3). This stems from two basic impulses. The first is the so-called turn to space, which has been discussed since the 1980s[1] and which Bachmann-Medick characterises as follows: ''In the new conception, space does not mean territoriality, the container of tradition or even home, in contrast to the previous understanding of space and place in, for example, folklore studies. Space refers to the social production of space as a multi-layered and often contradictory social process, a specific localisation of cultural practices, and the dynamics of social relations that point to the mutability of space. ... In literary scholarship, narrative space – from phenomenology to the semiotics of literary space – has been addressed long before the spatial turn, beginning with the specifically literary representation of movement in space and, above all, the encoding of space, its forms of representation, habits, practices, narrative exploration and its saturation with symbols and imagery, and finally its transformation into symbolic or imaginary places ... [The] theoretically sharpened rediscovery of spatiality and locality, of boundary transitions and topographies, represents a turning point for literary scholarship. It leads from overestimation of interior spaces to reassessment of real spaces, both as subject matter and as settings for literary texts" (Bachmann-Medick, 2006, pp. 289, 308, 310). The spatial turn represents a fundamental reconsideration of the conception and interpretation of cultural space by bringing about a reformulation and rethinking of the cultural-historical understanding of space, which is aimed at overcoming the view of space as a more or less disruptive spatial

[1] However, the preconditions for a change in the conception of the cultural-social spatial paradigm are of older date. In 1984, Michel Foucault published his now legendary text *Of Other Spaces*, in which he spoke of "heterotopias", i.e. other places within each culture that are profiled by their own special and axiological paradigm. However, he had presented his ideas about different cultural spaces earlier in a lecture in 1967 (Foucault, 1967/n.d.).

continuum, internally homogeneous towards plurality and multi-layered spatial schemas and frameworks.

The second major impetus was the development of digital technologies, especially geographic information systems (GIS), which have gradually become an integral part of our everyday lives (navigation, Google Maps, etc.). The spatial turn has opened the way for scholars in the humanities to rethink spatial relations as well as digital technologies, which are increasingly permeating everyday life and interacting with diverse discourses and areas of social life, and have provided not only technological but also methodological possibilities to realise and theoretically conceptualise this transformation.

Literary cartography today is a dynamically developing discipline, which has at its disposal not only a number of theoretical publications of various types (single-author and collective monographs, partial studies), but also specific projects. The different types of output also represent literary cartography as an internally divergent research field, which is, however, united by the issues of mapping and literary texts. If we were to attempt a kind of systematisation, we would speak of three basic areas in which literary cartography is being carried out today:

The first area consists of projects aimed at mapping an author's biographical information. Such maps also serve as a basis for mapping literary locations and their connectivity to the real environment (see the project Placing Literature: Where Your Book Meets the Map (*Placing Literature: Where Your Book Meets the Map*, n.d.)[2] or the Literary Map of Ostrava 1918–2018), or for mapping the journeys of specific writers (see the project Mapping the Lakes: A Literary GIS (*Mapping the Lakes: A Literary GIS*, n.d.)[3]) or important historical figures (see the project Johann Conrad Fischer Journey (*Johann Conrad Fischer Journey*, n.d.)[4]). The second area is research on maps in literary texts. This may involve fictional maps that are part of a story or maps as part of a discourse. This area of literary cartography is concerned with the way maps function within a literary work, where one of their primary functions is to enhance the immersive character of the work. The third area covers literary maps as tools for literary research. Among many projects that fall into this area is Franco Moretti's founding

[2] Available from: https://placingliterature.wordpress.com/2016/02/02/welcome-to-the-new-placing-literature/

[3] Available from: https://www.lancaster.ac.uk/mappingthelakes/

[4] Available from: https://www.johannconradfischer.com/en/travels

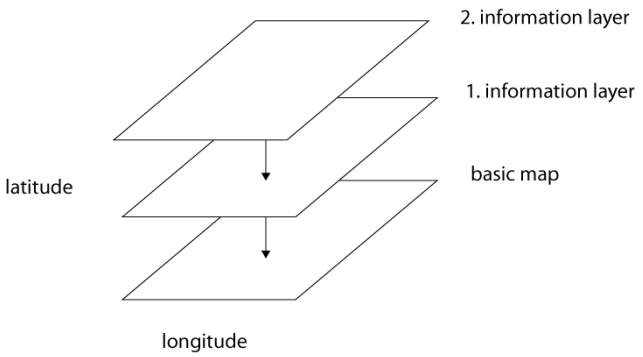


Figure 1. GIS system model.

work, *Atlas of the European Model: 1800–1900* (Moretti, 1998), as well as monographs such as Julia A. Buckler's *Mapping St. Petersburg: Imperial Text and Cityshape* (Buckler, 2005) and Marie-Laure Ryan's, Kenneth Foote's and Maoz Azaryahu's monograph *Narrating Space/Spatializing Narrative: Where Narrative Theory and Geography Meet* (Ryan et al., 2016). Last but not least, this field is represented by the project of Barbara Piatti et al., *Ein literarischer Atlas Europas*[5] (2019), which uses GIS methods frequently used today to map fictional topography, including that of Prague. Their principle is to project individual geoinformation layers onto a base map, with the vast majority of the base layer being actual maps such as Google Maps or Open Street Maps (see Fig. 1).

This method has advantages especially whenever locations can be successfully and meaningfully identified with a specific coordinate system (longitude and latitude). However, this can prove to be a considerable complication in the case of literary fiction in particular, especially for historical fiction or literary texts that were written in a different century and that use historical and often no longer existing topography as their substance from today's perspective. This is also the case with Prague's fictional topography, i.e. those literary narratives that were inspired by, for example, the real Prague environment of the 19th century.[6] In such a case,

[5] Available from: https://www.literaturatlas.eu/

[6] This is an example of numerous representative Czech prosaic texts of this period, see the prose of Jan Neruda, Jakub Arbes, Karolína Světlá, Zikmund Winter, Alois Jirásek, Svatopluk Čech, and many others.

automated GIS may not be the ideal solution, not to mention that fictional locations, unlike real ones, may be far from precise, which is true not only of locations but also of the movement of characters in fictional topography. However, there is another method besides GIS, which is linked to GIS by the overlapping of information layers on the one hand, whereas on the other hand, the identification of locations or paths of literary characters is not determined algorithmically but by manual plotting of the relevant areas on a base map. Where relevant, this method respects a certain degree of uncertainty or randomisation of locations. Moreover, such a procedure does not necessarily work with the actual base map, which proves to be very functional where, as we have noted, historical topography has become a source of inspiration for literary fiction. Thus in the following section we would like to demonstrate this second method, which respects both of these basic assumptions, and to show with concrete examples what advantages this alternative method offers.

Methodology

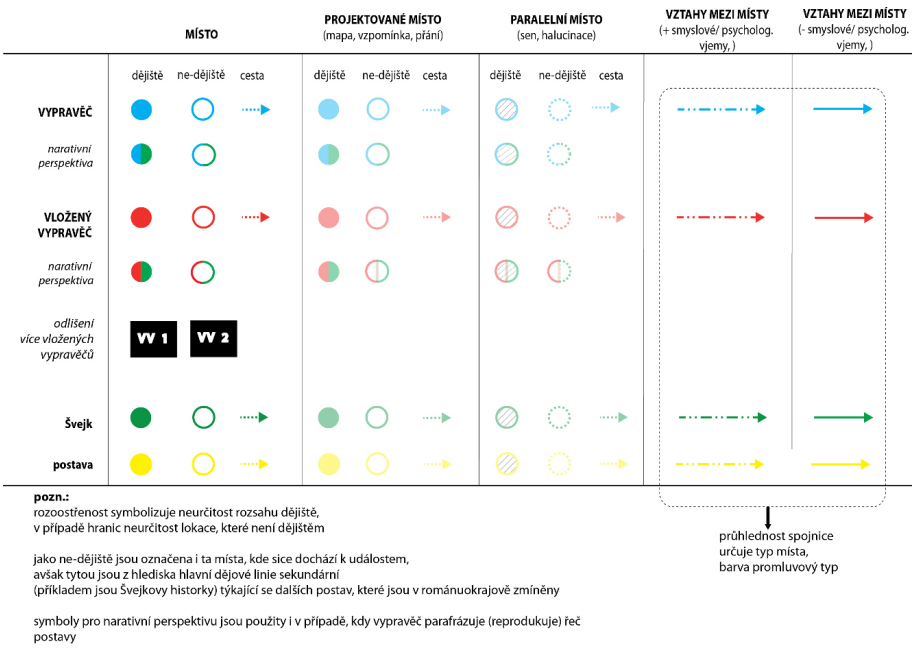
As we have shown in the study *Computational Literary Studies in the Context of Contemporary Czech Literary Studies – Especially the Concept of the Corpus of Czech Novels*, which is presented elsewhere in this issue, in addition to its own linguistic corpus, the project of the corpus of Czech prose consists of literary-cartographic maps modelling the Prague topography in the narrative fictions of Czech literature of the 19th century,[7] quantitative models showing the frequency distribution and stratification of selected textual segments,[8] the frequency load of toponyms, sentence lengths in these segments and the rhythm of narrative segments, as well as models of sentiment and word clusters.

We will try to demonstrate how to work with such a corpus on several examples that are currently available. We will not describe every functionality of the corpus in detail here; in fact, their description is part of the web interface (*Literary Cartographic and Quantitative*

[7] Excerpted are prosaic works that significantly thematise Prague's topography, such as the prose works of Jan Neruda, Jakub Arbes, Karolína Světlá, Zikmund Winter, Alois Jirásek, Gustav Meyrink, and many others. In the future, the corpus is planned to expand to include literary texts from the 20th and 21st centuries.

[8] Specifically, these are narrative speeches of the homo/heterodiegetic narrative type, extra/intradiegetic narrative, a band of character speeches or various types of embedded texts (diary, letter, etc.).

Table 1. Legend to the cartographic models.



Models of Czech Novels, n.d.).[9] What we would like to show at this point is the application of literary-cartographic models in literary and scientific interpretation.

In Fig. 2 to 5 we can see what the different models of fictional topographies look like in the early prose works of Jakub Arbes (1840–1914).[10] The models segment the topography according to whether it is the result of the narrative activities of different narrators or the speech projection of a character, and at the same time they capture the relations between places, based on sensory relations (cf. Fig. 3 to 5) or the movements of the characters, which are the source for the network models (see Fig. 6 to 9).[11] Table 1 shows

[9] Link: https://www.korpusprozy.com/

[10] Genre-wise, it is a "romanetto", which is a novel with elements of mystery and fantasy. The creator of the genre is Jakub Arbes.

[11] We will not present site density models here. Indeed, as all models published here, they can be searched in the corpus; the link is here: https://korpusprozy.com/Arbes/hustota%20lokaci.html . These models can be used to observe both how particular parts of Prague are involved in literary fiction and how particular places are frequency-laden in the prose. (The size

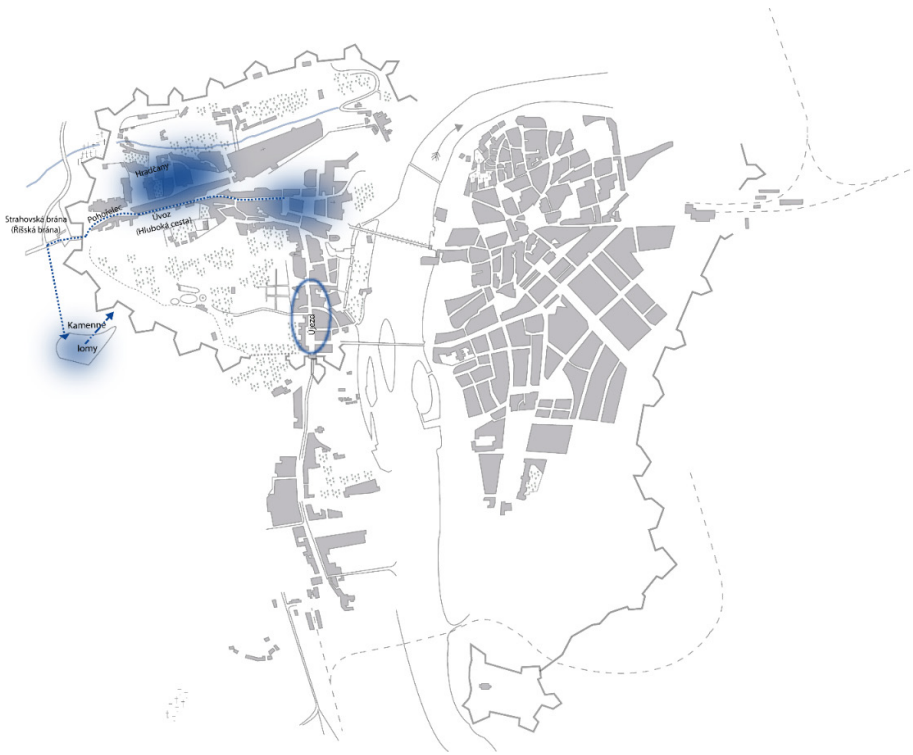


Figure 2. Model of topography in the prose *Ďábel na skřipci* [The Devil on the Rack].

the typology of symbols that are used in the elaboration of the literary-cartographic models.

Topographic models are created on the basis of historical maps of Prague. In the case of Jakub Arbes' prose, the map by František Kořistka from 1873 was chosen, showing the historical Prague topography from the second half of the 19th century. The advantage of this particular map base is that it corresponds with the origin of the analysed prose by Arbes. Moreover, Prague itself did not change fundamentally in terms of topography during the second half of the 19th century. It was only at the turn of the 19th

of the circles is determined by the circumference of the circle the radius of which is the relative frequency of the relevant toponym in the text.)

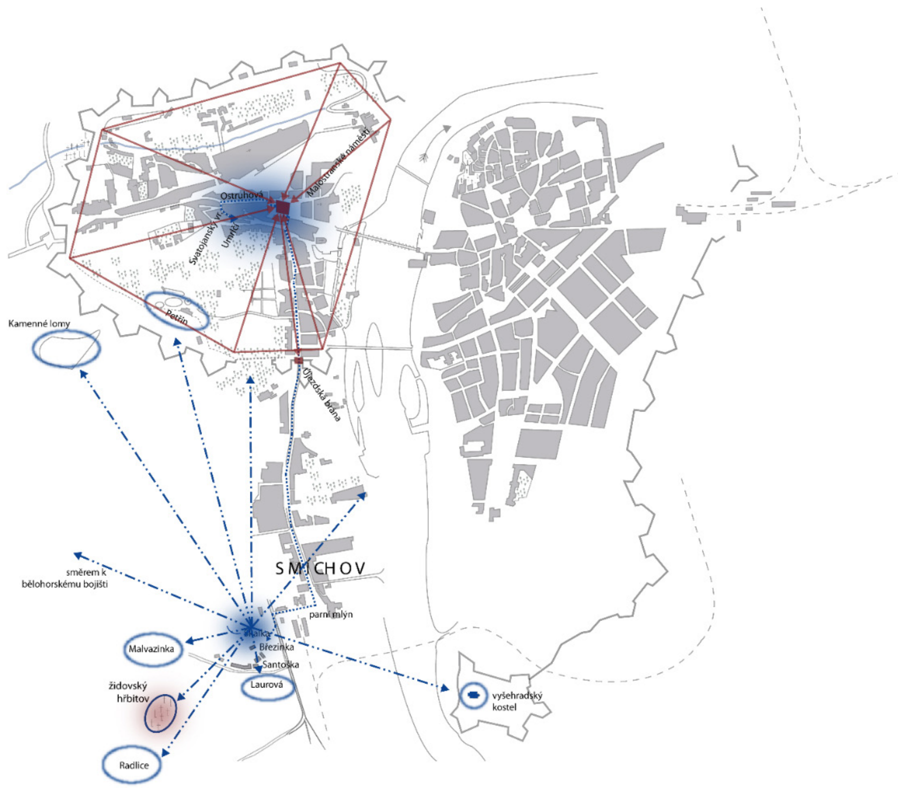


Figure 3. Model of topography in the prose *Svatý Xaverius* [Saint Xavier].

and 20th centuries that a dramatic change took place, as we will discuss later. By analogy, we have chosen the *Plan of Prague from 1909–1914* to map Prague's fictional topography in Jaroslav Hašek's novel, which in turn already captures the transformation of the real topography; the changes – as we will show – had their influence on the fictional topography. The underlying maps were subsequently converted into a basic topographical representation, which is deliberately contour-based. This is because the aim is not to search for correlations between fictional and real places, but mainly to model the structural situation of the fictional topography. It is this type of "blind" maps that best suits these purposes.

What unique information can be gleaned from these models? If we look at the topographical models, we can see how the topography of the fictional worlds in the prose works under consideration evolves over time. This



Figure 4. Model of topography in the prose *Sivooký demon* [The Grey-Eyed Demon].

process has an internal logic that is the source of the relevant paradigm. As the models in Fig. 2 and 3 show, at first it is a model of binary topography based on the confrontation of inner and outer space. This binarity is determined by the situatedness of events inside the Prague urban district (Malá Strana, or Lesser Town) and beyond its borders. An important part of the plot is the moment of crossing the borders (city walls), see Fig. 6 to 8. The crossing of the border significantly culminates the plot of the story with the mystery. The primary function of such a binary-structured spatial scheme is directed towards the accumulation of tension and mystery, which in Arbes' texts, at least in his early prose, stems from chance encounters combined with mysterious corners of Prague, palaces, temples, and also, as we see in the models, from the confrontation between inner and outer

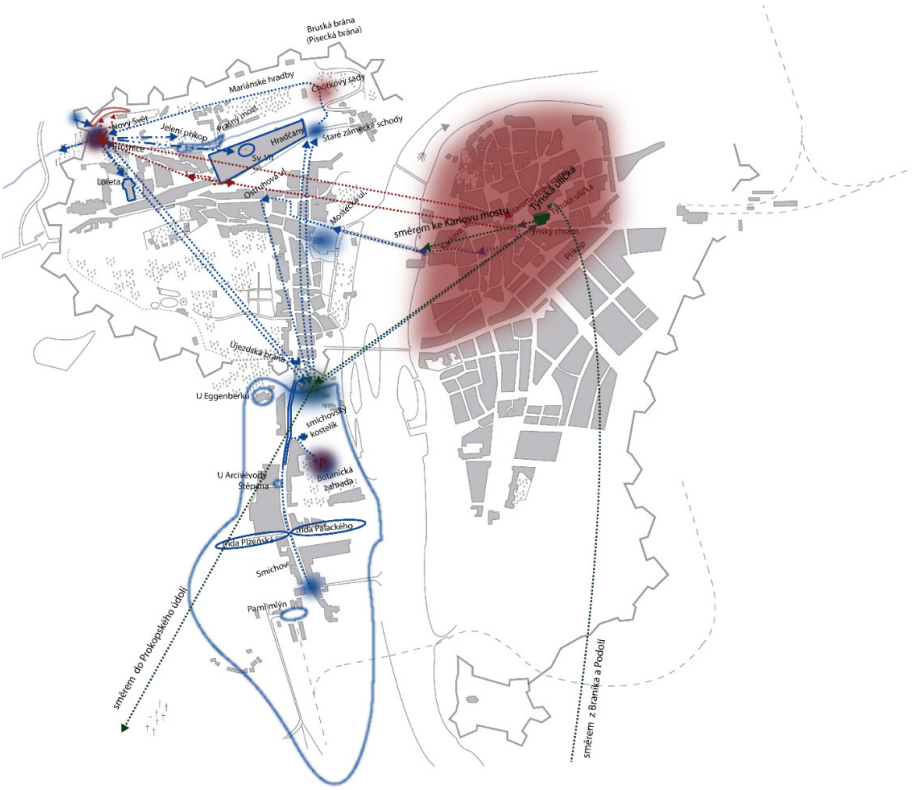


Figure 5. Model of topography in the prose *Zázračná madona* [The Miraculous Madonna].

space. What forms this boundary is the city walls. And here we see another interesting and useful feature of such models.[12] In addition to the fictional topography itself, they show how real topography is used functionally in the construction of fictional space, as we will see in the second example discussed here.

[12] The base layer for these models is a historical map of Prague from 1873 by Karel Kořistka. The choice of this map is not random. It corresponds to two basic criteria of the project. Firstly, it is a model of the actual topography of Prague, which in fact did not change substantially up to the end of the 19th and even the beginning of the 20th century. Secondly, it provides a relevant topographical platform for the analysed works by Arbes, which were created from the mid-1860s onwards and continuously filled the time span until the beginning of the 20th century.



Figure 6. Network model in the prose *Ďábel na skřipci* [The Devil on the Rack].

The model in Fig. 3 relates to the novella *Svatý Xaverius* (1873), which followed the first novella *Ďábel na skřipci* (1865). What situation does it represent? Again, it is a binary spatial paradigm, but unlike the first model, this one is much more sophisticated. The two opposing spaces (inner – outer) have distinct centres. The centrality, as seen in the model, is explicated by centripetal trajectories, which in the case of the inner space are represented by parallel lines leading from the corners of the polygon that forms the city wall to its imaginary centre, where St. Nicholas' Cathedral is located, while in the case of the outer space these are star-shaped diverging trajectories. What underlies both trajectories? The first is based on the following situation: the protagonist of the story is obsessed with the idea that the image of St. Xavier in the Lesser Town temple hides a secret



Figure 7. Network model in the prose *Svatý Xaverius* [Saint Xavier].

map that is supposed to lead to a treasure. This map includes the starting point, which, according to the protagonist, is to be the Lesser Town temple as the centre of the said polygon. The place where the treasure is found then becomes the opposite place behind the city walls. Here the protagonist, accompanied by the narrator, tries to retrieve the treasure in the middle of the night in a futile attempt. During the search, the narrator relates what he sees from there. This also centralises this place, even though it is an outer place beyond the city limits.



Figure 8. Network model in the prose *Sivooký demon* [The Grey-Eyed Demon].

The model shows us that, compared to the first prose, the structural situation based on the confrontation of inner and outer space is more interestingly addressed here, namely by introducing additional dimensions, which are the aforementioned centrality and verticality. The vertical dimension, however, is not to be deduced from the topographical model. So how can we claim that this type of spatial dimension is also part of the relevant fictional topography? This is where the usefulness of combining different types of models starts to become apparent. Chart 1 shows the frequency stratification of selected textual segments in the prose *Svatý Xaverius*.

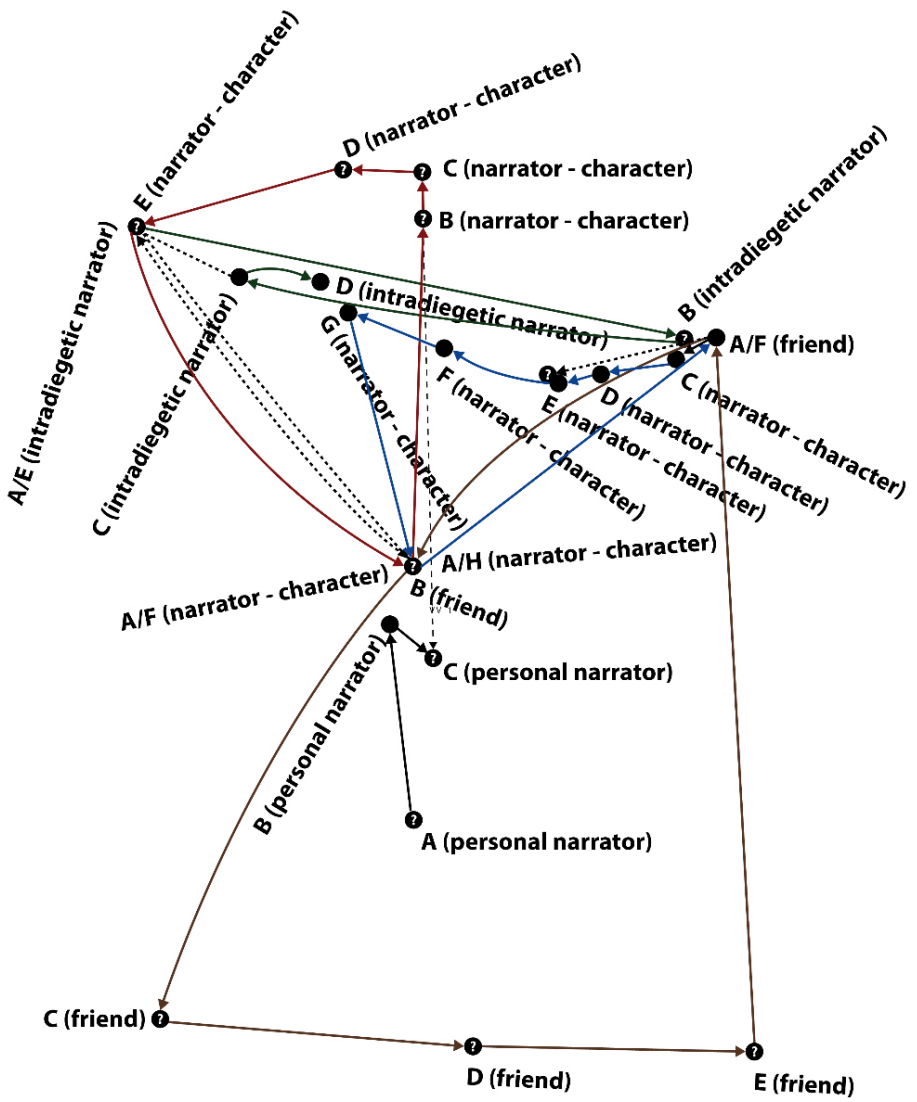


Figure 9. Network model in the prose *Zázračná madona* [The Miraculous Madonna].

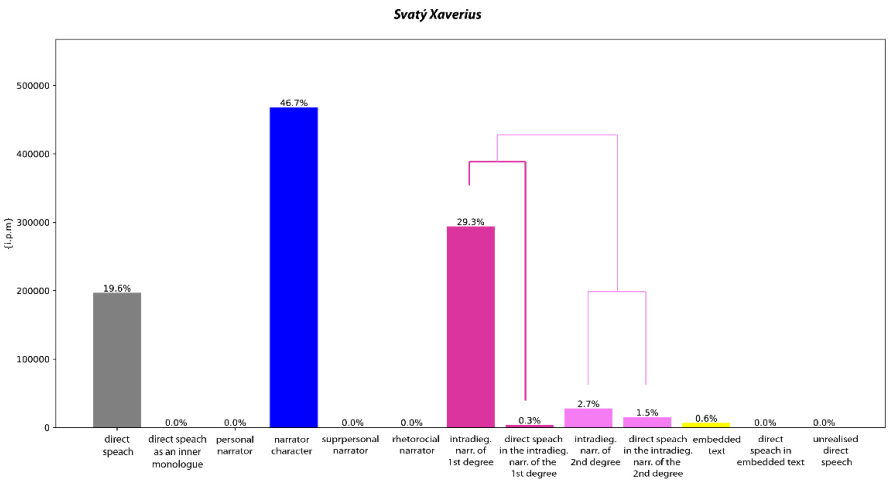


Chart 1. Frequency stratification of text segments in the prose *Svatý Xaverius* [Saint Xavier].

If we compare this situation with other charts of this type,[13] we will see one interesting thing. Here we have two embedded narratives ("intradiegetic narratives"), but unlike the situation in the prose of *Sivooký demon* (1873), which follows *Svatý Xaverius*, the second embedded narrative is part of the first one. And this fact is the source of the verticality. The spatial effect can be evoked in a fictional world not only by topography but also by narrative composition. However, for such a narrative composition to possess the spatial meaning of verticality, it is important that it itself be functionally linked to the relevant topographical structure, which is the case in *Svatý Xaverius*. The spatial relations formed by the polarities of inner and outer place, the central and vertical dimensions, are not only the basis of the fictional topography of this romance, but also a picture (metaphor) of the protagonist's inner situation, his gradually deforming psyche.

After explaining the basic way of handling cartographic models, we can briefly comment on the remaining topographic models. Fig. 4 refers to the prose *Sivooký demon* and Fig. 5 to *Zázračná madona* (1875). What

[13] These charts are available here as part of the corpus https://korpusprozy.com/Arbes/text-segment.php. In the *Quantitative Distribution of Text Segments* section, you can select a specific work from the menu to view the corresponding graph. For reasons of space, we therefore do not reprint the graphs.

these models show us is the gradual decomposition of the original binary topographical paradigm and its replacement by a new paradigm that can be seen as a diffuse network (see Barabási, 2005, p. 142). However, as the network models show (Fig. 6 to 9), this transition is gradual. The breakdown of the binary spatial paradigm in the prose *Sivooký demon* occurs at the structural level of the fictional topography, while the network model still corresponds to the binary construction of the previous prose. This transition from one spatial paradigm to a new one, the nature of which consists of a diffuse network, is only completed in the subsequent prose, *Zázračná madona*. This then has its functional-meaning consequences, which are reflected not only in the structural level of the fictional topography, but also in the sphere of characters, motifs and plot. Moreover, by comparing it with the frequency stratification graphs of the text segments, one can observe how a given setting functionally correlates with the topographical structure, from which one can infer the functional transformation of the individual speech segments.

Another interesting potential that literary cartography offers is the possibility to compare changes that have occurred in real topography and their influence on fictional topography. At the same time, it is possible to trace both lines continuously, i.e. the change within the literary system, or the way the fictional topography of a place has changed over a period of time, as we have just tried to demonstrate, and, in addition, the change in real topography, and especially how fiction has responded to changes in real topography in a unique way. As mentioned in the introduction, current research so far only has a few cartographic models at its disposal; in addition to the models of Arbes' prosaic works mentioned above, a model of the fictional Prague topography from Hašek's first work, the world-famous novel *The Fate of the Good Soldier Švejk During the World War* (1921), which, unlike the other three volumes, is set in Prague, has been completed at the time of writing.

If we compare the models of the topographies of Arbes' prose with the situation in Hašek's novel (see Fig. 10), we can immediately see that the topography is not concentrated in certain closed areas, nor does it create symmetrical relationships, as it did in some of Arbes' prose. On the contrary, Prague's topography here is distinctly disordered and chaotic, at first sight lacking the slightest order and organisation. Nevertheless, certain general tendencies and structures can be discovered here.

As we can see on the map, the locations and paths mentioned by the narrator are marked in blue (see Table 1). These overwhelmingly

refer to areas that predominantly belong to the state apparatus, namely the police and the army. Even the journeys marked in blue are those undertaken by Švejk not of his own volition but because he is forced to do so by the state bureaucracy. On the other hand, the green areas (places and paths) are those that are referred to by Švejk in the prose, and the yellow ones are those referred to by certain other characters in the novel. While the blue areas are associated with the Austrian official machinery, the green (or yellow) areas are related to Švejk's topographical circle, which is largely made up of Prague's peripheries (Nusle, Vršovice, Žižkov, Vinohrady, Karlín, Smíchov, etc.) full of various pubs and establishments with dubious reputations, where, alongside permanent drinkers and thieves, prostitutes also gather. Even places connected with religious buildings, if marked in green, belong to this circle. In Švejk's narratives, they are associated with an obscure event, dominated by an equally strange character whose true abode is the Prague periphery. The Emmaus Monastery is a typical example. We can see, then, that the colours de facto define two basic areas: one belonging to the state police and army, the other belonging to the Prague periphery from which the protagonist of the novel comes. If we try to divide these two basic topographical frames, we get the situation shown in Fig. 11. What these models show us is, first of all, a blurring of the boundaries between the centre and the periphery. The two components interpenetrate, resulting in a kind of confusion, an irregular incorporation of one topographic frame into the other.

The sources of this can be traced to several aspects. One of them is found beyond the fictional world of the novel, in the real world. Until 1922, Prague was divided into a number of separate districts and adjacent municipalities that were predominantly agricultural in nature and had the status of separate municipalities. Although Nusle, Vršovice, Holešov, Libeň, Karlín, Smíchov and many other districts of today's Prague had already been incorporated into Prague during the second half of the 19th century, they did not officially become part of the so-called Greater Prague until 1922. These more remote areas were connected to Prague by roads that lined meadows and fields (see Herrmann, 1925, p. 5). By the 1870s, Prague had four districts: Hradčany, Malá Strana, Staré Město (Old Town), Nové Město (New Town) as well as a fifth district, Josefov, added in 1850. However, the Act of 1893 decided that selected buildings in the Old Town, especially in Josefov, but also in the New Town and Lesser Town would be demolished. New, wider streets (such as today's Pařížská Street) were gradually built on the vacated site (boulevards like those in Paris or Vienna). From the 1870s onwards,

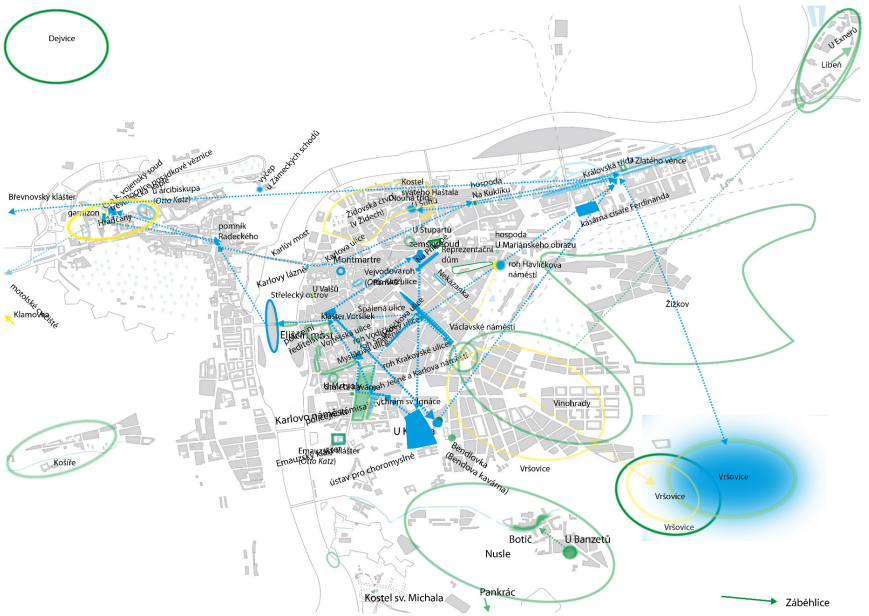


Figure 10. Fictional topography in the first part of Hašek's novel *The Fate of the Good Soldier Švejk During the World War*.

the walls of Prague were also demolished, which was aimed at the future merging of the peripheral localities outside Prague into one territorial unit.

From about the same time, the population had been increasing, especially in the peripheral areas; the fastest development in this respect was witnessed in Žižkov and Smíchov, and from 1921 we can observe a relatively steep increase in the population of Nusle, while in the original historical core the opposite tendency was occurring. This is particularly true of Staré Město and Josefov, where the population decline recorded towards the end of the century was related to the extensive redevelopment works that most significantly affected this district of Prague (see Chart 2). Of course, the changes in the number of houses in the individual districts is also related to this trend (see Chart 3). During the same period, we observe a marked increase in the number of houses, especially in Žižkov, Smíchov and Nusle, and from 1921 also in Záběhlice. The graphs illustrate the tumultuous changes that Prague underwent from the second half of the 19th century, and especially at the turn of the century.

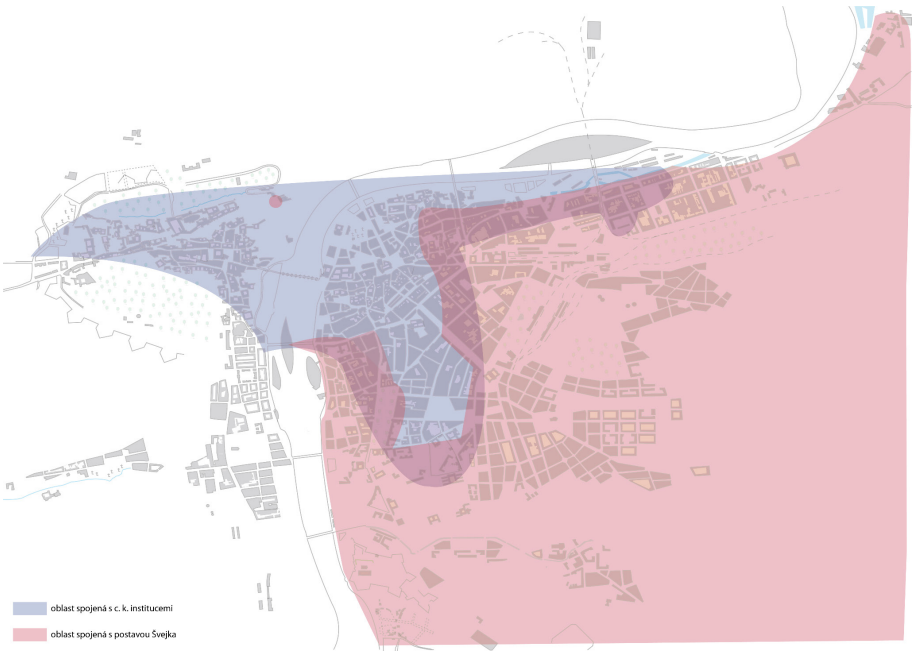


Figure 11. Conflict between the periphery and the centre in Hašek's novel *The Fate of the Good Soldier Švejk During the World War*.

Hašek wrote the first part of his novel after the end of World War I and published it in 1921. The growing importance of Prague's peripheries and their territorial and administrative integration into a common urban unit called Greater Prague is one of the extra-literary aspects that Hašek's novel reflects. If the real Prague was expanding, at first especially in the eastern direction, and if industry and the population were beginning to concentrate in the peripheral urban areas while the city centre was gradually depopulating, the Prague topography in Hašek's novel reflects this situation, but realises it in fiction in its own way. In the case of the novel's topography, it is the opposite process, which can be called "the infiltration of the periphery into the urban centre". In the character of Švejk, or, rather, in his utterances and comments, the urban periphery comes to life and is connected to this character in all the situations in which he finds himself. This also applies to the journeys that Švejk undertakes, whether as part of a police investigation or as a conscript in the Austrian army. The periphery, however, has two layers in the character of Švejk,

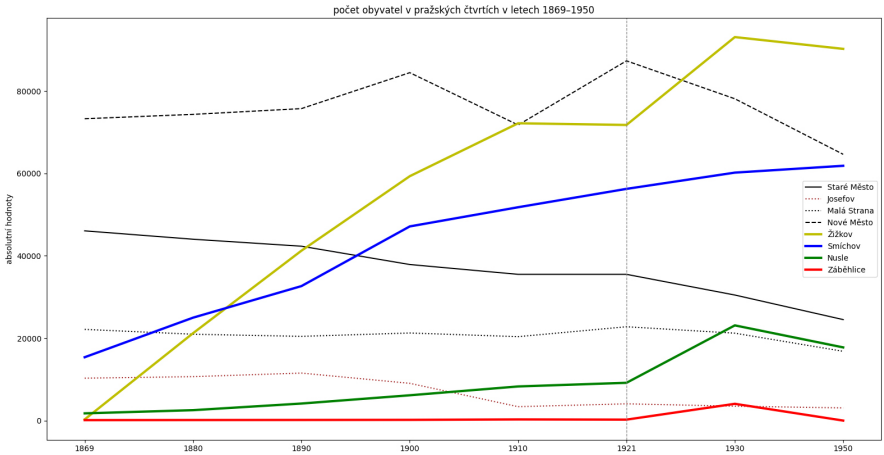


Chart 2. Population of Prague districts in 1869–1950 (Data source: *Historical lexicon of municipalities of the Czech Republic 1869–2005*[14]).

the first being topographical, the second being Švejk's speeches, to which we shall return.

At first glance seemingly chaotic, the fictional topography makes sense when we distinguish the areas belonging to the centre from those of the periphery (see Fig. 11). The initial chaos turns into a confusion between the two parts. This overlap is most clearly seen in the area of the New Town and other parts of Prague. But what does this overlap mean? To answer this question, let us recall who the main representative of the centre is and who represents the periphery in the novel. We have said that the centre, or rather the topography of the original Prague districts (Hradčany, Malá Strana, Old Town and partly New Town), is paradigmatically linked to the Austrian state bureaucracy, both its repressive and its military components. Meanwhile, the periphery is the proper, natural home of Josef Švejk, as well as of all the characters about whom Švejk tells his far-fetched and absurd stories. If we look again at our map, we can see that the blurring of the boundaries between the centre and the periphery takes place in the area of the zone that stretches from the Vojtěšská neighbourhood, from the former Ferdinand Avenue (now National Avenue), through New Town, especially Charles

[14] Available: https://csu.gov.cz/produkty/historicky-lexikon-obci-1869-az-2015

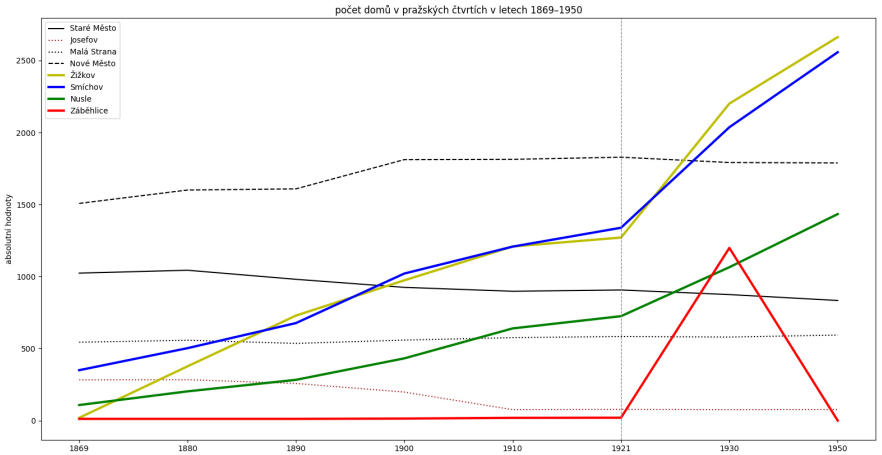


Chart 3. Number of houses in Prague districts in 1869–1950 (Data source: *Historical lexicon of municipalities of the Czech Republic 1869–2005*).

Square, then through Wenceslas Square, where Švejk's maid carries the crippled Švejk in a wheelchair to be enlisted in the Austrian army, and then a significant overlap continues in the area of today's Petrská neighbourhood and Karlín, the location (on Královská třída) of the apartment of Otto Katz, a field chaplain of the Austrian army with whom Švejk stays for a while as his orderly.

As regards the blue zone belonging to the centre (see Fig. 11), the field chaplain's apartment is de facto on its edge, on the periphery. It will be interesting to pause here for a moment. The figure of Katz is not a typical representative of the Austrian military apparatus, even though he undoubtedly belongs to it. Katz, however, is a marked departure from all the characters in prose who represent the Austrian bureaucracy, whether police or military. Unlike his colleagues, he does not take his official mission seriously, which is all the more piquant given that he is a military cleric, in whom one might automatically assume belief in God and respect for the saints. Katz's actual attitude to faith, for example, cannot be described as lukewarm; in fact, it is rather ironic, as is clear from his conversation with another, this time bigoted, field chaplain. Katz, with the grace of a notorious alcoholic, comments on paradise or purgatory in a peculiar way, thus bringing his bigoted colleague to a state of absolute consternation. Although Otto Katz is a character that falls outside the paradigm of characters

belonging to the circle of Austrian officials and soldiers, especially due to the laxity with which he carries out his professional duties, and might therefore seem to be related to the character of Švejk, in reality the two are not connected. The difference between Katz and Švejk lies in numerous things, most notably the fact that Švejk, unlike Katz, is not a hypocrite. In any situation in which he finds himself, Švejk does not fall morally by his attitude, behaviour or speech,[15] which is not the case with Katz. Nor does Katz's drunkenness create a link to Švejk. The chaplain's embarrassingly delirious antics are a far cry from Švejk's fondness for alcohol. Švejk never speaks out of turn and does not behave in a way that would sink below the limits of elementary human dignity. However humorous the character of Otto Katz is, there is a critical gulf between him and Švejk that identifies Švejk axiologically with the periphery and Katz with the centre. Katz, albeit in a peculiar way, de facto extends the novel's host of Austrian officials and officers.

Let us return again to the key concept of our analysis, which is confusion. Is it possible to talk about it while taking into account other structural layers of the novel? And what is its significance? These are other questions that should be answered. In this context, we will be particularly interested in the speech segments together with the thematic-motivic level.

A typical example of the way in which themes, or rather subthemes and motifs, are developed in the novel can be found in its very introduction, which begins with the announcement made by Mrs Müller, Švejk's maid and landlady, about the murder of the Austrian Archduke Franz Ferdinand. What is characteristic not only of this section is Švejk's comments, which in effect distract attention from the main event and instead focus on irrelevant details, which he furthermore develops into almost dryly conceived micro-stories (cf. Michel, 2010, p. 145). What we encounter here and elsewhere in the prose at the level of thematic-motivic micro-composition is, on the one hand, filtering of so-called great events through the cognitive lens of the "ordinary" everyday life of the Prague suburb of which Švejk

[15] Milan Jankovič drew attention to the contemporary criticism of Švejk as a morally unambiguously positively unprofiled character, and therefore even unsympathetic (see Jankovič, 2005, pp. 189–191). Jankovič refers in particular to a critical essay by Václav Černý in which the author wrote, among other things, about Švejk that what unites him with King Ubu is rudeness, being undignified and primitive (see Černý, 1993, p. 347). Jankovič, on the other hand, reads Švejk as a positive figure who is able to amuse himself with the absurdity of human actions, and, importantly, as a character "nowhere to be grasped, having his space and time, the conditions of his being within himself" (Jankovič, 2005, pp. 191–192).

is a representative. On the other hand, there is something else going on here. Namely, there is the infiltration of major and socially important themes by Švejk's rhetoric and narration, which has a subversive effect on such themes. Their seriousness, as well as the subsequent seriousness of the Austrian police bureaucracy and military apparatus, dissolves under Švejk's speeches into a sequence of absurdly panoptic statements and events perpetrated by representatives of the imperial state apparatus. One of the important functions of the figure of Švejk is precisely to deconstruct official discourse, to dissolve its strictly uncompromising rhetoric and meaning, thus exposing it to absurdity, paradox, nonsense and ridiculousness. It is also important that the official representatives of state power are unable to fully recognise this strategy, even if they often fall just short of doing so when, for example, they suspect Švejk of making fun of them. However, even in such cases, the mechanism of the main character's aim is to react in such a way that even the slightest suspicion is eventually resolved by a declaration of Švejk's innate dullness. Again, if we want to schematise this compositional strategy, we can generally think of such basic structures between the main theme and the ways in which it is developed (see Fig. 12 and 13).

These basic principles of developing (sub)themes are always applied by the main character in all situations. Švejk comments on events or other characters' behaviour with naive eloquence. On the one hand, he is thus the creator of equilibristic verbal ballast, or communicative noise, which makes any reasonable and successful communication impossible, as precisely analysed by Petr Steiner, who wrote about Švejk's communication, among other things, that "[i]t makes communication impossible: words become a protective shield against foreign, hostile words" (Steiner, 2000, p. 76). In many ways, Švejk's comments also resemble moritats or street ballads (cf. Jankovič, 2005, p. 193).

Švejk's speeches, together with his absurd behaviour in response to the official orders of the imperial power machine, are the source of the character's comedy. Milan Jankovič has commented on this subject by saying, "What is it that moves Švejk's comedy? Parody and irony, fantastic exaggeration, paradoxical logic, similes that 'prove' a previous example by turning it on its head or at least skewing it, the relentless setting of examples that unleash a chain reaction of unconscious comic contrasts and associations. ... Grotesque indifference to any human situation, cynical, gallows humour – and absolute humour, the comedy of numbers, the play on words, the comedy of names, swear words and inventive labels, the comedy of new forms, twisted words" (Jankovič, 2005, p. 192).

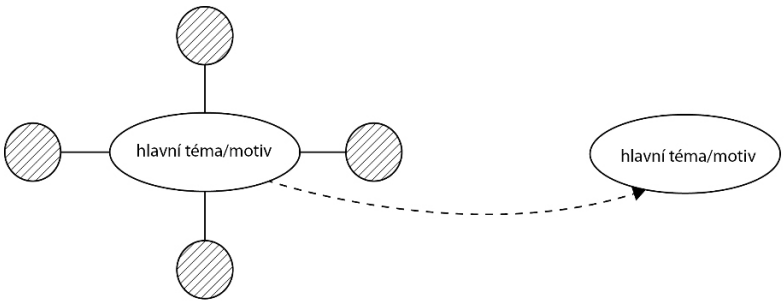


Figure 12. Basic type of structure of thematic-motivic development.

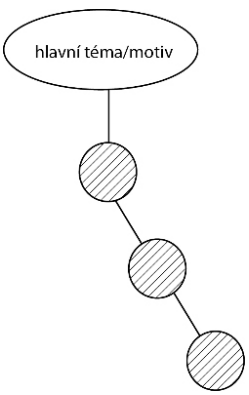


Figure 13. Basic type of structure of thematic-motivic development.

The subversiveness and deconstructive power of Švejk's speeches is an integral part of Švejk's circle, the urban periphery, which, like Švejk's speeches, is folded into the circle that is the domain of official state institutions. These two relations, i.e. the blurring of the boundary between centre and periphery, resulting in confusions between the two, and Švejk's subversively verbal activity deconstructing the seemingly fixed paradigm of imperial institutions, are functionally complementary. It is only in this context that our claim of topographical confusion as the infiltration of the periphery into the topographical centre takes on ultimate significance.

Conclusion

Using selected examples from two Czech authors, we have tried to show the potential of literary-cartographic models for literary science. It is necessary to take a proper methodological standpoint when compiling and using them. Most of the current literary-cartographic models use modern GIS technology, which makes the work much easier on the one hand, but raises a number of critical questions on the other. One of them is the selection of base maps. Current literary-cartographic models work with either Google Maps or Open Street Maps, which provide an overview of current topography but do not correspond to the historical topographic situation, which – as we have shown – has its influence on fictional topography. Another fact that raises questions is the automatic detection of toponyms in text, to which coordinates are then added and projected onto the map base. Many places in literary fiction cannot be precisely located. This is also why, in our case, we have chosen location labels that symbolise these ambiguities with fuzzy location boundaries. Another issue is, for example, the movement of the characters. If this movement is not explicitly thematised in the work, it cannot, we believe, be reconstructed. Entering the paths of the characters in a story into a GIS automatically displays the paths on actual maps connecting the starting and ending locations, which is, however, somewhat distorting in terms of the text itself.

At the same time, our aim was to show that the analysis of fictional topographies by means of cartographic models cannot be isolated from other aspects of the work, some of which can also be analysed and modelled by quantitative methods, for example. Indeed, fictional topography is one of the structural layers of a work that functionally coexists with other levels, e.g. with speech segments, thematic-motivic and compositional aspects, etc.

It is precisely with regard for the need for a more comprehensive analysis of literary works, which cannot focus exclusively on cartographic models, however useful they undeniably are for the resulting analysis, that the corpus of 19th-century prose, of which the models presented here are a part, has been designed. Of course, the corpus is not and will not be able to provide models or tools that encompass the full complexity of a literary work. On the other hand, what can be grasped in a work through formal mapping techniques or through machine-performed quantitative analyses can be made part of specially designed corpora that, by their specialisation, can offer literary scholarship a valuable source of otherwise difficult-to-obtain information.

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Literárně-kartografické modely v korpusu české prózy

Studie se zaměřuje na problematiku literární kartografie. První část se zabývá základními otázkami souvisejícími s vymezením oboru, pokouší se definovat jeho základní taxonomii a představit vybrané literárně-kartografické projekty. Druhá část studie představuje literárně-kartografické modely, které jsou součástí literárního korpusu české prózy. Konkrétně se zabývá modely fikční topografie Prahy u vybraných českých spisovatelů. Cílem je nejen ukázat, jak takové modely vypadají, ale především představit způsob, jak lze s nimi reálně zacházet v literární interpretaci.

Klíčová slova: digitální literární studia, kvantitativní a kartografické metody, strukturalismus, interpretace kartografických modelů, korpus českých románů.

Modele literacko-kartograficzne w korpusie czeskiej prozy

Artykuł koncentruje się na problematyce kartografii literackiej. W pierwszej części omówiono podstawowe zagadnienia związane z definicją dziedziny, podjęto próbę zdefiniowania jej podstawowej taksonomii i opisano wybrane projekty literacko-kartograficzne. W drugiej części artykułu zaprezentowano modele literacko-kartograficzne wchodzące w skład korpusu prozy czeskiej, w szczególności modele fikcyjnej topografii Pragi w twórczości wybranych pisarzy czeskich. Celem artykułu jest nie tyle prezentacja samych modeli, ale przede wszystkim pokazanie, w jaki sposób można je wykorzystać w interpretacji prozy.

Słowa kluczowe: literaturoznawstwo cyfrowe, metody ilościowe i kartograficzne, strukturalizm, interpretacja modeli kartograficznych, korpus czeskich powieści.

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