MAPS AND MAPPING IN LITERARY CRITICISM:
A HUMANISTIC PERSPECTIVE

EDEBİYAT ELEŞTİRİSİNDE HARİTALAR VE HARİTALAMA:
HÜMANİST BİR PERSPEKTİF

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Abstract

The relations between literature and mapping have long been an area of interest among researchers in social sciences and humanities. From the mid-twentieth century, in particular, technological advancements in cartography and the emergence of humanistic geography have transformed literary mapping into an enthralling interdisciplinary field: Literary Geography. In this line, this study aims to provide a critical overview of the role and increasing significance of maps and mapping in literary criticism through a humanistic perspective. The study places a special emphasis on humanistic geography and argues that, along with the notable developments in cartography, humans' experience of space and place, as well as their distinctive navigation and cognitive skills, have contributed considerably to the development of literary geography and cognitive mapping which provide new perspectives on understanding the various ways authors, readers and critics experience, view or represent spatiality in literature and literary studies. In this respect, the article outlines a theoretical and historical approach to the growing interdisciplinary research carried out on spatiality, mapping and literature since the 1960s and presents notable examples regarding the use of maps and mapping in imaginative narratives and critical works. Furthermore, the present work contends that the progress of literary cartography and cognitive mapping in the digital era provides new opportunities for digital humanities by generating spatial/visual representations of complicated human senses, feelings and moods associated with particular real/imaginary spaces, places or landscapes used in narratives.

Keywords: Mapping; Literary Geography; Humanistic Geography; Cognitive Mapping; Literary Criticism; Space and Place

Özet

Edebiyat ve haritalama arasındaki ilişki sosyal ve beşerî bilimlerdeki araştırmacılar arasında uzun süredir bir ilgi alanı olmuştur. Özellikle yirminci yüzyılın ortalarından itibaren, kartografya alanındaki teknolojik gelişmeler ve hümanistik coğrafyanın ortaya çıkışı, edebi haritalamayı ilgi çekici disiplinler arası bir alana dönüştürdü: Edebiyat Coğrafyası. Bu doğrultuda, bu çalışma, hümanist bir bakış açısıyla, edebiyat eleştirisinde haritaların ve haritalamanın rolü ve artan önemi hakkında eleştirel bir bakış sağlamayı amaçlamaktadır. Çalışma, hümanistik coğrafyaya özel bir vurgu yapmakta ve kartografyadaki dikkate değer gelişmelerle birlikte, insanların yer ve mekân deneyiminin yanı sıra kendine özgü yön bulma ve bilişsel becerilerinin edebiyat coğrafyası ve bilişsel becerilerin gelişimine önemli katkılar

sağladığını ileri sürmektedir. Söz konusu alanlar, yazarların, okurların ve eleştirmenlerin edebi eser ve edebiyat araştırmalarında mekânsallığı çeşitli şekillerde deneyimleme, inceleme veya temsil etme konusunda yeni bakış açıları sağlar. Bu bağlamda makale, 1960'lardan itibaren mekânsallık, haritalama ve edebiyat üzerine yürütülen disiplinler arası araştırmalara teorik ve tarihsel bir yaklaşımla haritaların ve haritalamanın yaratıcı anlatılarda ve eleştirel çalışmalarda kullanımına ilişkin dikkate değer örnekler sunmaktadır. Dahası, mevcut çalışma, dijital çağda edebi haritacılık ve bilişsel haritalamanın ilerlemesinin, spesifik gerçek/hayali mekânlar, alanlar veya manzaralarla ilişkilendirilen karmaşık insan duyuları, duyguları ve ruh hallerinin mekânsal/görsel temsillerini üreterek dijital çağda beşerî bilimler alanında yeni fırsatlar sunduğunu ileri sürmektedir.

Anahtar Kelimeler: Haritalama; Edebiyat Coğrafyası; Hümanistik Coğrafya; Bilişsel Haritalama; Edebiyat Eleştirisi; Yer ve Mekân

Introduction

How many maps, in the descriptive or geographical sense, might be needed to deal exhaustively with a given space, to code and decode all its meanings and content? (Lefebvre, 1991).

The history of maps and map-making is "as old as human history" and it is intimately connected to humans' spatial orientation, navigation and cognitive skills (Brunn & Dodge, 2017: 2). In human history, these skills were primarily used in the spatial environment for catering to human beings' biological and basic needs. The earliest versions of maps, for instance, were made for various purposes such as illustrating the location of food sources, drinking water and safe settlements for small human groups, and they were drawn on materials such as animal bones, rocks and caves. Pathways, routes, territorial limits and boundaries were also mapped by gatherers, hunters and sedentary communities. In the due time, with the increase in human population, migration, commerce relations and the discovery of distant geographies, the need for more detailed mapping skills and representations had also mounted. After the introduction of paper from China, in particular, map-making and the dissemination of geographical information dramatically multiplied.

Geographical knowledge gained through maps provided a conscious interpretation of spatial relations in distant areas where one seldom visits, and it became a means of power in world history. The use of locational grids and triangulation techniques (as well as the magnetic compass and charts) greatly facilitated transcontinental travels and improved Western cartography. From the 18th century, maps were used for political and military relations, traders, colonists, scientists and the church. States also contributed to the development of cartography by training professional cartographers to access more territorial knowledge and control. Moreover, a variety of thematic maps such as physical territories, inhabited places, climate maps and vegetation maps were produced by scientists and explorers, and disseminated through graphs, globes and printed atlases until the mid-twentieth century.

Distinctive types and forms of maps have preserved their significance during the last two centuries in various areas of life. Besides their innumerable benefits in physical and social sciences, maps and mapping have widely been used in humanities and social sciences by literary critics and geographers to interpret the complex relationship between space, place and

literature. The use of maps in literary works, mapping narratives and narrating maps are only some of these reciprocal relations between humans' spatial experiences and their representations in literature and literary criticism. In this scope, this study seeks to provide a critical overview of the role and increasing importance of maps and mapping in literary criticism by adopting a humanistic perspective. Some questions addressed in this study are: How do we perceive and experience space and place? How are our senses and cognitive skills used in the mapping process? In what ways do maps and narratives interact and influence each other? How do literary geography and cognitive mapping contribute to our understanding and representation of spatiality in literature? Do they have any limitations or drawbacks in literary criticism? How have the recent developments in cartography altered the use and concept of maps and mapping in literary criticism?

In line with these questions, the study places an emphasis on humanistic geography and argues that, along with the dramatic developments in cartography, humans' experience of space and place, as well as their distinctive navigation and cognitive skills, have contributed considerably to the development of literary geography and cognitive mapping which offer new perspectives on understanding the various ways authors, readers and critics experience, view or represent spatiality in narratives and literary criticism. Using the evocative power of art, imaginative narratives give visibility to subtle and intimate experiences of places and reveal the intricate worlds of human experiences of space (Tuan, 1977: 162, 178). Similarly, maps make places more visible through abstraction and symbolisation. Literary studies also utilise theories of space and place from various disciplines. In this respect, the present work outlines a theoretical and historical approach to the growing interdisciplinary research carried out on spatiality, mapping and literature since the late 1960s and presents some noteworthy examples regarding the use of maps and mapping in imaginative narratives and critical works. Furthermore, it contends that the progress of literary cartography and cognitive mapping and their cooperation in the digital era bring new opportunities for generating spatial/visual representations of complicated human senses, feelings and moods associated with particular real/imaginary spaces, places or landscapes.

In the first part of the study, a brief history of humanistic geography and the distinctions between space and place are introduced with a particular emphasis on the role of human senses and cognitive skills in the perception and experience of spatiality and mapping in human life. Besides Yi-Fu Tuan's critical considerations, Henri Lefebvre and Michel Foucault's views on spatiality are included for a comparative outlook in other social science disciplines. In the second part, the study moves on to the various ways maps have been used by writers in literary works. This is followed by a section on the emergence and development of literary geography with an overview of notable critical studies produced in this field. The fourth section provides a critical overview of the use and limitations of cognitive mapping in literary criticism in the twentieth century. Finally, the study presents contemporary cartographical developments and their impact on literary geography and cognitive mapping during the last few decades. A re-assessment of the research questions, limitations of the study and further suggestions for future studies are presented in the conclusion.

Humanistic Geography: The Experience of Space and Place

Until the 1960s, geographers were mainly interested in the analysis of the regional novel to interpret the undeciphered features of a region or place (Porteous 1985: 117-8). However, such studies were often limited to a single author's portrayal of a single region (such as Thomas Hardy's novels), whilst only a few broader kinds of research, as exemplified by Watson's study on Canadian regionalism in 1965, were carried out. With the emergence and development of humanistic geography in the late 1960s and the early 1970s, the emphasis gradually shifted from the geographical analysis of place to the human experience of space and place.

During the 1970s, some geographers' prominent works such as Yi-Fu Tuan's *Topophilia* (1974) and *Space and Place: The Perspective of Experience* (1977) and *Landscapes of Fear* (1979), Nicholas Entrikin's paper "Contemporary Humanism in Geography" (1976), and a series of essays collected in *Humanistic Geography* (1979) edited by David Ley and Marwyn Samuels established humanistic perspectives in geography and provided "geographical articulations" of literary works (Neal, 2015: 4).[1] These studies utilised some intellectual and philosophical concepts that originated from existentialism and phenomenology for geographical analysis of literature and placed an emphasis on notions of place such as belonging-placelessness, rootlessness and being an insider-outsider. A conceptual framework for a humanist geographer, for instance, would link "sense of place" to concepts of home and inside, "entrapment" to home and outside, and "journey, exile" to away and outside (Porteous, 1985: 119). The use and spatial representations of literary terms such as metaphor and allegory in fictional works were also examined by geographers in the period.

In humanistic geography, the perception and experience of space and place play a critical role in understanding human beings' intricate worlds. How people attribute meaning to, articulate and respond to space and place is not only complicated but also fascinating. Besides ambivalent definitions of space and place, different modes of experience, along with feelings and thought, enrich our apprehension of the spatial environment. As stated in the introduction part of this study, humans' ability of spatial orientation and navigation have also contributed to the emergence and development of maps and map-making in history.

The concepts of space and place are often intimately related, yet they have distinctive qualities and ways of experience. In his seminal work, *Space and Place*, Tuan suggests that space is a more abstract term than a place: whilst the former indicates freedom and allows room for movement the latter means security, stability and attachment (1977: 1-6). The place is where one can dwell and satisfy his/her biological needs and thus, it is endowed with value. Undistinguished space may turn into the place through increased familiarity and felt value. Nonetheless, the construction of the place and the external world as concrete reality requires a totality of different modes of experience.

The experience of space and place can be "direct and intimate, or it can be indirect and conceptual, mediated by symbols" (Tuan, 1977: 6). Direct modes of spatial experience include human senses such as vision, smell, touch, hearing or taste while symbolization is indirect and conceptual. These are supported by human feelings, intention, images and cognitive abilities

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[1] See also Douglas Pocock's *Humanistic Geography and Literature* (1981) for the relations between humanism, geography and literary works in the 1980s.

in the perception and construction of spatial reality. A city, for instance, can be recognized through its unique location, topography, buildings, odours and noises. These shared qualities of human experience allow for transcending specific cultural, social and political conditions to interpret the external world from a mutual perspective.

Amongst the human senses, eyesight and touch are privileged in the articulation of space and place. With adequate time and practice, visual perception of three-dimensional objects in space is possible thanks to the bifocal and stereoscopic capacity of the eye (Tuan, 1977: 12-16). In this way, the ability of sight provides humans a spatially structured and sharp visual world. By touching, the shape and size of objects are preserved. Olfactory sense suggests the mass and volume of objects and places and facilitates their identification and recollection. Through sounds, a sense of size and distance can be achieved along with a vague sense of location. Visually impaired people, to illustrate, are more sensitive sounds that help them evaluate their spatial environment by constructing auditory space.

In addition to sensory experiences, the human body and its kinesthetic ability greatly enrich the various experiences of spatiality, in particular, spatial orientation and navigation. The structure of the corporeal entity (front-back, right-left, and vertical-horizontal) is vital to the articulation and organisation of space and it is "a measure of direction, location and distance" (Tuan 1977: 35-44). A sense of direction is acquired through the act of motion (forward, backwards and sideways) and distance is both linked to the self and relations among people (1977: 50). As Kant noted in 1768, "our geographical knowledge, and even our commonest knowledge of places, would be of no aid to us if we could not, by reference to the sides of our bodies, assign to regions the things so ordered and the whole system of mutually relative positions" (1929: 23). Kant's statement further confirms that objective spatial reference points such as landmarks and cardinal locations conform with the purpose and the coordinates of the human body.

Interestingly, from ancient to modern times, human groups such as nomadic tribes and religious communities have frequently held a tendency to consider their homeland or sacred sanctuaries as the centre of the world or as the earth's summit (Tuan, 1977: 38-39). The existence of both "egocentric" (personal pronouns and spatial demonstratives: I, here, you, there, they, yonder) and ethnocentric organizations of space confirms this approach (see "The world of Hecateus" (fl. 520 BC), "Yurok Idea of the World", and representations of Jerusalem or Mecca as centres of the world in Tuan, 1977: 48-49). In this regard, maps may be regarded "as contingent, relational, embodied, fluid entities" that can be used and manipulated by the users in terms of their materiality or meaning (Rossetto, 2014: 513).

Furthermore, humans' spatial ability is distinguished from their spatial knowledge since the latter is acquired by envisaging directions and a network of places. During spatial navigation, cognitive maps are effectively used. The human brain "support[s] map-like spatial codes … [allows] landmark anchoring and route planning" and hence "builds a unified representation of the spatial environment to support memory and future action" (Epstein et. al., 2017: 1504). Commuters and drivers, to illustrate, perform these cognitive and spatial skills more successfully (though less consciously due to repetition) in finding their way through the city or the town. In this line, mapping contributes to the development of spatial orientation and navigation skills and the formation of new mental maps, too (Maxwell, 2013).

Besides Tuan's humanistic perspective to space and place, Henri Lefebvre's *The Production of Space* (1974) and Michel Foucault's "Of Other Spaces" (1967) and *Knowledge/Power* (1972-77) are pioneering examples of theoretical considerations of space and place in cultural geography and contemporary literary criticism. Even if the term "space" was often regarded as a geometrical entity and "an empty area" for long years, Lefebvre has broadened its meaning by suggesting that "space is never empty: it always embodies meaning" (1991: 154). Lefebvre's main interest lies in the social relations that connect space to human beings in dynamic ways and he identifies three types of space: "spatial practices", "representations of space" and "representational space". Spatial practices refer to the experienced space that indicates a connection with the outside world; hence, it deals with what people do in spaces. Representations of space are connected with "official relations of production and order", as perceived and planned by architects and governments (1991: 42). Representational space is the production of space as imagined by the inhabitants or writers/artists who appropriate an existing space in their imaginary work and present it in an altered form. This type of space denies "the rational order and cool logic" and creates its language to describe various places and the inhabitants (1991: 42).

Dissimilarly, Foucault's works broadly examine the spatial metaphors and material spaces intertwined by power relations and spatiality "is saturated with the social, and can be traced historically; it is political in nature; and it occurs in many different forms – body, room, house, institution, or political geography" (Thacker, 1988: 23). Two significant concepts developed by Foucault are "utopia" and "heterotopia". In "Of Other Spaces" (1967), Foucault describes utopia as "an unreal space" that creates a perfect space or society, and heterotopia as "a real space" that represents real sites transformed or altered, such as mirrors and theatres (24). As space of otherness, heterotopia actively resists the power of institutional forces and embodies multiple meanings with individual appropriations of space. Heterotopias function as real spaces that are illusionary, ill-natured and disturbing. Both Lefebvre's and Foucault's theories of space and place have been widely used in literary criticism. However, considering the dramatic changes taking place regarding spatio-temporal experiences in the digital era, it is obvious that there is an increasing need for innovative theories to understand the contemporary world. Before focusing on the developments in literary geography and cognitive mapping, the following section provides a brief overview of the most common ways maps have been used by writers in literary production.

Maps and Mapping in Literature

In literature, narratives contribute significantly to making sense and configuration of the world in which individuals are in a constant move and endeavour to orient/navigate and locate themselves in space and place. Human conditions such as displacement, disorientation or feelings of homelessness are frequently challenged in literary works through the organisation of experiences, knowledge and imagination. In this way, narratives function as maps by helping both the writer and the readers to establish a meaningful framework to orient and situate themselves in space. A novel, for instance, may become "a literary cartography" providing symbolic and metaphorical images of life and an individual's place in it (Tally, 2011).

To illustrate, in *The Charterhouse of Parma* by Stendhal the hero (Fabrice) is depicted as feeling disoriented and dizzy on the battlefield and he is unable to distinguish his comrades from his foes whilst smoke obstructs his view severely. Stendhal provides "a fragmented and dizzying topography" in the narrative through the protagonist's random movements on the battlefield (Pedersen, 2017). In this process, humans' navigation and cognitive mapping skills are used as reference points to establish a better comprehension of the individual's place in the seemingly unrepresentable social totality/social space.

Literary works make use of real or imaginative maps to provide the reader not only with spatial representations but also the human experience of spatiality. These types of maps have a range of functions and forms and they support narratives in a number of ways. In a critical review on literature and cartography, Tania Rossetto notes the multi-dimensional and multi-functional qualities of maps as:

….'generative' and imaginative entities; the subjective rewriting of cartographic representations; the interiorization and personalization of maps; the projection of sensations and affects on cartographic objects; maps as private universes, storage for memories, fetishes; the animation, dynamization and dramatization of maps; the use of the map as a relational tool, an emotional medium, a link between persons; writing as a way to 'dwell' in the cartographic space through the narration of the map.

Whilst some maps are used as narrative guidelines for the reader to follow the protagonist's journey others function as "a spatial metaphor, as aesthetic elements" (Caquard & Cartright, 2014: 104). They may also heighten the perception of reality of unlikely events and imaginary or distant places. As Annika Richterich notes in "Cartographies of Digital Fiction" (2011), "readers perceive the maps themselves as realistic objects, since they are familiar tools of orientation and overview in daily life … maps localize the story in a factual geography and act as a topographic authentication of the literary space" (244). From Robert Louis Stevenson's *Treasure Island to* Jules Verne's *20,000 Leagues Under the Sea* and Tolkien's *The Hobbit and The Lord of the Rings*, maps are used to enhance the reality of the fantasy worlds and help readers orient themselves in fictional space. The instability of a real space can bring material and metaphorical spaces together in new illuminating ways in the literature. For instance, modernist texts create "metaphorical spaces that try to make sense of the material spaces of modernity" (Thacker, 1988: 3). Joseph Conrad's *Heart of Darkness* is another example to reveal the connections between colonialism, politics, defence and cartography. In the novel, to illustrate, white patches on maps are gradually filled with geographic information and they become an ominous place for the leading character, Marlow.

The power of maps in literature further lies in their potential to stimulate and enrich the narrative process. In Homer's famous epic *Odysseus*, for instance, the protagonist's travelling routes are based on ancient sailing manuals produced by Phonecians as navigation tools (Pedersen, 2017). James Joyce is known to have used a map of Dublin while writing his well-known novel, *Ulysses* (Budgen, 1960: 67-68). William Faulkner uses a fictional setting that he mapped, "Yoknapatawpha Country", in his twelve novels and most of his short stories. The author identifies himself as the "sole owner and proprietor" of the place on one of the maps and provided immense details about the country such as its location, population, geographical features, inhabitants etc. (Muehrcke & Muehrcke, 1974: 317).

In contemporary fiction, Russell Kirkpatrick, also a cartographer, created a topographical map of the setting of the story before writing his trilogy entitled "*Fire of Heaven*": *Across the Face of the World* (2004), *In the Earth Abides the Flame* (2005) and *The Right Hand of God* (2006) (Caquard & Cartright, 2014: 104). In this way, the human experience of spatiality is supported by navigational tools and topographical maps in the production of plot and settings. Although maps are produced with a specific objective and in a particular context, they offer unlimited possibilities for interpretation by map-readers and map-makers. Their use of maps in narratives may further assist in flourishing artistic creativity and endeavour in literary production. Besides the use of maps by authors as a supportive tool for literary production, the intimate links between literature and mapping have been disclosed and progressed with literary geography. The next section elaborates on the emergence and development of literary geography in the late-twentieth century.

Literary Geography

Also named as literary/narrative cartography, geo-criticism or geo-humanities, literary geography is an interdisciplinary field placed at the crossroad of literary studies and human geography and it has triggered an immense cultural and spatial turn in the arts and humanities since the 1990s (Neal, 2015: 3). In literary criticism, the term was first used by William Sharp used as the title of his book published in 1904 and then by Virginia Woolf in her review of Lewis Melville's *The Thackeray Country* and F.G. Kitson's *The Dickens Country* (Neal, 2015: 4). The interdisciplinary quality of literary geography has attracted not only writers and literary critics but also geographers and artists dealing with dance, films, sculpture and visual arts. As a dynamic and intellectual approach, literary geography provides innovative perspectives on understanding the relationship between humans and spatiality, places and landscapes. In this way, it contributes to the discovery of universal truths about the human condition and the experience of space and place.

Although the meaning and scope of literary geography have still not been clarified among scholars and critics, in a general sense, it aims to examine "textual geographies" and "the geographies of texts", or in other words, "space in literature" and "literature in space" (Ogborn, 2005: 149). That is, whilst the former deals with representations of spatiality in literary works, the latter investigates geographies of "literary production, circulation and dissemination" such as libraries (2005: 149). Some critics consider literary geography as a way of "generating maps from quantitative data as a means of correlating genre with geography or charting the lineaments of a narrative trajectory" (Neal, 2015: 5). On the other hand, some others are highly interested in investigating the connection between material and metaphorical spaces. Contemporary studies, for instance, focus on fictional spaces, characteristics of different genres and spatiality, and textual space- narrative/text as a material object. In this context, there are a great number of critical works available on realist novels, science fiction, poetry and early modern drama.

In literary geography, maps have frequently been used in various ways and forms. The first and foremost usage of maps is related to the analysis of the geographical nature of narratives (Caquard & Cartright, 2014: 101). In this respect, the role and significance of geography in the formation, structure and content of fictional works and its influence on the

authors are examined. Spatio-temporal structures of fictional/factual narratives in oral, written or audio-visual forms are represented through maps and raises some crucial issues such as "spatial expression of time, emotions, ambiguity, connotation, as well as the mixing of personal and global scales, real and fictional places, dream and reality, joy and pain" or "how can we map the multiple scales of the different spatial settings often embedded in a story?" (2014: 101-3). Furthermore, using maps as narratives allows cartographers to use (oral/collective) stories of travellers or indigenous communities to complete some missing information on the map for improvement. Similarly, decorations on maps provide specific details about certain individuals and minority groups. More recently, online maps are being used to create personal stories and to hold memories of journeys.

Although mapping spatio-temporal structures of narratives dates back to the early twentieth century, literary geography has grown enormously since the publication of one of the most influential works on literary mapping: Franco Moretti's *Atlas of the European Novel* (1998). In his study, Moretti relies on the pivotal role of maps in the analysis of the connection between literature, representational and real spaces. Moretti defines literary mapping as "making the connection between geography and literature explicit" since a map is defined as "a connection made visible" (1998: 3). This strategy permits the discovery of some important connections gone unnoticed so far and generation of new ideas through mapping. Moretti aims to use maps as analytical tools rather than as metaphors for analysing literary texts by making new connections, raising new questions and finding new answers. He introduces an innovative approach to mapping by drawing his maps with the assistance of a cartographer. He uses quantitative information with maps and graphs, and trees. In this sense, literary maps emphasize the "place-bound nature of literary forms" with their spatial qualities and "the internal logic of narrative: the semiotic domain around which a plot coalesces and self-organizes" (1998: 5).

The value of Morretti's work has been recognised by literary critics as "a key work in the development of a new literary geography" (Thacker, 1988: 61). In most literary studies, mapping strategies and functions of maps are ambivalent, which lead to their perception as either useful or dangerous weapons (Huggan, 1994: 31). In previous years, some literary atlases existed, however, maps in these works mostly played a secondary role. For instance, J.G. Bartholomew's *Literary and Historical Atlas of Europe* (1910), Michael Harwick's *Literary Atlas and Gazetteer of the British Isles* (1973), David Daiches's *Literary Landscapes of the British Isles: A Narrative Atlas* (1979), *Atlas zur Deutschen Literatur* edited by Horst Dieter Schlosser (1983) and Malcolm Bradbury's *The Atlas of Literature* (1996) use maps for decorative purposes or as "colorful appendixes" which "don't intervene in the interpretive process" and are not a part of the main discourse (Moretti, 1998: 7).

However, explanatory information provided with the maps distorts their meaning and function for it prevents any interpretation by the reader. In Bradbury's work, a critical assessment of maps is not possible since places and people are simply to be plotted without a meaningful connection between them (Frayn, 2017: 261). Moretti suggests that placing a literary work in a particular space on the map should be the beginning of thinking, not just the end. Spatial features of a plot are highly significant and mean a lot because "geography shapes the narrative structure of the European novel" (Moretti, 1998: 8). Another commonly preferred

method of analysing space in literature or literature in space is cognitive mapping in literary criticism, as explained in detail in the following section.

Cognitive Mapping in Literary Criticism

In literary criticism, the term "mapping" has frequently been used by literary scholars for clarification of a subject matter or theoretical approaches to space and place rather than dealing with cartography and figures directly. To illustrate, "Maps of Englishness" (1996) by Simon Gikandi, "Joseph Conrad and the Double-mapping of Europe and Empire" (1995) by Christopher GoGwilt, "Mapping Literary Modernism" (1985) by Ricardo Quinone and "Mapping the Wessex Novel" (2010) by Andrew Radford use mapping as an explanatory term instead of using maps as an analytical tool. The use of cartographic terminology also evokes powerful metaphorical meanings and "original critical concepts" as exemplified in Brabon's "Gothic Cartography" (2006), Flatley's "Affective Mapping" (2008), or Naramore Maher's (2011) "Environmental Deep-Map" (2011) (Rossetto, 2014: 518).

Since mapping is preferably used as "an explanatory metaphor" in literary studies, there is still some resistance to the creation and use of digital maps, charts or diagrams as analytical tools (Frayn, 2017: 269). Geographer Mark Monmonier notes some possible reasons for this resistance as follows:

Why biographers and literary analysts rarely use maps puzzles me. Perhaps, as 'word people,' the idea of providing a geographic summary of an important person's life never occurs to them. Perhaps they merely lack the tools, skills, and self-confidence to attempt a map themselves, or the funds to hire a cartographic illustrator. Or, perhaps by tradition, publishers, critical reviewers, and readers don't expect maps in these genres. (1993: 204)

Maps are often resisted because they are believed to exist merely for displaying or revealing some geographic information. However, as Muehrcke and Muehrcke suggest, "a map is by nature interdisciplinary, and all imaginable fields of learning may be brought to both making it and reading it" (1974: 331). This includes literary works since they are productions of imagination, too. Fictional representations of real places and literary references to particular places are sometimes used to demonstrate the intimate relationship between space and literary works.

This approach is supported by researchers Piatti and Hurni in "Cartographies of Fictional Worlds", suggesting that mapping literary works let us gain a better interpretation of how narratives operate and this process allows for new perspectives in literary criticism because "some maps make aspects visible which have been invisible before" (2011: 222). That is, maps then become a part of interpretation rather than a supporting tool for it. However, they should not be considered as "neutral, and they are not mirrors reflecting the world" since their textuality offers several distinct interpretations (Frayn, 2017: 280). Maps indicate a broader reality, and they are not natural because they are strongly shaped and influenced by power relations. The steps in map-making (such as preference, deletion, simplification, categorisation, ranking and representation) are also intrinsically "rhetorical" (Harley, 2009: 285).

The literary theorist, Fredric Jameson's concept of "cognitive mapping" has greatly contributed to literary critics to map ideas without "using cartography" (Frayn, 2017: 265).[2] This type of "non-geographical mapping" attempts to use distinctive representational methods to develop and organize ideas in both the process of literary writing and literary reading. Jameson introduced this approach/method in 1984 in an article published in New Left Review. One of the aims of cognitive mapping was described by Jameson as helping human beings to gain "some new heightened sense of its place in the global system" (qtd in Rossetto, 2014: 519). This would also help the individual to take action and strive in the disorienting modern and postmodern spaces in the twenty-first century. One of the methods he uses to analyse literature in spatial terms is "the semiotic rectangle", a method that describes "oppositions, problems and paradoxes" (Jameson, 2003: 30).

Moretti's *Graphs, Maps, Trees* (2005) provides a useful example for using cognitive mapping in literary history. By using graphs, trees and diagrams, Moretti aims to comprehend how little we know about literary history and what remains to be done through abstraction and distant reading (2). Moretti uses graphs for introducing the rise and fall of novels in Britain, France, Spain, Japan and Nigeria. The amount of quantitative information used in these graphs also brings new questions regarding the reasons behind the increase and decrease in the number of books published in the nineteenth century. Similarly, the figure on British novelistic genres between 1740-1900 discloses the existence of "forty-four genres over 160 years" with certain periods of bursts of creativity or invention (2005: 18-19). Trees and diagrams are other common techniques used in cognitive mapping to reveal complex relations between ideas, key arguments and concepts, to brainstorm on a topic or to make a meaningful organization of some complex information. It is also successfully used in creating a literature review, teaching, or analysing key terms or themes in short stories. In literary criticism, it helps the researcher and the reader to visually interpret the relations less visibly before and make new inquiries.

In recent literary criticism, cognitive mapping has been successfully used by Sally Bushell in *Reading and Mapping Fiction* (2020) with critical literary geographical readings of narratives in the late nineteenth and beginning of the twentieth centuries. The author investigates whether readers map as they read a fictional work and argues that cognitive mapping is a crucial and intrinsic part of our experience of literature, making it more compelling and powerful in human life. By using mapping, spatialising, or visualising the readers get a better grasp of literary works. Bushell focuses on the cognitive mapping of literature in several chapters that examine concepts of utopia and dystopia, mapping crime scenes, the absence of maps, reading as mapping and conscious memory mapping.

As aforementioned, most studies in literary criticism often use the term "mapping" for analysing their subject through concept mapping and avoid cartographic information or

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[2] Cognitive mapping was first introduced by Lynch in 1960 and until the late 1970s it was not welcomed by some geographers considering it being "mechanistic, reductionistic and uncritical" (Rossetto, 2014: 519-21). Recently, the term has connotations of being a cognitive map rather than a cartographical tool for spatial analysis. In the 1980s, Bjornson highlighted the similarity between the cognitive activity involved in literary production and individuals' mental mapping activity to store spatial information. Nevertheless, the term became a popular concept with Fredric Jameson's article published in New Left Review in 1984. Spatial and geographical analysis of literary works in the following decades contributed to the use of cognitive mapping in literary studies.

geographical maps in their research. This approach is criticised by cartographers since they consider this as a resistance to maps or mapping in literary studies and criticism. The use of both cartographic maps and concept mapping shall increase the validity and reliability of research projects in literary criticism. In this case, an interdisciplinary approach and collaboration with cartographers or digital humanists would result in more effective and influential studies in humanities.

Literary Cartography in the Digital Age

Contemporary developments in mapping are intimately linked with "the digital transition in cartography" as termed by Michael Goodchild, referring to the utilization of "computer, GIS and satellite technologies based on digital data, graphic information exchanges and powerful web-based dissemination" to produce representations of locations and place (2000: 13). Thanks to these technologies, mapping has started to be used in various spatial and temporal scales, and natural and social sciences with illuminating "spatial concepts and modes of enquiry" (2000: 14). This mounting interest in space, place and geographical analysis has even been characterized as a "spatial turn" by researchers and scholars during the last few decades.

Although earlier maps almost always depicted known parts of the world and conceived information, these developments have added an innovative dimension and function to the mapping practice and maps with an interdisciplinary outlook. New techniques and technologies enable us to see or make new connections between seemingly disconnected places, historical events, literary works, people, societies, and states. This might help us to see and understand the world in a better way than before and solve problems with new perspectives. In the humanities and social sciences, map representations are now regarded as essential to researchers on such as human anatomy, "climate modelling, natural hazard prediction and disaster planning" (Goodchild, 2000: 14). The emergence of fictional maps and mapping narratives have also carried mapping practice well beyond geography. Categorizing and visually mapping the patterns of knowledge through graphical representations or spatial charts are some other ways of facilitating the reception of complicated and disorganized knowledge.

In *Maps of Imagination* (2004), Peter Turchi identifies the function of maps as a way of organizing information "in order to see our knowledge in a new way" (11). Maps not only suggest explanations but also "inspire us to ask more questions, consider other possibilities" (2004: 11). In this sense, the developments in the Digital Humanities bring about some differences (whether better or worse) which trigger diverging from "traditional assumptions" and pave way for "rethinking and reconceptualizing" (Hayles, 2012: 23-24*). Literary Mapping in the Digital Age* (2016) explores the connections between "the practice of mapping, the application of geospatial technologies and the interpretation of literary texts" with an interdisciplinary perspective (Cooper et al., 2016: 18). The essays in this collection use digital mapping tools and methods in critical literary studies and cultural-geographical research. These works explore "the dynamic ways" that literary mapping shall "confirm meaning and challenge critical assumptions" (2016: 18).

With new technologies in digital mapping "spatial interconnections- and tensions- that link literary texts with writers, readers and the material world" can be reconsidered (Cooper et. al. 2016: 19). Some of the recent digital mapping projects in literary studies include ETH

Zurich's *A Literary Atlas of Europe*, Trinity College Dublin's *Digital Literary Atlas of Ireland* and the University of Queensland's *Cultural Atlas of Australia*, the University College London-funded *Mapping St Petersburg: Experiments in Literary Cartography*, Lancaster University's *Mapping the Lakes* and the University of Edinburg's *Palimpsest: Literary Edinburgh*. Some other project developers attempt to visualize some spatial networks in W.G. Sebald's *Rings of Saturn* (Barbara Hui- *Litmap*) and Joyce's *Ulysses* (Boston College- *Walking Ulysses*). These research projects aim at understanding how geospatial technologies might improve our reading and analysing practices.

Moretti's project has been extended and developed by geographer Barbara Piatti, whose project entitled *A Literary Atlas of Europe* (2009) divides fictional places into several spatial categories such as "setting, projected space, zone of action, marker and route" (183). Piatti aims at developing a theory of literary geography and cartography, which places analysis as the last step. The main objective of the project, in Piatti's terms, is to create "a database that stores information about fictional spaces" (2009: 189). Besides some methodological questions regarding the "efficacy of literary databases" in maps, the cultural and historical aspects of literary texts should also be considered for a better result (Frayn, 2017: 281). On utilisation of digital information in cartography, Reuschel and Hurni note that "in order to explore the multi-dimensional geography of literature, it is essential to exploit the capabilities of database enhanced, digital, interactive cartography" (2011: 294).

Further technological developments in mapping provide multi-dimensional maps that show different aspects such as density, hotspot or frequency (Frayn, 2010: 269). At the end of the project, qualitative and quantitative evidence might be combined and compared as needed to provide reliable information on fictional spaces. Relatedly, Robert T. Tally's *Literary Cartographies* (2014) provides a valuable collection of theoretical essays on mapping and literature, yet it still lacks visual materials in a cartographic sense. Special issues in *The Cartographic Journal* (2011) such as "Cartographies of Fictional Worlds" (2011) and "Cartography and Narratives" (2014), also display the range of current research being carried out in literary cartography. There is an increasing need for entirely interdisciplinary research to enhance the interpretation of literary studies and human geography.

The challenges of digital literary mapping are identified in four questions in *Literary Mapping in the Digital Age*: "Why map? How to map? What to map" and "is there potential - and perhaps even a need- to go beyond the map?" (Cooper et al., 2016: 28). The reason for using digital mapping ranges from using it as a communication tool, such as for pedagogical purposes to "enhance the literary-geographical knowledge of students", for commercial or touristic purposes, or scholarly objectives to "advance knowledge" (2016: 29-30). In the spatial humanities, the most commonly used digital mapping technologies are GIS and ArcGIS "to integrate, analyze, and visualize large amounts of both spatial and temporal data" (qtd in Cooper et al., 2016: 31). Besides, Google Maps and Google Earth have also become a part of digital mapping practices for literary studies.

In many projects, toponymic maps were used to identify and "geo-reference the place names either in specific literary works or collections of literary texts" (Cooper et al., 2016: 33). However literary works do not always refer to real and mappable geographies, which is called "spatial uncertainty in fiction" a term defined by Anne-Kathrin Reuschel and Lorenz Hurni

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(2011: 295). This arises new challenges in identifying the similarities and differences between real and imagined spaces. Some other challenges include "the misspelling of place-names or the misidentification of geographical features" and "ambiguous forms of spatial information" which generate "fuzzy geographies" (Cooper et al., 2016: 34). It is necessary to go beyond these digital technologies since maps should present a platform, a process, and an outcome which can be altered by users in time. A dynamic GIS visualization, therefore, means "deep mapping" which provides "a creative space that is visual, structurally open, genuinely multimedia and multi-layered" triggering creativity and collaboration (qtd in Cooper et al., 2016: 35).

Conclusion

The emergence and development of humanist geography in the second half of the twentieth century have contributed greatly to the establishment of literary geography and cartography in digital humanities. Humanist geographers such as Yi-Fu Tuan adopted a humanistic perspective on the perception and experience of space and place and examined the role and significance of human senses, spatial orientation, navigation and cognitive skills in this process. This approach facilitated not only the interpretation of the humans' spatial experiences and representations in literature but also their complex and complicated engagements with maps and map-making throughout history. Along with the advancements in cartography and humanist geography, an interdisciplinary field of research (literary geography) emerged with the collaboration of geographers/cartographers and literary critics in the following decades.

Within the scope of the research questions in this study, it is observed that definitions of space and place are determined considerably by humans' direct or indirect modes of perception and experience rather than a completely objective assessment. Even our geographical knowledge of places, maps or map-making process is largely affected by our sensory experiences of space and place, corporeal qualities and our spatio-cognitive abilities. The transforming outlooks on space and place in the contemporary world and the historical development of distinctive forms and types of maps confirm this dynamic and evolving process. Literature, at this point, enriches our understanding of the perception, experience and representations of space and place in human life. The multiple ways in which maps have been used by authors in literary production and by literary critics for textual or geographical analysis reveal the multifunctional potential and importance of maps and mapping in literary circles.

Literary geography and cognitive mapping provide two different directions in understanding spatial experience and representations in literature. Whilst literary geography deals with geographical or spatio-temporal articulations of narratives through maps or uses maps as narratives, cognitive mapping allows literary critics to use the term "mapping" as an explanatory metaphor or a representational method to develop or organize ideas without using geographical maps. Even though the concept mapping in literary studies is often criticised by cartographers, this study suggests that the collaboration of literary geography and cognitive mapping would result in a more reliable assessment of spatiality in literary works because literature is also a product of organised ideas, feelings and experiences shaped or influenced by specific spatial/environmental conditions.

Although some scholars such as Piatti and Hurni suggest that with the development of digital technology cartographers hold "a dominant position" over literary critics, their cooperation in the application of GIS technology and visual-spatial methods in literary criticism reveal more of the presence of a developing "interdisciplinary laboratory" (Rossetto, 2014: 516). Restrictions often encountered in conventional literary geography are overcome through innovative mapping technologies and qualitative data is gradually used not only for fictional space but also authors' spatial experiences and their influence in literary production. In the "Mapping the Lakes" project, for instance, Cooper and Gregory develop mood maps. Moreover, contemporary maps produced since the 1980s have brought new unconventional atlases that subvert traditional ways of thinking, assumptions and imagination and offer new possibilities of reading them. These types of maps signal a radical change in literary cartography as "re-cartography", representing maps as unfinished and "always in the process of becoming" (Kitchin and Dodge, 2007). This process involves not only the course of mapmaking but also their use in particular contexts with distinct objectives.

Nevertheless, there are still many issues waiting for attention in literary studies due to some limitations or drawbacks in literary geography and cognitive mapping. Since both fields are in the process of improvement with new technological developments in cartography and theoretical outlooks in social sciences and humanities, the following decades shall witness new directions in spatial and digital humanities. Digital maps not only allow researchers to analyse fictional spaces in new ways, but they also inspire them to make new inquiries about the experience and representations of multi-layered forms of spatiality and temporality. Spatial representations of human senses, feelings, ideas or moods in fictional works, for instance, are amongst the challenging areas in digital humanities in the recent years. Future studies in literary geography shall reveal the new steps taken in this field.

Briefly, the present work emphasises the significance of humanistic perspectives in the emergence and development of literary geography and cognitive mapping and argues that humans' senses, spatial experiences and cognitive skills have contributed greatly to understanding the multiple ways spatiality is experienced and represented by authors, readers and critics. Besides presenting a theoretical and historical approach to the relations between spatiality/mapping and literature since the 1960s, the paper has overviewed critical works produced in humanistic geography, literary criticism and fictional works. The study also suggests that the continuous advancement of literary cartography and cognitive mapping in the digital era and their cooperation in literary criticism shall bring researchers new opportunities for producing new spatial representations of human feelings, thoughts, sounds or smells thoughts associated with particular real/imaginary spaces, places or landscapes in fictional works.

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